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U.S. Department of the Treasury

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TREASURY NEWS



Department of the Treasury

Washington, D.C.

Telephone 566-2041

FOR IMMEDIATE RELEASE
January 3, 1992

CONTACT: Claire Buchan
(202) 566-8773

Statement of Secretary Brady
on
Membership of the New States of the Former Soviet Union
in the IMF and World Bank

The dramatic developments in the former Soviet Union have created new opportunities and challenges for international financial cooperation. The United States supports early consideration by the IMF and World Bank of membership for new states of the former Soviet Union with whom we are establishing diplomatic relations (Russia, Ukraine, Kazakhstan, Belarus, Kyrgyzstan, Armenia).

Membership in the IMF and World Bank will further market-oriented economic reform in these newly independent nations. We will work with them to ensure that their applications are considered as quickly as possible. We are also prepared to consider the membership of the other new states of the former Soviet Union once diplomatic relations are established with them (Azerbaijan, Turkmenistan, Uzbekistan, Tajikistan, Georgia, and Moldova).

The benefits of technical assistance and expertise provided by the IMF and World Bank, pending full membership, should continue to be available to all twelve states of the former Soviet Union.

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NB-1606

TREASURY NEWS



Department of the Treasury

Washington, D.C.

Telephone 566-2041

FOR RELEASE AT 2:30 P.M.
January 3, 1992

CONTACT: Office of Financing
202-219-3350

TREASURY'S 52-WEEK BILL OFFERING

The Department of the Treasury, by this public notice, invites tenders for approximately \$12,500 million of 364-day Treasury bills to be dated January 16, 1992 and to mature January 14, 1993 (CUSIP No. 912794 ZZ 0). This issue will provide about \$700 million of new cash for the Treasury, as the maturing 52-week bill is outstanding in the amount of \$11,803 million. Tenders will be received at Federal Reserve Banks and Branches and at the Bureau of the Public Debt, Washington, D. C. 20239-1500, Thursday, January 9, 1992, prior to 12:00 noon for noncompetitive tenders and prior to 1:00 p.m., Eastern Standard time, for competitive tenders.

The bills will be issued on a discount basis under competitive and noncompetitive bidding, and at maturity their par amount will be payable without interest. This series of bills will be issued entirely in book-entry form in a minimum amount of \$10,000 and in any higher \$5,000 multiple, on the records either of the Federal Reserve Banks and Branches, or of the Department of the Treasury.

The bills will be issued for cash and in exchange for Treasury bills maturing January 16, 1992. In addition to the maturing 52-week bills, there are \$22,069 million of maturing bills which were originally issued as 13-week and 26-week bills. The disposition of this latter amount will be announced next week. Federal Reserve Banks currently hold \$977 million as agents for foreign and international monetary authorities, and \$7,885 million for their own account. These amounts represent the combined holdings of such accounts for the three issues of maturing bills. Tenders from Federal Reserve Banks for their own account and as agents for foreign and international monetary authorities will be accepted at the weighted average bank discount rate of accepted competitive tenders. Additional amounts of the bills may be issued to Federal Reserve Banks, as agents for foreign and international monetary authorities, to the extent that the aggregate amount of tenders for such accounts exceeds the aggregate amount of maturing bills held by them. For purposes of determining such additional amounts, foreign and international monetary authorities are considered to hold \$130 million of the original 52-week issue. Tenders for bills to be maintained on the book-entry records of the Department of the Treasury should be submitted on Form PD 5176-3.

TREASURY'S 13-, 26-, AND 52-WEEK BILL OFFERINGS, Page 2

Each tender must state the par amount of bills bid for, which must be a minimum of \$10,000. Tenders over \$10,000 must be in multiples of \$5,000. Competitive tenders must also show the yield desired, expressed on a bank discount rate basis with two decimals, e.g., 7.15%. Fractions may not be used. A single bidder, as defined in Treasury's single bidder guidelines, shall not submit noncompetitive tenders totaling more than \$1,000,000.

The following institutions may submit tenders for accounts of customers if the names of the customers and the amount for each customer are furnished: depository institutions, as described in Section 19(b)(1)(A), excluding those institutions described in subparagraph (vii), of the Federal Reserve Act (12 U.S.C. 461(b)); and government securities broker/dealers registered with the Securities and Exchange Commission that are registered or noticed as government securities broker/dealers pursuant to Section 15C(a)(1) of the Securities and Exchange Act of 1934, as amended by the Government Securities Act of 1986. Others are only permitted to submit tenders for their own account. Each tender must state the amount of any net long position in the bills being offered if such position is in excess of \$200 million. This information should reflect positions held as of one-half hour prior to the closing time for receipt of competitive tenders on the day of the auction. Such positions would include bills acquired through "when issued" trading, and futures and forward contracts as well as holdings of outstanding bills with the same CUSIP number as the new offering. Those who submit tenders for the accounts of customers must submit a separate tender for each customer whose net long position in the bill being offered exceeds \$200 million.

A noncompetitive bidder may not have entered into an agreement, nor make an agreement to purchase or sell or otherwise dispose of any noncompetitive awards of this issue being auctioned prior to the designated closing time for receipt of competitive tenders.

Tenders from bidders who are making payment by charge to a funds account at a Federal Reserve Bank and tenders from bidders who have an approved autocharge agreement on file at a Federal Reserve Bank will be received without deposit. Tenders from all others must be accompanied by full payment for the amount of bills applied for. A cash adjustment will be made on all accepted tenders, accompanied by payment in full, for the difference between the par payment submitted and the actual issue price as determined in the auction.

11/5/91

Public announcement will be made by the Department of the Treasury of the amount and yield range of accepted bids. Competitive bidders will be advised of the acceptance or rejection of their tenders. The Secretary of the Treasury expressly reserves the right to accept or reject any or all tenders, in whole or in part, and the Secretary's action shall be final. Subject to these reservations, noncompetitive tenders for each issue for \$1,000,000 or less without stated yield from any one bidder will be accepted in full at the weighted average bank discount rate (in two decimals) of accepted competitive bids for the respective issues. The calculation of purchase prices for accepted bids will be carried to three decimal places on the basis of price per hundred, e.g., 99.923, and the determinations of the Secretary of the Treasury shall be final.

Settlement for accepted tenders for bills to be maintained on the book-entry records of Federal Reserve Banks and Branches must be made or completed at the Federal Reserve Bank or Branch by the issue date, by a charge to a funds account or pursuant to an approved autocharge agreement, in cash or other immediately-available funds, or in definitive Treasury securities maturing on or before the settlement date but which are not overdue as defined in the general regulations governing United States securities. Cash adjustments will be made for differences between the par value of the maturing definitive securities accepted in exchange and the issue price of the new bills.

Department of the Treasury Circulars, Public Debt Series - Nos. 26-76, 27-76, and 2-86, as applicable, Treasury's single bidder guidelines, and this notice prescribe the terms of these Treasury bills and govern the conditions of their issue. Copies of the circulars, guidelines, and tender forms may be obtained from any Federal Reserve Bank or Branch, or from the Bureau of the Public Debt.

11/5/91

PUBLIC DEBT NEWS



Department of the Treasury • Bureau of the Public Debt • Washington, DC 20239

FOR IMMEDIATE RELEASE
January 6, 1992

CONTACT: Office of Financing
202-219-3350

RESULTS OF TREASURY'S AUCTION OF 13-WEEK BILLS

Tenders for \$10,262 million of 13-week bills to be issued. January 9, 1992 and to mature April 9, 1992 were accepted today (CUSIP: 912794YH1).

RANGE OF ACCEPTED COMPETITIVE BIDS:

	<u>Discount Rate</u>	<u>Investment Rate</u>	<u>Price</u>
Low	3.84%	3.94%	99.029
High	3.85%	3.95%	99.027
Average	3.85%	3.95%	99.027

Tenders at the high discount rate were allotted 32%.
The investment rate is the equivalent coupon-issue yield.

TENDERS RECEIVED AND ACCEPTED (in thousands)

<u>Location</u>	<u>Received</u>	<u>Accepted</u>
Boston	23,440	23,440
New York	40,210,100	8,883,110
Philadelphia	38,715	38,590
Cleveland	49,245	37,235
Richmond	76,570	45,855
Atlanta	37,740	34,740
Chicago	1,054,295	45,700
St. Louis	52,940	12,940
Minneapolis	7,690	7,690
Kansas City	26,745	26,745
Dallas	26,070	26,070
San Francisco	718,730	53,030
Treasury	<u>1,026,745</u>	<u>1,026,745</u>
TOTALS	\$43,349,025	\$10,261,890
Type		
Competitive	\$38,821,115	\$5,733,980
Noncompetitive	<u>1,675,440</u>	<u>1,675,440</u>
Subtotal, Public	\$40,496,555	\$7,409,420
Federal Reserve	2,693,230	2,693,230
Foreign Official Institutions	<u>159,240</u>	<u>159,240</u>
TOTALS	\$43,349,025	\$10,261,890

An additional \$165,160 thousand of bills will be issued to foreign official institutions for new cash.

AUCTION
RESULTS

PUBLIC DEBT NEWS



Department of the Treasury • Bureau of the Public Debt • Washington, DC 20239

FOR IMMEDIATE RELEASE
January 6, 1992

CONTACT: Office of Financing
202-219-3350

RESULTS OF TREASURY'S AUCTION OF 26-WEEK BILLS

Tenders for \$10,308 million of 26-week bills to be issued January 9, 1992 and to mature July 9, 1992 were accepted today (CUSIP: 912794ZC1).

RANGE OF ACCEPTED COMPETITIVE BIDS:

	<u>Discount Rate</u>	<u>Investment Rate</u>	<u>Price</u>
Low	3.85%	3.99%	98.054
High	3.86%	4.00%	98.049
Average	3.86%	4.00%	98.049

Tenders at the high discount rate were allotted 42%.
The investment rate is the equivalent coupon-issue yield.

TENDERS RECEIVED AND ACCEPTED (in thousands)

<u>Location</u>	<u>Received</u>	<u>Accepted</u>
Boston	25,580	25,580
New York	44,774,310	9,287,725
Philadelphia	11,715	11,715
Cleveland	27,955	27,955
Richmond	546,760	30,960
Atlanta	20,325	19,325
Chicago	1,082,985	58,705
St. Louis	34,395	12,395
Minneapolis	8,100	8,100
Kansas City	29,280	29,280
Dallas	17,380	17,380
San Francisco	601,320	36,320
Treasury	742,565	742,565
TOTALS	<u>\$47,922,670</u>	<u>\$10,308,005</u>
Type		
Competitive	\$43,960,280	\$6,345,615
Noncompetitive	<u>1,140,830</u>	<u>1,140,830</u>
Subtotal, Public	\$45,101,110	\$7,486,445
Federal Reserve	2,450,000	2,450,000
Foreign Official Institutions	<u>371,560</u>	<u>371,560</u>
TOTALS	<u>\$47,922,670</u>	<u>\$10,308,005</u>

An additional \$390,840 thousand of bills will be issued to foreign official institutions for new cash.

NB-1609

Report of
THE DEPARTMENT OF THE TREASURY
on

Integration
of
The Individual and Corporate
Tax Systems

Taxing Business Income Once



January 1992

Report of
THE DEPARTMENT OF THE TREASURY
on

Integration
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The Individual and Corporate
Tax Systems

Taxing Business Income Once



January 1992



DEPARTMENT OF THE TREASURY
WASHINGTON

ASSISTANT SECRETARY

January 1992

The Honorable Dan Rostenkowski
Chairman
Committee on Ways and Means
United States House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

Section 634 of Public Law 99-514, the Tax Reform Act of 1986 directed the Secretary of the Treasury or his delegate to study reforms of the taxation of corporate income under Subchapter C of the Internal Revenue Code. This mandate is quite broad. We concluded that a comprehensive study of the issues presented by integration of the corporate and individual income tax would address fundamental questions concerning how the corporate income tax might be restructured to reduce tax distortions of important corporate financial decisions and to achieve a more efficient system. Given the prevalence of integrated corporate income tax systems in the world today, we believe that an examination of these substantial issues should precede consideration of other, less fundamental, approaches to corporate income tax reform. Accordingly, this Report is submitted pursuant to the statutory directive cited above.

I am sending a similar letter to Representative Bill Archer.

Sincerely,

Kenneth W. Gideon
Assistant Secretary
(Tax Policy)



DEPARTMENT OF THE TREASURY
WASHINGTON

January 1992

ASSISTANT SECRETARY

The Honorable Lloyd Bentsen
Chairman
Committee on Finance
United States Senate
Washington, D.C. 20515

Dear Mr. Chairman:

Section 634 of Public Law 99-514, the Tax Reform Act of 1986 directed the Secretary of the Treasury or his delegate to study reforms of the taxation of corporate income under Subchapter C of the Internal Revenue Code. This mandate is quite broad. We concluded that a comprehensive study of the issues presented by integration of the corporate and individual income tax would address fundamental questions concerning how the corporate income tax might be restructured to reduce tax distortions of important corporate financial decisions and to achieve a more efficient system. Given the prevalence of integrated corporate income tax systems in the world today, we believe that an examination of these substantial issues should precede consideration of other, less fundamental, approaches to corporate income tax reform. Accordingly, this Report is submitted pursuant to the statutory directive cited above.

I am sending a similar letter to Senator Bob Packwood.

Sincerely,

Kenneth W. Gideon
Assistant Secretary
(Tax Policy)

PREFACE

The so-called classical system of current U.S. tax law treats corporations and their investors as separate entities and levies tax at both the corporate and shareholder levels on earnings from investments in corporate equity. Corporate earnings distributed to lenders as interest are generally deductible by the corporation and taxed, if at all, to the lender. Investors who conduct business activity in noncorporate form, such as a sole proprietorship or partnership, are taxed once on their earnings at the owners' tax rate.

As a result, despite the critical role played by corporations as a vehicle for economic growth, the United States tax law often perversely penalizes the corporate form of organization. The current system of taxation also distorts corporate financial decisions—in particular by encouraging debt and discouraging new equity financing of corporate investments. The tax system also prejudices corporate decisions about whether to retain earnings or pay dividends and encourages corporations to distribute earnings in a manner to avoid the double-level tax.

Integration of the individual and corporate tax system would tax corporate income once and reduce or eliminate these economic distortions. Most trading partners of the United States have integrated their corporate tax systems. The potential economic gains from integration are substantial.

This Report examines in detail several different integration prototypes, although it does not attempt an exhaustive discussion of all possible integration systems or of all the technical issues raised by the alternative prototypes.

This Report does not contain legislative recommendations. Rather, it is intended to stimulate discussion of the various prototypes and issues they raise. By advancing the opportunity for such debate, this Report should encourage serious consideration of proposals for integrating the individual and corporate tax systems in the United States.

EXECUTIVE SUMMARY

WHAT IS INTEGRATION AND WHY SHOULD IT BE BENEFICIAL?

Currently, our tax system taxes corporate profits distributed to shareholders at least twice—once at the shareholder level and once at the corporate level. If the distribution is made through multiple unrelated corporations, profits may be taxed more than twice. If, on the other hand, the corporation succeeds in distributing profits in the form of interest on bonds to a tax-exempt or foreign lender, no U.S. tax at all is paid.

The two-tier tax system (i.e., imposing tax on distributed profits in the hands of shareholders after taxation at the corporate level) is often referred to as a classical tax system. Over the past two decades, most of our trading partners have modified their corporate tax systems to "integrate" the corporate and shareholder taxes to mitigate the impact of imposing two levels of tax on distributed corporate profits. Most typically, this has been accomplished by providing the shareholder with a full or partial credit for taxes paid at the corporate level.

Integration would reduce three distortions inherent in the classical system:

- (a) The incentive to invest in noncorporate rather than corporate businesses. Current law's double tax on corporations creates a higher effective tax rate on corporate equity than on non-corporate equity. The additional tax burden encourages "self-help" integration through disincorporation.
- (b) The incentive to finance corporate investments with debt rather than new equity. Particularly in the 1980s, corporations issued substantial amounts of debt. By 1990, net interest expense reached a postwar high of 19 percent of corporate cash flow.
- (c) The incentive to retain earnings or to structure distributions of corporate profits in a manner to avoid the double tax. Between 1970 and 1990, corporations' repurchases of their own shares grew from \$1.2 billion (or 5.4 percent of dividends) to \$47.9 billion (or 34 percent of dividends). By 1990, over one-quarter of corporate interest payments were attributable to the substitution of debt for equity through share repurchases.

These distortions raise the cost of capital for corporate investments; integration could be expected to reduce it. To the extent that an integrated system reduces incentives for highly-leveraged corporate capital structures, it would provide important non-tax benefits by encouraging the adoption of capital structures less vulnerable to instability in times of economic downturn. The Report contains estimates of substantial potential economic gains from integration. Depending on its form, the Report estimates that integration could increase the capital stock in the corporate sector by \$125 billion to \$500 billion, could decrease the

debt-asset ratio in the corporate sector by 1 to 7 percentage points and could produce an annual gain to the U.S. economy as a whole from \$2.5 billion to \$25 billion.

PROTOTYPES

This Report defines four integration prototypes and provides specifications for how each would work. Three prototypes are described in Part II: (1) the dividend exclusion prototype, (2) the shareholder allocation prototype, and (3) the Comprehensive Business Income Tax (CBIT) prototype. In addition, in Part IV, titled "Roads Not Taken," the Report describes the imputation credit prototype and a dividend deduction alternative. For administrative reasons that the Report details, we have not recommended the shareholder allocation prototype (a system in which all corporate income is allocated to shareholders and taxed in a manner similar to partnership income under current law). Simplification concerns led us to prefer the dividend exclusion to any form of the imputation credit prototype.

In the dividend exclusion prototype, shareholders exclude dividends from income because they have already been taxed at the corporate level. Dividend exclusion provides significant integration benefits and requires little structural change in the Internal Revenue Code. When fully phased in, dividend exclusion would cost approximately \$13.1 billion per year.

CBIT is, as its name implies, a much more comprehensive and larger scale prototype and will require significant statutory revision. CBIT represents a long-term, comprehensive option for equalizing the tax treatment of debt and equity. It is not expected that implementation of CBIT would begin in the short term, and full implementation would likely be phased in over a period of about 10 years. In CBIT, shareholders and bondholders exclude dividends and interest received from corporations from income, but neither type of payment is deductible by the corporation. Because debt and equity receive identical treatment in CBIT, CBIT better achieves tax neutrality goals than does the dividend exclusion prototype. CBIT is self-financing and would permit lowering the corporate rate to the maximum individual rate of 31 percent on a revenue neutral basis, even if capital gains on corporate stock were fully exempt from tax to shareholders.

POLICY RECOMMENDATIONS

In addition to describing prototypes, the Report makes several basic policy recommendations which we believe should apply to any integration proposal ultimately adopted:

- (a) Integration should not result in the extension of corporate tax preferences to shareholders. This stricture is grounded in both policy and revenue concerns and has been adopted by every country with an integrated system. The mechanism for preventing passthrough of preferences varies; some countries utilize a compensatory tax mechanism and others simply tax preference-sheltered income when distributed (as we recommend in the dividend exclusion prototype). Both of these mechanisms are discussed in the Report.

- (b) Integration should not reduce the total tax collected on corporate income allocable to tax-exempt investors. Absent this restriction, business profits paid to tax-exempt entities could escape all taxation in an integrated system. This revenue loss would prove difficult to finance and would exacerbate distortions between taxable and tax-exempt investors.
- (c) Integration should be extended to foreign shareholders only through treaty negotiations, not by statute. This is required to assure that U.S. shareholders receive reciprocal concessions from foreign tax jurisdictions.
- (d) Foreign taxes paid by U.S. corporations should not be treated, by statute, identically to taxes paid to the U.S. Government. Absent this limitation, integration could eliminate all U.S. taxes on foreign source profits in many cases.

A table summarizing the characteristics of each of the prototypes follows.

OBJECTIVES OF THE REPORT

This Report is not a legislative proposal but rather a source document to begin the debate on the desirability of integration. This Report concludes that integration is desirable and presents a variety of integration mechanisms. A major reform such as integration should be undertaken only after appropriate deliberation and consideration of public comments. In light of the increasing isolation of the United States as one of the few remaining countries with a classical tax system, serious consideration of integration is now appropriate.

Comparison of the four principal integration prototypes

Issues	Prototype			
	Dividend Exclusion Prototype	Shareholder Allocation Prototype	CBIT Prototype	Imputation Credit Prototype
Rates				
a) Distributed Income	Corporate rate	Shareholder rate ¹	CBIT rate (31 percent)	Shareholder rate ¹
b) Retained Income ²	Corporate rate (additional shareholder level tax depends on the treatment of capital gains; see Chapter 8)	Shareholder rate	CBIT rate (additional investor level tax depends on the treatment of capital gains; see Chapter 8)	Corporate rate (additional shareholder level tax depends on the treatment of capital gains; see Chapter 8)
Treatment of non-corporate businesses	Unaffected	Unaffected	CBIT applies to non-corporate businesses as well as corporations, except for very small businesses.	Unaffected
Corporate tax preferences	Does not extend preferences to shareholders. Preference income is subject to shareholder tax when distributed.	Extends preferences to shareholders.	Does not extend preferences to investors. Preference income is subject to compensatory tax or investor level tax when distributed.	Does not extend preferences to shareholders. Preference income is subject to shareholder tax when distributed.
Tax-exempt investors	Corporate equity income continues to bear one level of tax.	Corporate equity income continues to bear one level of tax.	A CBIT entity's equity income and income used to pay interest bear one level of tax.	Corporate equity income continues to bear one level of tax.
Foreign source income	Foreign taxes are creditable at the corporate level, but shielded income is subject to shareholder tax when distributed.	Foreign taxes are creditable at the corporate level and at the shareholder level.	Foreign taxes are creditable at the entity level, but shielded income is subject to compensatory tax or an investor level tax when distributed.	Foreign taxes are creditable at the corporate level, but shielded income is subject to shareholder tax when distributed.
Foreign investors	Corporate equity income continues to bear tax at the corporate level and current withholding taxes (eligible for treaty reduction) continue to apply to distributions.	Corporate equity income continues to bear tax at the corporate level and current withholding taxes (eligible for treaty reduction) continue to apply to distributions.	A CBIT entity's equity income and income used to pay interest bear tax only at the entity level, and no withholding taxes are imposed on distributions to equity holders or on payments of interest.	Corporate equity income continues to bear tax at the corporate level and current withholding taxes (eligible for treaty reduction) continue to apply to distributions.
Treatment of debt	Unaffected	Unaffected	Equalizes treatment of debt and equity	Unaffected (unless bondholder credit system adopted)

¹Plus 3 percentage points of corporate level tax not creditable because the prototype retains the 34 percent corporate rate but provides credits at the 31 percent shareholder rate.

²Assuming no DRIP. See Chapter 9.

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PART I: THE CASE FOR INTEGRATION

CHAPTER 1: INTRODUCTION

1.A THE CORPORATE TAX: NEED FOR CHANGE

Issues

Current U.S. tax law treats corporations and their investors as separate taxable entities. Under this classical system of corporate income taxation, two levels of income tax are generally imposed on earnings from investments in corporate equity. First, corporate earnings are taxed at the corporate level. Second, if the corporation distributes earnings to shareholders, the earnings are taxed again at the shareholder level. In contrast, investors in business activities conducted in non-corporate form, such as sole proprietorships or partnerships, are generally taxed only once on the earnings, and this tax is imposed at the individual level. Corporate earnings distributed as interest to suppliers of debt capital also are taxed only once because interest is deductible by the corporation and generally taxed to lenders as ordinary income.

Despite its long history, considerable debate surrounds the role of the corporate income tax in the Federal tax structure. The central issue is whether corporate earnings should be taxed once rather than taxed both when earned and when distributed to shareholders. Integration of the individual and corporate income tax refers to the taxation of corporate income once. This Report discusses and evaluates several integration alternatives.¹

Despite their differences, the methods of integration studied in this Report reflect a common goal: where practical, fundamental economic considerations, rather than tax considerations, should guide business investment, organization, and financial decisions. The Tax Reform Act of 1986 (the 1986 Act)² made the tax system significantly more neutral in its impact on business decisions about capital investment by reducing tax rates and tax preferences. The 1986 Act,

however, did not address tax-related distortions of business organizational and financing decisions. In fact, the 1986 reforms may have increased the pressure to select noncorporate organizational forms by imposing a higher marginal rate on corporations than on individuals and by repealing the *General Utilities*³ doctrine, which had protected corporations from corporate level tax on liquidating dispositions of corporate assets. Corporate integration can thus be regarded as a second phase of tax reform in the United States, extending the goal of neutral taxation to the choice of business organization and financial policy.

The current two-tier system of corporate taxation discourages the use of the corporate form even when incorporation would provide nontax benefits, such as limited liability for the owners, centralized management, free transferability of interests, and continuity of life. The two-tier tax also discourages new equity financing of corporate investment, encourages debt financing of such investment, distorts decisions with respect to the payment of dividends, and encourages corporations to distribute earnings in a manner designed to avoid the double-level tax.

These distortions have economic costs. The classical corporate tax system reduces the level of investment and interferes with the efficient allocation of resources. In addition, the tax bias against corporate equity can encourage corporations to increase debt financing beyond levels supported by nontax considerations, thereby increasing risks of financial distress and bankruptcy.

Historically, the corporation has been an important vehicle for economic growth in the United States, but the classical corporate tax system often perversely penalizes the corporate form of organization. With the increasing integration of international markets for products and capital, one must consider effects of the corporate

tax system on the competitiveness of U.S. firms. Most of the major trading partners of the United States have revised their tax systems to provide for some integration of the corporate and individual tax systems.

This Report provides a comprehensive study of integration, including both the legal and economic foundations for implementing integration in the United States. We present three prototypes representing a range of integration systems and recommend two prototypes that implement our policy goals. One prototype, a dividend exclusion system, can be implemented with minimal changes to current law. The second, the Comprehensive Business Income Tax (CBIT), extends the dividend exclusion model to debt. CBIT achieves the important goal of equating the treatment of debt and equity, but because it represents a greater departure from current law, it would require a longer transition period. We have included, albeit with substantial reservations as to feasibility, a third prototype—a shareholder allocation system, often referred to as full integration. We considered it necessary to examine such a prototype because this system is so frequently viewed as ideal by proponents of integration, although we ultimately reject it on both policy and administrative grounds.

The Report also documents the substantial economic benefits of integration. We estimate that any of the three prototypes would increase the capital stock in the corporate sector by \$125 to \$500 billion and would decrease the debt to asset ratio in the corporate sector from 1 to 7 percentage points. Further, efficiency gains from integration would be equivalent to annual welfare gain for the U.S. economy as a whole of 0.07 to 0.7 percent of annual consumption (or \$2.5 to \$25 billion (in 1991 dollars)).⁴ See Chapter 13.

Brief Description of Current Law

Under current law, income earned by corporations is taxed at the corporate level, generally at a marginal rate of 34 percent.⁵ When the corporation distributes earnings to shareholders in the form of dividends, the income is generally taxed

again at the shareholder level.⁶ If corporations retain earnings, the value of their stock will generally increase to reflect those earnings. When shareholders sell their stock, gains from the sale are taxed also. Thus, like income distributed as dividends, retained corporate income generally is taxed twice. In contrast, investors who conduct business activity in noncorporate form, such as through a sole proprietorship or partnership, are taxed once on their earnings at their individual tax rate.

Dividends distributed to individual U.S. citizens and residents are taxed generally at marginal rates of 15, 28, or 31 percent.⁷ Dividends distributed to nonresident aliens and foreign corporations by U.S. corporations are generally subject to a nonrefundable "withholding" tax, currently set by statute at 30 percent. United States treaties with trading partners frequently reduce the rate to 15 or 5 percent on a reciprocal basis. Dividends received by U.S. corporate shareholders generally qualify for a dividends received deduction of 70, 80 or 100 percent, depending on the degree of affiliation between the corporations. Shareholders' gains from sales of corporate stock are taxed also, typically as capital gains, although capital gains of foreign shareholders generally are exempt from U.S. tax.

Unlike dividends, interest is generally deductible by corporations. Interest income received by domestic lenders is generally taxed at their marginal tax rates. Interest income received by foreign lenders from U.S. corporations, however, generally is not subject to U.S. tax.⁸

Tax-exempt entities supply a substantial portion of the corporate capital in the United States. These tax-exempt entities include pension funds and educational, religious and other charitable organizations. These entities are generally not taxed on interest, dividends or gains from the sale of their investments. However, the corporate level tax applies to corporate income attributable to the equity capital they supply. Tax-exempt entities may be subject to the unrelated business income tax (UBIT) on earnings from equity investments in partnerships.

1.B THE CORPORATE TAX AND ECONOMIC DISTORTIONS

The classical corporate income tax system distorts three economic and financial decisions: (1) whether to invest in noncorporate rather than corporate form, (2) whether to finance investments with debt rather than equity, and (3) whether to retain rather than distribute earnings. Apart from corporate and investor level tax considerations, nontax benefits and costs also influence these decisions. To the extent that the classical tax system distorts the choice of organizational form, financial structure, and dividend policy, economic resources can be misallocated.⁹

The Cost of Capital As a Measure of Investment Incentives

This Report examines distortions resulting from the corporate income tax in terms of effects on the cost of capital. In deciding whether to undertake an investment, firms require that the investment provide a sufficient after-tax return to compensate investors. The cost of capital is the pre-tax rate of return that is sufficient to cover operating expenses, taxes, economic depreciation, and the investor's required after-tax rate of return. Thus, the cost of capital depends in part on the return firms must pay to suppliers of debt or equity capital to attract funds. The cost of capital also depends on such factors as tax rates, the investment's economic depreciation rate, the capital cost recovery deductions allowed on the investment, the inflation rate, and the source of financing for the investment. Because a higher cost of capital makes certain investments unprofitable, corporate and individual income taxes reduce investment incentives by raising the cost of capital.

This section uses the cost of capital as a framework for analyzing the effects of the current classical corporate tax system on the business decisions described above (i.e., form of business organization, form of financing, and retention of earnings). The final part of this section discusses the effect of the corporate income tax on savings and investment in the economy as a whole.

Organizational Form

The waste of economic resources from tax-distorted misallocation of capital between the noncorporate and corporate sectors was the original focus of criticism of the corporate income tax. Beginning with Harberger,¹⁰ economists have argued that a classical corporate tax system misallocates capital between the corporate and noncorporate sectors. Over the years, more sophisticated models have been developed to examine more carefully the efficiency costs of corporate taxation. Contemporary approaches suggest that these costs are significant. See Chapter 13.

A simple example illustrates the effect of the current corporate tax system on investment decisions. Suppose that an investor requires an after-tax rate of return of 8 percent and the investor's effective tax rate is 20 percent. An equity investment in a noncorporate enterprise must earn a return high enough to pay tax at the investor's rate (20 percent) and still yield the required 8 percent after-tax return.¹¹ The noncorporate investment must therefore earn a 10 percent pre-tax rate of return (net of depreciation) in order to cover the investor's income taxes and meet the required return ($0.10 \times (1 - 0.20) = 0.08$). However, if the corporate tax rate is 34 percent and the corporation distributes all of its income, the cost of capital of an equity financed investment in the corporate sector in the above example is 15.2 percent. This 15.2 percent pre-tax return yields an 8 percent return after paying both the corporate tax and the investor level tax on dividends ($0.152 \times (1 - 0.34) \times (1 - 0.20) = 0.08$). Since fewer investments can earn the higher required return (15.2 percent as opposed to 10 percent), the corporate tax discourages investment in the corporate sector by raising the cost of capital.

More complex calculations support this result. For example, a Congressional Research Service report estimates, under realistic assumptions, the total effective Federal income tax rate on corporate equity (taking into account both corporate level and shareholder level taxes) to be 48 percent, compared to 28 percent for noncorporate

equity.¹² Therefore, some corporations fail to undertake investments that would be profitable if the tax burden on corporate and noncorporate investments were the same. Moreover, for some business enterprises, the added corporate taxes exceed the nontax benefits of incorporation, causing such businesses to forego those benefits and to operate instead in noncorporate form. Figure 1.1 illustrates the differences in taxation of equity investments in corporate and non-corporate businesses.

The bias against corporate sector investments compared with investments in the noncorporate sector reduces the productivity of the nation's capital investments and reduces potential national income. See Chapter 13. This reduction in productivity is a hidden cost of the corporate tax. In addition, the classical system encourages corporations to convert to noncorporate form, thereby abandoning the benefits of incorporation.¹³

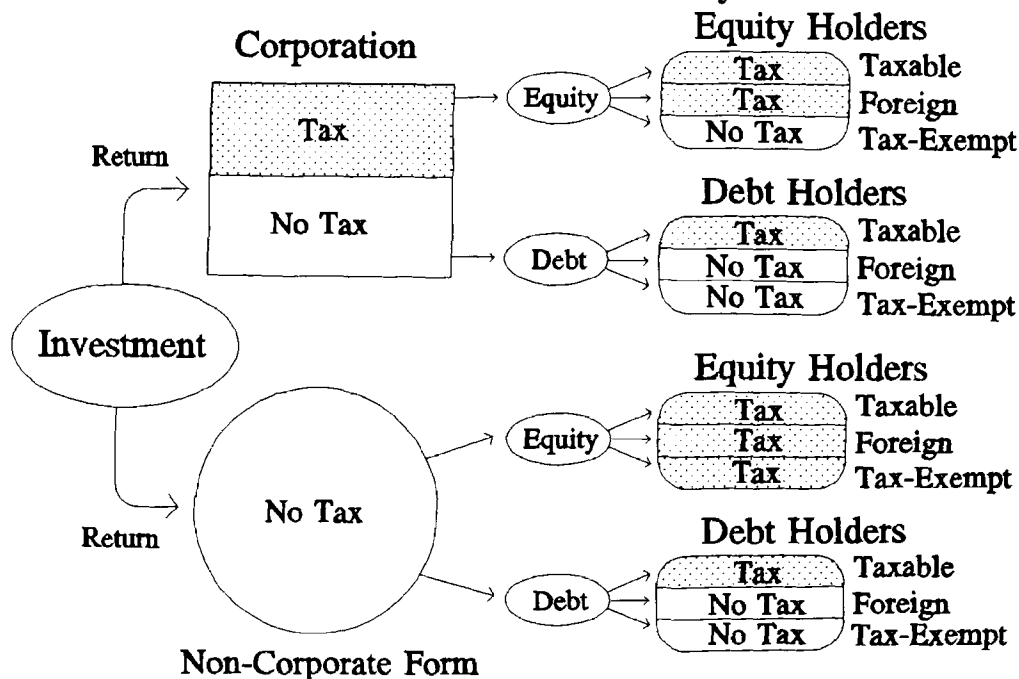
Certain tax provisions mitigate this tax bias against corporate investment. First, by using debt to finance investments, corporations can reduce

the relative tax advantage of noncorporate firms. Considering only tax costs, corporate and noncorporate entities face the same cost of debt financed capital, because interest paid is deductible. Thus, corporations can reduce the difference in tax burdens for total investment by financing new investment with debt. Increases in debt may, however, increase the risk of financial distress or bankruptcy. Second, accelerated cost recovery deductions provide, in effect, an interest-free government loan to finance new investment. These deductions lower the total cost of capital for both corporate and noncorporate firms, but because corporate tax rates generally exceed individual tax rates, corporations realize greater tax benefits from accelerated depreciation. Thus, such deductions reduce, but do not eliminate, the additional tax burden on corporate equity investments.

Corporations also can reduce the distortion between corporate and noncorporate investments by distributing corporate income to shareholders through share repurchases and other nondividend distributions. The advantage of a nondividend

distribution is that it allows shareholders to recover the cost (or basis) of their shares, with any excess generally taxed as capital gains. Current law provides a slight rate preference for capital gains of individuals (a maximum rate of 28 percent compared with a maximum of 31 percent on other income). Capital gains also benefit from the deferral permitted under current law, because shareholders do not recognize gain until stock is sold, and capital assets receive a tax-free step-up in basis at death. The preferential tax treatment of capital gains reduces, but does not eliminate,

Figure 1.1
Distortions Under the Classical System¹



¹The figure does not take into account tax preferences or taxes imposed by other countries.

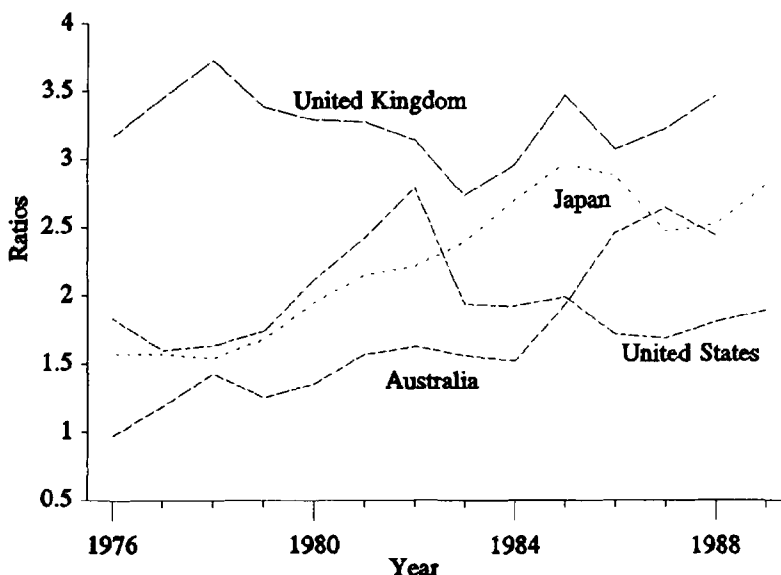
the distorting effect of the current corporate tax system on corporate level investment.

International comparisons add perspective on the effect of the corporate tax on the U.S. corporate sector. One measure is the ratio of corporate investment to investment in housing, which provides a comparison of resource allocation in different economies. Figure 1.2 presents the ratio of corporate gross fixed investment relative to private residential investment in the United States and three other industrialized countries for which data are available since 1976. Throughout the period, the United States had a lower ratio than the United Kingdom. Although the U.S. ratio exceeded that for Japan and Australia until the early 1980s, corporate investment relative to housing investment has tended upwards over the whole period for Japan and Australia while the ratio for the United States has remained fairly stable, except for the 2 years following the Economic Recovery Tax Act of 1981. Indeed, for the last 4 years for which data are available, the United States has had essentially the lowest corporate investment per dollar of housing investment of any of the four nations. A similar picture

of relatively low corporate investment in the United States is depicted in Figure 1.3, which presents the ratio of investment (net of depreciation) in the corporate sector relative to the total noncorporate sector (households and unincorporated businesses combined) during the same period for the same four countries plus France. By this measure, the United States had the lowest ratio of corporate to noncorporate investment during the last 3 years for which data are available for any of the five nations.

Another useful international comparison is the spread between the pre-tax return on corporate investment and the cost of funds in the United States and other countries. This spread, or corporate "tax wedge," generally depends upon the type of asset acquired, the corporate tax rate, the capital recovery allowances, the rate of inflation, and various other country specific factors. Table 1.1 presents a listing of preliminary OECD calculations of the 1991 corporate tax wedge based on a standardized mix of assets and sources of funding for a manufacturer located in several OECD member countries. According to these data, the corporate tax wedge in the United States is higher than in France or Germany, is approximately the same as in the U.K., and is lower than the tax wedge in Canada and Japan.

Figure 1.2
Ratio of Corporate Investment Relative to Residential Investment in Four Countries, 1976-1989



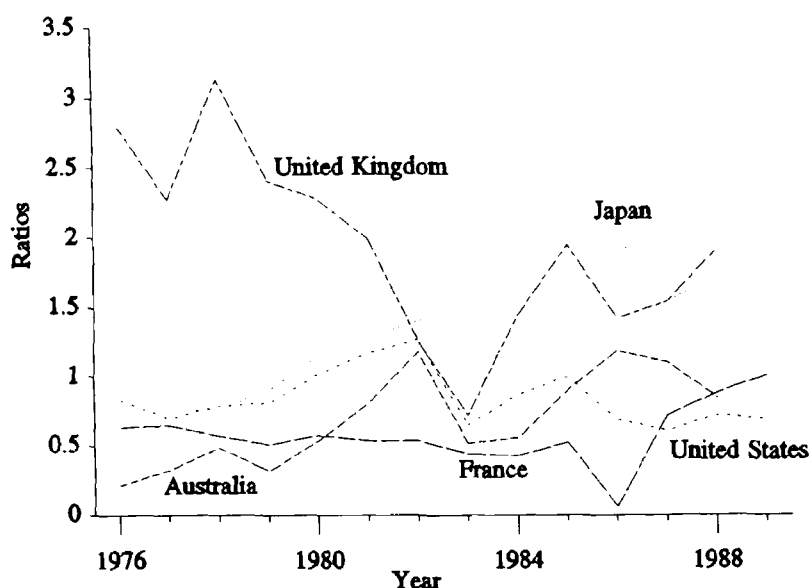
Source: Organisation for Economic Co-operation and Development, National Accounts (1976-1989).

Corporate Capital Structure

Corporations have three alternatives for financing new investments: (1) issuing new equity, (2) using retained earnings, or (3) issuing debt. There can be important nontax benefits and costs of alternative corporate financing arrangements, and the tax system should avoid prejudicing financial decisions.

The current classical corporate tax system discriminates

Figure 1.3
Ratio of Corporate Investment Relative to
Noncorporate (including Household) Investment
in Five Countries, 1976-1989



Source: Organisation for Economic Co-operation and Development, National Accounts (1976-1989).

Table 1.1
Corporate Tax Wedges for
New Investments in Manufacturing
1991

Country	Corporate Tax Wedge ¹
Canada	1.2
France	0.4
Germany	0.6
Japan	1.4
United Kingdom	0.9
United States	0.8

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¹The difference between the pre-corporate tax real rate of return and 5 percent (the real interest rate). The calculations assume no personal taxes and an inflation rate of 4.5 percent for all countries. The weights for the proportion of investment in each type of asset and the proportion of finance from each source of funds are assumed to be the same for each country: 50 percent for machinery, 27 percent for buildings, and 23 percent for inventories and 35 percent for debt, 10 percent for new equity, and 55 percent for retentions.

Source: Organisation for Economic Co-operation and Development, preliminary unpublished estimates.

against equity financing of new corporate investment. See Figure 1.1. Because of the two levels of taxation of corporate profits, the cost of equity capital generally exceeds the cost of debt capital. The Congressional Research Service estimates, under realistic assumptions, the total effective Federal income tax rate on corporate debt to be 20 percent, compared with 48 percent for corporate equity.¹⁴ Moreover, the total effective tax rate on debt can be negative. The lower effective tax rate for debt financed corporate investment than for equity financed corporate investment encourages the use of debt by corporations, assuming nontax factors that affect financing decisions do not change.

If a corporation borrows from an individual to finance an investment, the corporation deducts the interest payments from its taxable income and is therefore not taxed on the investment's pre-tax return to the extent of interest payments, although the lender is taxable on the interest at the individual tax rate.¹⁵ Consequently, to the extent that corporations finance investment with debt, current law does not distort the choice between investment in the corporate and noncorporate sectors. Using the assumptions in the numerical example set forth under "Organizational Form," above, for a 100 percent debt financed corporate

investment, the cost of capital is 10 percent ($0.10 \times (1 - 0.2) = 0.08$, the required rate of return). This cost is well below the 15.2 percent cost of capital for equity financed investments for corporations that distribute income as dividends, and is the same as the cost of capital for a non-corporate investment.

Recent Trends in Corporate Debt

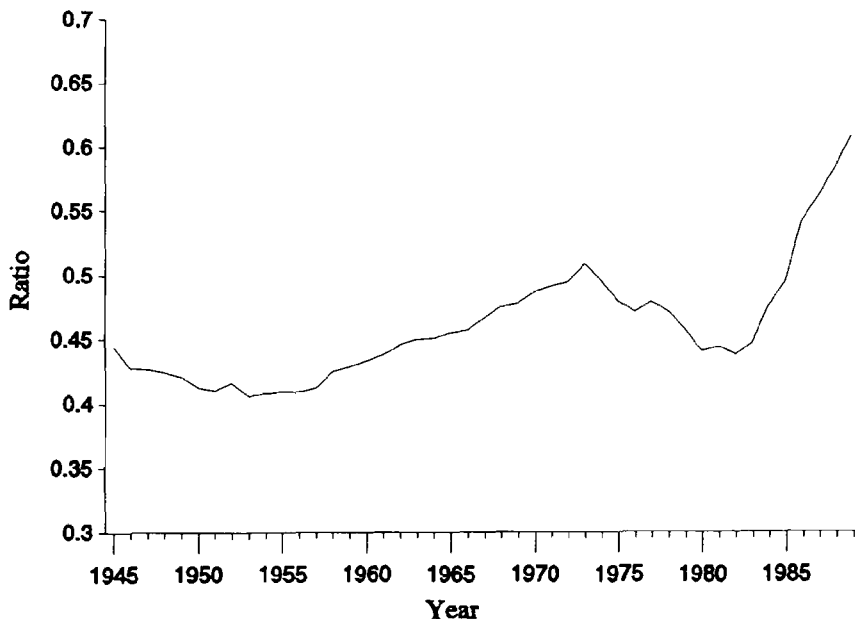
Historical data show U.S. corporate debt to be at relatively high levels by postwar standards, with some, but not all, measures growing at an unusually rapid pace in the 1980s. Because there is no single, universally agreed-upon measure of debt, the discussion below considers trends based on alternative measures.

One group of debt measures focuses on corporate balance sheets: the ratio of debt to total assets. The debt to asset ratio can be computed using either book value (the par value of debt and the historical cost of assets as reported for financial accounting purposes) or market value. Figure 1.4 displays one book value measure, the

ratio of credit market debt to the book value of tangible assets for nonfinancial corporations, based on Federal Reserve Board data. This ratio grew from 43 percent in 1948 to 61 percent in 1989. Although the ratio generally increased over the postwar period, it declined sharply beginning in 1975 and continuing through the mid 1980s. Following that decrease, the ratio began to rise again and by 1989 had reached a postwar high of 61 percent. In 1989, this book-value debt to asset ratio was more than 17 percentage points higher than in 1980, but only 10 percentage points higher than the pre-1980s peak of 51 percent reached in 1973.

Figure 1.5 presents Federal Reserve Board data showing the ratio of the market value of debt to the market value of the firm (debt plus equity) for nonfinancial corporations from 1961 through 1989. Like the book-value measure, the market-value ratio indicates that corporate debt has generally increased since 1961. In 1961, debt represented 26 percent of the total market value of the capital stock of nonfinancial corporations compared to 38 percent of total market value in 1989. The market-value data, however, suggest that the dramatic increase in corporations' use of debt occurred in the middle 1970s. Indeed, the market-value ratio peaked at 47 percent in 1974, a year in which the stock market fell sharply. During the 1980s, the market-value ratio does not show a discernible upward trend because rising stock market prices largely offset the growth in the dollar amount of debt during this period. In contrast, the book-value measure described in the preceding paragraph shows a large increase during the 1980s, because stock market growth is not reflected directly in the book-value measure, and thus does not offset the rising dollar volume of debt.¹⁶

Figure 1.4
Ratio of Credit Market Debt to the
Book Value of Tangible Assets
Nonfinancial Corporations

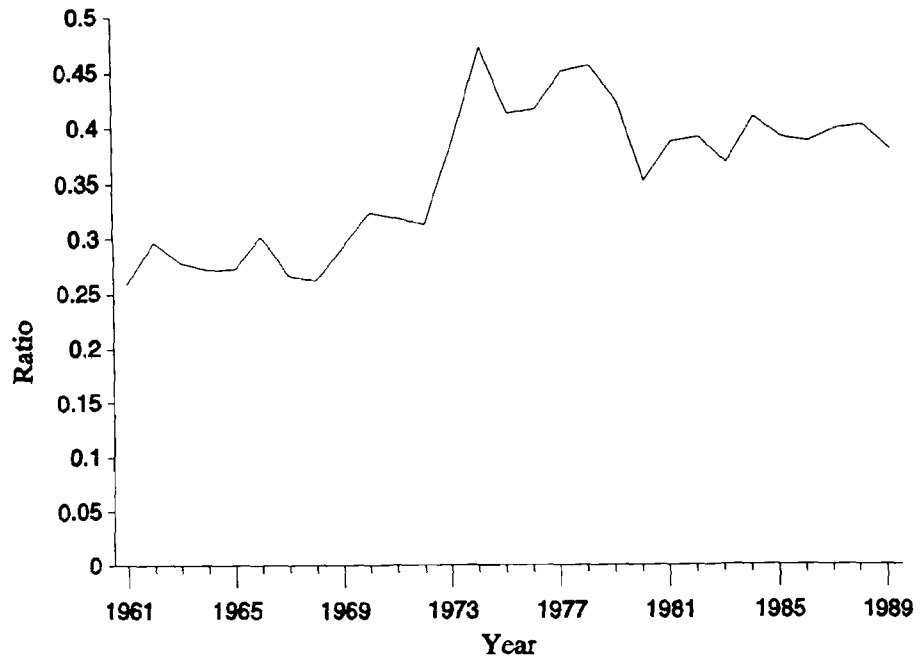


Source: Federal Reserve Board, *Flow of Funds Accounts* (various issues).

A second measure of leverage focuses on the importance of debt in corporations' sources of additional funds rather than corporations' total outstanding debt. See Table 1.2. Over the entire postwar period, equity finance was dominant. For nonfinancial corporations, retained earnings and net new equity issues accounted for roughly 78 percent of funds raised. Debt provided the balance, divided about equally between private issues (bank loans and private placements) and public issues (bonds). Relative financing patterns changed during the 1980s. While corporations continue to rely heavily on retained earnings, they have sharply adjusted the composition of external finance. Most notably, corporations have undertaken substantial repurchases of equity, financed mainly with debt.¹⁷ In (current) dollar terms, this pattern is illustrated in the left panel of Figure 1.6. The increase in nonfinancial corporate debt during the early and middle 1980s was largely matched by a reduction in outstanding equity. As shown in the right panel of Figure 1.6, nonfinancial corporations relied significantly more on internal funds (retained earnings) during the 1980s than was the case for the postwar period as a whole.

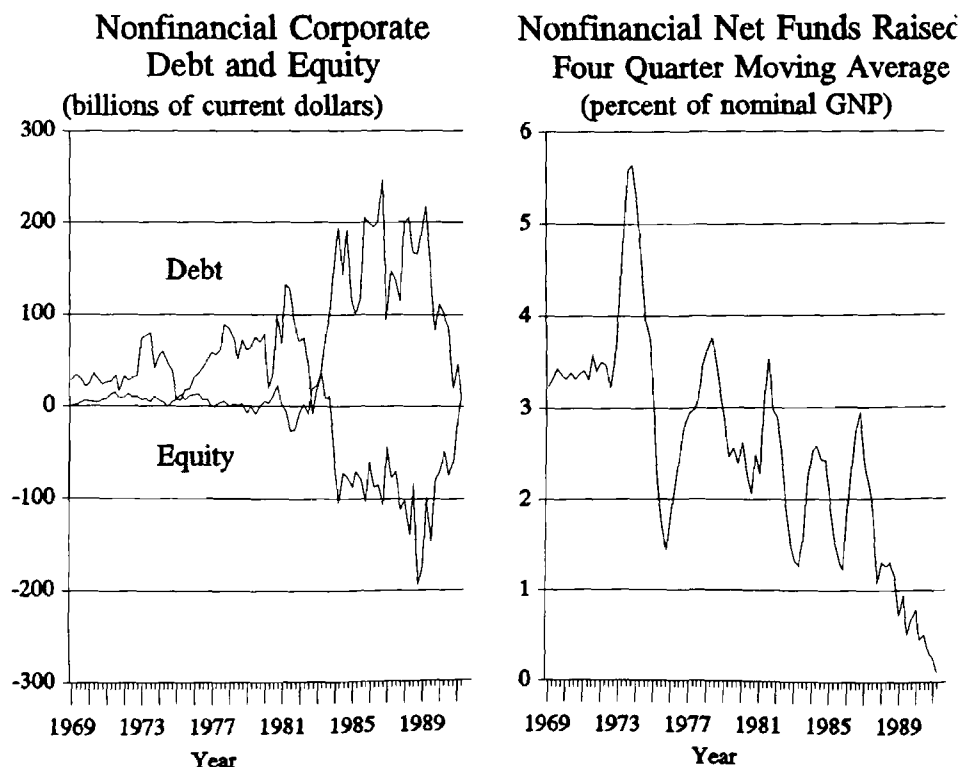
Recent evidence suggests that share repurchases have contributed to the increase in

Figure 1.5
Ratio of Market Value of Debt to Market Value of the Firm
Nonfinancial Corporations



Source: Federal Reserve Board, unpublished estimates.

Figure 1.6
Changing Sources of Funds for the Corporate Sector



Source: Strongin (1991).

Table 1.2
Sources of Funds, Nonfinancial Corporations, 1946-1990

Year	Amount (millions of dollars)				Shares		
	Internal Funds	New Debt Issues	Net New Equity Issues	Total Funds	Internal Funds	New Debt Issues	Net New Equity Issues
1946	\$8,503	\$6,103	\$1,018	\$15,624	54.4%	39.1%	6.5%
1947	13,335	7,306	1,093	21,734	61.4%	33.6%	5.0%
1948	19,651	6,398	1,000	27,049	72.6%	23.7%	3.7%
1949	20,024	1,826	1,212	23,062	86.8%	7.9%	5.3%
1950	18,539	6,772	1,288	26,599	69.7%	25.5%	4.8%
1951	20,761	8,770	2,107	31,638	65.6%	27.7%	6.7%
1952	22,457	6,852	2,320	31,629	71.0%	21.7%	7.3%
1953	22,334	4,022	1,766	28,122	79.4%	14.3%	6.3%
1954	24,403	4,714	1,583	30,700	79.5%	15.4%	5.2%
1955	29,943	8,557	1,719	40,219	74.4%	21.3%	4.3%
1956	30,045	10,397	2,250	42,692	70.4%	24.4%	5.3%
1957	31,983	9,587	2,441	44,011	72.7%	21.8%	5.5%
1958	30,659	8,395	1,968	41,022	74.7%	20.5%	4.8%
1959	36,434	10,150	2,078	48,662	74.9%	20.9%	4.3%
1960	35,842	9,976	1,365	47,183	76.0%	21.1%	2.9%
1961	36,895	9,853	2,121	48,869	75.5%	20.2%	4.3%
1962	43,219	12,591	369	56,179	76.9%	22.4%	0.7%
1963	46,967	12,245	(341)	58,871	79.8%	20.8%	-0.6%
1964	52,309	12,667	1,145	66,121	79.1%	19.2%	1.7%
1965	59,098	18,931	(28)	78,001	75.8%	24.3%	-0.0%
1966	63,274	23,451	1,259	87,984	71.9%	26.7%	1.4%
1967	64,250	24,924	2,397	91,571	70.2%	27.2%	2.6%
1968	65,766	27,677	(159)	93,284	70.5%	29.7%	-0.2%
1969	65,195	28,995	3,406	97,596	66.8%	29.7%	3.5%
1970	62,693	28,484	5,694	96,871	64.7%	29.4%	5.9%
1971	74,614	25,986	11,435	112,035	66.6%	23.2%	10.2%
1972	86,214	31,463	10,922	128,599	67.0%	24.5%	8.5%
1973	93,704	68,439	7,883	170,026	55.1%	40.3%	4.6%
1974	88,972	50,835	4,097	143,904	61.8%	35.3%	2.8%
1975	124,249	13,171	9,908	147,328	84.3%	8.9%	6.7%
1976	141,272	40,138	10,524	191,934	73.6%	20.9%	5.5%
1977	164,401	66,695	2,727	233,823	70.3%	28.5%	1.2%
1978	181,914	70,970	(101)	252,783	72.0%	28.1%	-0.0%
1979	197,206	68,142	(7,836)	257,512	76.6%	26.5%	-3.0%
1980	199,772	58,206	10,375	268,353	74.4%	21.7%	3.9%
1981	239,098	104,085	(13,450)	329,733	72.5%	31.6%	-4.1%
1982	241,901	46,567	1,900	290,368	83.3%	16.0%	0.7%
1983	285,217	56,521	20,000	361,738	78.8%	15.6%	5.5%
1984	335,885	170,828	(78,975)	427,738	78.5%	39.9%	-18.5%
1985	351,815	134,260	(84,500)	401,575	87.6%	33.4%	-21.0%
1986	344,294	209,718	(84,975)	469,037	73.4%	44.7%	-18.1%
1987	372,448	123,749	(75,500)	420,697	88.5%	29.4%	-17.9%
1988	391,371	184,633	(129,500)	446,504	87.7%	41.4%	-29.0%
1989	380,010	159,537	(124,150)	415,397	91.5%	38.4%	-29.9%
1990	369,458	86,186	(63,000)	392,644	94.1%	22.0%	-16.0%

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Office of Tax Policy

Source: Federal Reserve Board, Flow of Funds Accounts (various issues).

corporate debt. Rather than simply replacing dividends, repurchases have been financed primarily by debt, which results in higher interest costs.¹⁸ Increased share repurchases, therefore, accounts for part of the recent increases in net interest payments, and may be viewed as one method that firms have used to reduce their corporate tax liabilities. Table 1.3 presents estimates of the portion of net interest payments of nonfinancial corporations that might be attributable to "excess" share repurchases of the 1980s, where the excess is the difference between actual repurchases and the levels that would have occurred if the ratio of repurchases to dividends had continued at its average for the 1970s.¹⁹ The table shows that, by 1990, over one quarter of the interest payments of nonfinancial corporations was attributable to increased share repurchases.²⁰

A third measure of corporate debt focuses on the ability of corporations to service their debt. Corporations meet their interest payments out of the cash available after other payments, such as those for labor, materials, energy, and taxes. Cash flow, calculated as after-tax profits plus depreciation, serves as a measure of funds from which a corporation can cover its interest payments. Figure 1.7 shows the ratio of net interest to cash flow for nonfinancial corporations from 1948 through 1990. These data show a generally upward trend over time with substantial increases in the late 1960s and early 1970s, again in the early 1980s, and in the last 2 years (1989 and 1990). After reaching 19 percent in 1982, the ratio of net interest to cash flow showed little upward movement through 1988 but has increased in 1989 and 1990. By 1990, it reached a postwar high of 19 percent. Firm level data document a similar pattern.²¹

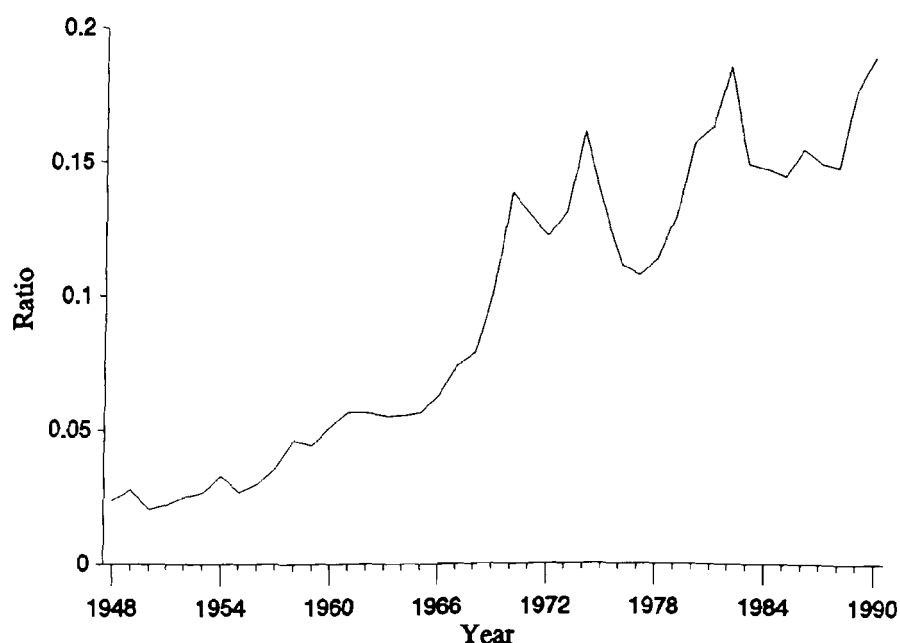
Table 1.3
Estimates of Maximum Amount of
Interest Attributable to
Increased Share Repurchases
1980-1990

Year	Percentage of Net Interest of Nonfinancial Corporations
1980	1.0
1981	0.9
1982	1.3
1983	1.8
1984	5.4
1985	11.2
1986	12.4
1987	18.2
1988	23.6
1989	23.4
1990	25.5

Department of the Treasury
Office of Tax Policy

Source: Office of Tax Policy calculations based on Standard and Poor's COMPUSTAT data and on information in Poterba (1987).

Figure 1.7
Ratio of Net Interest to Cash Flow, 1948-1990
Nonfinancial Corporations



Sources: Department of Commerce (1986) and Department of Commerce, *Survey of Current Business* (July, various years).

Some economists also are concerned that high debt-service burdens (by postwar standards) during the 1980s have been associated with an increase in corporate bankruptcies. While bankruptcies followed a cyclical pattern over most of the postwar period, they remained high (relative to postwar standards) throughout the expansion following the 1981-1982 recession.²²

Benefits and Costs of Corporate Debt

Debt finance may have nontax benefits. Analysts most sanguine about high levels of corporate debt and debt-service burdens typically maintain that the discipline of debt is desirable because it gives lenders indirect means to monitor the activities of managers. This need for supervision owes to the separation between ownership and management that is characteristic of the traditional corporate structure.²³

A disadvantage of higher debt levels is that they can increase nontax costs of debt, including costs associated with financial distress. Even when corporations avoid formal bankruptcy proceedings, they incur costs when they cannot meet their interest obligations or when debt covenants restrict operating flexibility. The costs include extra demands on executives' time, supply disruptions, declines in customers' confidence, and, frequently, significant legal fees. Corporations therefore must evaluate the tax and nontax benefits of additional debt relative to these costs. Tax-induced distortions in capital structure can entail significant efficiency costs.²⁴

Corporate Dividend Distributions

The current system of corporate taxation also may distort a corporation's choice between distributing or retaining earnings and, if amounts are distributed, whether they are paid in the form of a nondividend distribution, such as a share repurchase. Differences in effective tax rates on dividends and retained earnings are significant.²⁵

Assessing the efficiency costs of such tax differentials requires an analysis of motives for corporate dividend distributions in the presence of

relatively high taxes on such dividends compared to capital gains. This Report assumes that corporate dividends offer special nontax benefits to shareholders that offset their tax disadvantage,²⁶ and, accordingly, that corporations set dividend payments so that the incremental nontax benefit of dividends paid equals their incremental tax cost. Under this assumption, the amount of dividends paid out is expected to decrease as the tax burden on dividends relative to capital gains increases; empirical studies are consistent with this prediction.²⁷ Investor level taxes on dividends also raise the cost of capital (and thereby reduce investment) to the extent that corporations pay out earnings as dividends. Thus, under the assumptions used in this Report, dividend taxes reduce the payout ratio and real investment incentives.

The growth in share repurchases in the last decade supports this view of the linkage between the corporate tax and corporate dividends. Share repurchases provide a means of distributing corporate earnings with, in many cases, more favorable shareholder level tax treatment than dividend distributions. While a shareholder pays tax on the full amount of a dividend at ordinary income rates, the shareholder generally pays tax on the proceeds of a share repurchase only to the extent they exceed share basis and, in some cases, at a preferential capital gains rate. Share repurchases increased substantially from 1970 to 1990, growing from \$1.2 billion (or 5.4 percent of dividends) to \$47.9 billion (or 34 percent of dividends), and peaking in 1989 at \$65.8 billion (or 47 percent of dividends).²⁸

Savings and Investment

The corporate tax increases the tax burden on the returns from saving and investing. The magnitudes of tax-induced distortions of investment and savings decisions depend on two factors: the size of the spread (or wedge) between pre-tax and after-tax returns and the responsiveness of savers and investors to changes in after-tax returns. The more responsive savers and investors are to changes in rates of return, the larger the effect of a tax wedge of a given size.²⁹ The Report documents significant wedges between pre-tax and

after-tax returns to saving and investment. While empirical evidence on the effect of changes in the after-tax return on savings is in conflict, there is substantial empirical evidence documenting important effects of capital taxation on investment.³⁰ See Chapter 13.

In the presence of international capital flows, the U.S. corporate income tax can reduce incentives to invest in the United States, even if it has a relatively small effect on saving by U.S. citizens.

1.C NEUTRALITY AS THE GOAL OF INTEGRATION

Integration would reduce and in some cases eliminate the distortions of business decisions under the current tax system by coordinating the individual and corporate income tax systems so corporate income is taxed only once. Broadly speaking, corporate tax integration seeks to reduce tax-induced distortions in the allocation of capital by taxing corporate income once, rather than zero, once, or multiple times as under the current regime. Integration has attracted the attention of tax policymakers for many years. The Department of the Treasury and the Congress have considered integration on several occasions, most recently in 1984 and 1985.³¹ Many industrial countries have long had integrated systems; several others have recently adopted integration.³²

The classical system of corporate taxation is inefficient because it creates differences in the taxation of alternative sources of income from capital. Under the classical system, a taxpayer conducting business in corporate form faces a different tax burden on equity financing than a taxpayer conducting the same business in non-corporate form. A corporation that raises capital in the form of equity faces a different tax burden than a corporation that raises the same amount of capital from debt. A similar disparity exists in the treatment of corporations that finance with retained earnings and those that pay dividends and finance with new equity. This Report provides evidence that these distortions impose significant economic costs, including reduced financial

flexibility of corporations and an inefficient allocation of capital.

A traditional goal of integration proposals has been to tax corporate income only once at the tax rate of the shareholder to whom the income is attributed or distributed.³³ Under the traditional approach, corporate income ideally would be taken into account when earned in determining each individual's economic income and would be taxed at each individual's marginal tax rate.³⁴ To illustrate, assume that a corporation has \$100 of income on which it pays \$34 in corporate tax. The corporation's shareholder has a marginal rate of 28 percent. Traditional proposals would typically treat the shareholder as having received income of \$100, but credit the shareholder with a tax payment of \$34. Since the shareholder owes only \$28 in tax on \$100 of income, traditional proposals typically provide that the shareholder is entitled to a \$6 refund or credit against other taxes.

Assuring that corporate income is taxed once, but only once, does not require that corporate income be taxed at individual rates, however. Attaining a single level of tax—with the most significant efficiency gains we project from any system of integration—can be achieved with a schedular system in which all corporate income is taxed at a uniform rate at the corporate level without regard to the tax rate of the corporate shareholder. Under the current rate structure, in which the corporate rate is slightly higher than the maximum individual rate, there seems little reason to tax corporate income at shareholder rates. In contrast, an integration proposal developed in the late 1970s, when the maximum individual rate on capital income of 70 percent exceeded the corporate rate of 46 percent, might well have required taxation at shareholder rates in order to prevent avoidance of the higher shareholder rates.³⁵

Neutral taxation of capital income will reduce the distortions under the current system.³⁶ Economic efficiency suggests that all capital income should be taxed at the same rate. Accordingly, we place less emphasis than some advocates of integration on either trying to tax corporate

income at shareholder tax rates or on simply trying to eliminate one level of tax on distributed corporate income.

The prototypes advanced in this Report use the corporation not as a withholding agent for individual shareholders (which implies ultimate taxation at shareholder rates), but rather as a means of collecting a single level of tax on capital income at a uniform rate. Nevertheless, Chapter 3 discusses a shareholder allocation prototype, which closely resembles the traditional passthrough methods of integration. We do not recommend adopting shareholder allocation, but it illustrates the problems presented by an integration mechanism that imputes corporate income to shareholders and taxes it at individual rates.

A decision to adopt a schedular system for taxation of business capital is not irreversible. Future policymakers can, if they wish, add refund and crediting mechanisms to achieve the traditional objective of taxing corporate income at the individual shareholder's marginal rate, or they can address the issue by adjusting the corporate rate to more precisely approximate individual rates.³⁷ Our judgment is that neither of these courses is necessary to achieve the principal benefits of an integrated tax system. They are options that can be added once the complexities of transition have been mastered. Deferring them makes the integration prototypes examined in this Report simpler to implement and conserves revenues.

We approach integration primarily as a means of reducing the distortions of the classical system and improving economic efficiency. This Report's emphasis on enhancing neutrality in the taxation of capital income can be summarized in four goals for the design of an integrated tax system:

- Integration should make more uniform the taxation of investment across sectors of the economy. The U.S. corporate system discourages investment in the corporate sector relative to investment in the noncorporate sector and owner-occupied housing.

That is, current law results in too little capital in the corporate sector relative to that elsewhere in the economy. Integration seeks to reduce this distortion.

- Integration should make more uniform the taxation of returns earned on alternative financial instruments, particularly debt and equity. The U.S. corporate tax system discourages corporations from financing investments with equity as opposed to debt. Such a system violates the goal of neutral taxation. Although equalizing the tax treatment of debt and equity need not be the overriding goal of integration, equal treatment follows from the goal of attaining neutral taxation of capital income.
- Integration should distort as little as possible the choice between retaining and distributing earnings. The U.S. corporate system discourages the payment of dividends and encourages corporations to retain earnings or to make nondividend distributions.
- Integration should create a system that taxes capital income once. Imposing double or triple taxation on some forms of capital income while not taxing others violates the objective of achieving neutrality between corporate and noncorporate forms of investment.

Integration is not a cure-all. Even an integrated system cannot attain complete neutrality with respect to the taxation of capital income. One reason is that integration fails to address an important category of tax distortions: distortions in allocating investment capital among assets. These inter-asset distortions are important, and reducing such distortions was an important impetus and goal of the 1986 Act. Because a corporate income tax per se does not cause inter-asset distortions, this Report does not directly address them.³⁸

The integration prototypes analyzed in this Report are income tax systems. The Report does not consider non-income tax reform of corporate taxation. For example, some economists have advocated a corporate cash-flow tax.³⁹ In 1984, the Department of the Treasury rejected substitution of a consumption-based tax for the income tax,⁴⁰ and in the 1986 Act, Congress moved decisively

in the direction of strengthening the individual income tax. So long as the individual tax base is income, we do not believe a corporate cash-flow tax would enhance the neutral treatment of capital income relative to the reforms discussed here.

Revenue concerns also may prevent integration from fully equalizing the taxation of alternative investments. Some integration proposals would reduce government revenue from income taxes. Lost tax revenue must be made up either by increasing other taxes or by reducing government spending. Replacement taxes may create distortions and alter the distribution of tax burdens. See Chapter 13.

Finally, integration does not directly address the general question of whether the overall tax rate on capital income, and hence the overall cost of capital, is too high. If integration eliminates double taxation of corporate source income, the overall tax rate on capital income would fall, other things being the same. Integration must be financed, however, and taxes on other types of capital income might rise. Thus, integration primarily focuses on improving the allocation of the Nation's capital stock, but not necessarily on reducing the overall tax rate on capital income. As Chapter 13 documents, the benefits associated with such improvements are nonetheless substantial.

PART II: PROTOTYPES

INTRODUCTION

This Part presents three prototypes for implementing integration in the United States: (1) a dividend exclusion prototype, (2) a shareholder allocation prototype, and (3) the Comprehensive Business Income Tax (CBIT) prototype.¹

Our trading partners that have integrated their corporate tax systems, including most European countries, as well as Canada and Australia, have all adopted distribution-related integration systems. Such integrated systems retain a separate corporate level tax on undistributed earnings but eliminate part or all of the corporate level tax on corporate earnings distributed to shareholders as dividends. Distribution-related integration can be accomplished by excluding dividends from shareholders' income (a dividend exclusion system), by allowing shareholders a credit for corporate level taxes (an imputation credit system), or by allowing corporations a deduction for dividends (a dividend deduction system).

After considering each of these three alternatives, we determined that a dividend exclusion system would implement in a relatively simple and straightforward manner our policy recommendations. The flexibility of an imputation credit system in responding to important policy issues, such as the treatment of tax preferences, foreign taxes, and tax-exempt and foreign shareholders under integration, does not, in our view, outweigh its complexity in implementation. A dividend deduction system would produce results in many cases contrary to our policy recommendations. Chapter 2 outlines a dividend exclusion prototype, and Chapters 11 and 12 discuss the imputation credit and dividend deduction alternatives. Because an imputation credit system is the mechanism of corporate tax integration most frequently used abroad, we discuss an imputation credit prototype in considerable detail in Chapter 11.²

The Report also examines two integration systems that are not distribution-related.

Chapter 3 describes a shareholder allocation integration prototype, which would extend integration to retained earnings by taxing both distributed and retained corporate earnings at the shareholder's tax rate. Chapter 4 describes the CBIT prototype, which, in effect, would extend a dividend exclusion system to payments of interest in order to equalize the treatment of debt and equity and would tax corporate and noncorporate businesses in the same manner. This Report recommends the dividend exclusion prototype and CBIT for further study. While we do not recommend adopting the shareholder allocation prototype, we include it here to illustrate how a traditional full integration or passthrough model might be implemented and the problems it presents.

Each of these prototypes would move the U.S. tax system in the direction of more neutral taxation of corporate income and, in so doing, would reduce significantly tax-induced distortions in the allocation of capital. The prototypes generally are structured to implement our recommendations on four major issues:

- The benefit of corporate level tax preferences should not be extended to shareholders. Tax preferences, e.g., exempt state and local bond interest and accelerated depreciation, may reduce the corporate level tax, but current law does not extend corporate level tax preferences to shareholders. When corporate earnings sheltered by preferences are distributed to shareholders, they are currently taxed. Integration of the corporate income tax need not become an occasion for expanding the benefits of tax preferences. Therefore, we do not recommend extending corporate level tax preferences to shareholders under integration, and we have attempted to develop administrable rules to reach this result whenever we could do so in a manner compatible with the prototype. See Chapter 5.
- Integration should not reduce the total tax collected on corporate income allocable to tax-exempt investors. Under current law, tax-exempt organizations holding corporate stock, in fact, are not exempt from the corporate level tax imposed on corporate equity investments. Because corporate income is

subject to tax at the corporate level regardless of the exempt status of a shareholder, a tax-exempt organization is exempt only from the shareholder level tax. Integration presents the fundamental question whether under an integrated tax this treatment should continue, or whether integration should reduce the total taxes paid on corporate income allocable to tax-exempt entities. This Report recommends, in general, retaining the current level of taxation of corporate equity income allocable to tax-exempt shareholders. See Chapter 6. The CBIT prototype would introduce a corporate level tax on income allocable to tax-exempt bondholders as well. See Chapter 4.

- Integration should be extended to foreign shareholders only through treaty negotiations, not by statute. The United States generally imposes two levels of tax on foreign equity investment in U.S. corporations (inbound investment). Thus, the United States taxes the business profits of foreign owned domestic companies similarly to the profits of U.S. owned companies and also imposes significant withholding taxes on dividends paid to foreign investors. The basic issue that an integration proposal must resolve for inbound investment is whether, by statute, the United States should continue to collect two levels of tax on foreign owned corporate profits or whether foreign investors should receive benefits of integration similar to those received by domestic investors. This Report generally recommends that foreign shareholders not be granted integration benefits by statute, but

instead that this issue be addressed through treaty negotiations in order to achieve reciprocity. Most of the major trading partners of the United States that have adopted integrated corporate tax regimes have followed this approach. See Chapter 7 and Appendix B.

- Foreign taxes paid by U.S. corporations should not be treated, by statute, identically to taxes paid to the U.S. Government. The United States permits U.S. corporations to credit foreign taxes against U.S. taxes on foreign source income (outbound investment) but taxes shareholders on the distribution of such income without regard to the foreign taxes paid on that income. Treating foreign and U.S. corporate level taxes equally under an integrated system by statute would significantly reduce the current U.S. tax claim against foreign source corporate profits and often would completely exempt such profits from U.S. taxation at both the corporate and shareholder levels. Such unilateral action would result in a significant departure from the current allocation of tax revenues between the source and residence country. We therefore recommend that foreign taxes not be treated, by statute, the same as U.S. taxes. As a consequence, the prototypes generally would retain the foreign tax credit at the corporate level but would continue to tax foreign source income when it is distributed to shareholders. Extending the benefits of integration to foreign source income is more properly accomplished in the context of bilateral treaty negotiations. See Chapter 7.

CHAPTER 2: DIVIDEND EXCLUSION PROTOTYPE

2.A INTRODUCTION AND OVERVIEW OF PROTOTYPE

The dividend exclusion prototype set forth in this chapter would, with few changes in current law, implement many of this Report's key policy recommendations.¹ The principal advantage of the dividend exclusion prototype is its simplicity and relative ease of implementation. We considered an imputation credit prototype that would achieve results similar to the dividend exclusion prototype but at the cost of additional complexity, including an entirely new regime for taxing corporate distributions. Although we do not recommend an imputation credit system, such a system is described in Chapter 11 because it provides useful background for understanding the dividend exclusion prototype. A summary of the prototype follows.

Mechanics. Under the dividend exclusion prototype, corporations would continue to calculate their income under current law rules and pay tax at a 34 percent rate.² Shareholders receiving corporate distributions treated as dividends under current law, however, generally would exclude the dividends from gross income. The prototype requires corporations to keep an Excludable Distributions Account (EDA) to measure the amount of dividends that can be excluded by shareholders—essentially an amount on which corporate taxes have been paid. Thus, the dividend exclusion prototype would apply the corporate tax rate of 34 percent to both distributed and retained income but would eliminate the shareholder level tax on dividends paid from fully-taxed corporate income.³ All other distributions, e.g., interest and returns of capital, would be taxed in the same manner as under current law.

Tax-Exempt Shareholders. The dividend exclusion prototype would automatically retain the current level of taxation of corporate income earned on equity capital supplied by tax-exempt shareholders. Income from equity investments by tax-exempt organizations would be taxed at the corporate level under the current corporate tax

rules but, when distributed, would be exempt from tax at the shareholder level.⁴

Corporate Shareholders. A corporate shareholder would exclude from income excludable dividends received and would add the amount of such dividends to its EDA. The prototype retains the current dividends received deduction for taxable dividends.

Tax Preferences. The prototype retains the corporate tax preferences available under current law and the corporate alternative minimum tax. To avoid extending corporate tax preferences to shareholders, the prototype permits shareholders to exclude only those dividends deemed made out of income that has been taxed fully at the corporate level. Thus, corporate dividends paid to shareholders out of preference income would continue to be taxable as under current law. Mechanically, this is accomplished once the corporation's supply of fully-taxed income (as reflected in the EDA) is exhausted, by making additional dividends taxable to shareholders.⁵ See Section 2.B. As under current law, preference income distributed to tax-exempt shareholders would escape taxation at both the corporate and shareholder levels.

Foreign Source Income. The prototype retains the current foreign tax credit system, including the corporate level indirect foreign tax credit for taxes paid by foreign subsidiaries. The prototype, however, does not treat foreign taxes the same as U.S. taxes in determining the EDA, with the consequence that, as under current law, distributions of foreign earnings that have been shielded by the foreign tax credit at the corporate level are taxable to shareholders when distributed.⁶

Foreign Shareholders. The prototype retains the current 30 percent statutory withholding tax on dividends. In addition, it retains the branch profits tax on earnings considered repatriated from U.S. branches of foreign corporations. Thus, as under current law, inbound investment is subject to two levels of U.S. tax, with reductions in the

rate of withholding tax negotiated through tax treaties.⁷

Capital Gains and Share Repurchases. Chapter 8 discusses the treatment of capital gains on sales of corporate stock and the treatment of share repurchases.

Structural Issues. The dividend exclusion prototype does not require any major changes to current rules concerning the tax treatment of corporate acquisitions. Adopting the prototype does, however, require consideration of rules for the carryover or separation of corporation EDA balances in liquidations and tax-free corporate reorganizations.

Impact on Tax Distortions. Table 2.1 illustrates the impact of the dividend exclusion prototype on the three distortions integration seeks to address: the current law biases in favor of corporate debt over equity finance, corporate retentions over distributions, and the noncorporate over the corporate form. The only difference between the current law treatment of nonpreference, U.S. source business income and its treatment under the dividend exclusion prototype is the taxation of corporate equity income distributed to individuals. Since exclusion of dividends by individuals would remove the individual level tax, the total tax rate on distributed earnings would be reduced to the corporate rate (t_c , generally 34 percent), except for the influence of investor level taxes on foreign investors. This reduction would narrow (but not eliminate) the rate differential between distributed corporate and noncorporate equity income and between corporate equity income and interest. These reductions in differentials would help reduce the debt-over-corporate-equity-finance and noncorporate-over-corporate form distortions. The tax rate on undistributed corporate equity income would now be higher for individuals than the rate on distributed corporate equity income, so the tax bias against corporate distributions would likely be reversed, in the absence of a DRIP. See Chapter 9. For tax-exempt and foreign investors, there would be no change in the tax treatment of nonpreference, U.S. source business income. (The

tax bias against distributed earnings thus would remain for foreign investors.)⁸

2.B THE NEED FOR A LIMITATION ON EXCLUDABLE DIVIDENDS

In General

An exclusion from shareholder level tax for all dividends received not only would eliminate the

Table 2.1
Total U.S. Tax Rate on a Dollar of NonPreference, U.S. Source Income from a U.S. Business Under Current Law and the Dividend Exclusion Prototype

Type of Income	Current Law	Dividend Exclusion Prototype
I. Individual Investor is Income Recipient		
Corporate Equity:		
Distributed	$t_c + (1 - t_c)t_i$	t_c
Undistributed	$t_c + (1 - t_c)t_g$	$t_c + (1 - t_c)t_g$
Noncorporate Equity	t_i	t_i
Interest	t_i	t_i
Rents and Royalties	t_i	t_i
II. Tax Exempt Entity is Income Recipient		
Corporate Equity:		
Distributed	t_c	t_c
Undistributed	t_c	t_c
Noncorporate Equity	t_c	t_c
Interest	0	0
Rents and Royalties	0	0
III. Foreign Investor is Income Recipient		
Corporate Equity:		
Distributed	$t_c + (1 - t_c)t_{WD}$	$t_c + (1 - t_c)t_{WD}$
Undistributed	t_c	t_c
Noncorporate Equity	t_{WN}	t_{WN}
Interest	t_{WI}	t_{WI}
Rents and Royalties	t_{WR}	t_{WR}

Department of the Treasury
Office of Tax Policy

t_c = U.S. corporate income tax rate.
 t_i = U.S. individual income tax rate.
 t_g = U.S. effective individual tax rate on capital gains.
 $t_{WD}, t_{WN}, t_{WI}, t_{WR}$ = U.S. withholding rates on payments to foreigners of dividends, noncorporate equity income, business interest, and rents and royalties, respectively. Generally varies by recipient, type of income, and eligibility for treaty benefits and may be zero.

double tax on distributed corporate income, but also would eliminate the current shareholder level tax that serves as the only U.S. tax on distributed income that has been sheltered from corporate level tax by preferences and on distributed foreign source income that has borne only foreign taxes. To prevent the dividend exclusion system from extending preferences to shareholders and to ensure that foreign source income that has not borne U.S. tax at the corporate level is subject to tax at the shareholder level when distributed, the dividend exclusion prototype limits the amount of dividends that can be excluded at the corporate level to an amount that has been subject to U.S. tax at the corporate level. Thus, as under current law, corporate preference income would generally remain free of tax until distributed and, when distributed, would be taxed at shareholder rates. Foreign source income sheltered by foreign tax credits at the corporate level also would continue to be taxed when distributed to shareholders. See Chapters 5 and 7.

The prototype treats dividends as made first from a corporation's fully-taxed income, rather than from preference or foreign source income. Stacking dividends first against fully-taxed income should permit many corporations to continue their current dividend policy while paying excludable dividends. Even corporations with substantial preference or foreign source income can continue to pay dividends without incurring any additional corporate level tax, although the dividends would be taxable at the shareholder level. We considered, but rejected, the alternative of imposing a nonrefundable "compensatory tax" at the corporate level on distributions of preference or foreign source income.⁹ See Chapter 5. A nonrefundable compensatory tax not only reduces cash available to pay dividends but also increases the total tax burden on dividends paid to tax-exempt and foreign shareholders as well as to any shareholder taxed at less than a 34 percent rate; on the other hand, imposition of such a tax would permit uniform dividend exclusion. On balance, concern that a compensatory tax would distort the dividend decisions of corporations, particularly those with large numbers of tax-exempt or foreign shareholders, by requiring them to pay an extra tax to

maintain their current dividend policy, led us to the alternative described here. Section 11.B discusses a compensatory tax in more detail.

The prototype retains the corporate alternative minimum tax (AMT), which functions, as under current law, to curb the excessive use of tax preferences at the corporate level. The prototype treats AMT as taxes paid for purposes of determining the corporation's supply of fully-taxed income, but effectively converts income taxed at the 20 percent corporate AMT rate to a smaller amount of income taxed at the regular 34 percent rate.¹⁰

Identifying Distributed Preference Income: the EDA

To determine whether dividends are paid out of fully-taxed income or preference income, the prototype requires corporations to maintain an Excludable Distributions Account (EDA). Amounts included in the EDA are considered "fully-taxed income." Dividends paid are stacked first against fully-taxed income.

As a mechanical matter, the EDA measures a corporation's supply of fully-taxed income based on the taxes actually paid by the corporation. The corporation simply tracks actual corporate taxes paid and then converts that amount into an equivalent amount of after-tax income taxed at a 34 percent rate, using the following formula:

Annual additions to EDA =

$$\left[\frac{\text{U.S. tax paid for taxable year}}{.34} - \text{U.S. tax paid for taxable year} \right]$$

+ excludable dividends received

Thus, for each \$34 of taxes paid (whether regular corporate tax or AMT), the corporation may pay \$66 of excludable dividends, i.e., each \$1 of corporate taxes paid supports \$1.94 of excludable dividends or each dollar of excludable dividends must be supported by at least \$0.52 of corporate taxes paid.¹¹ The effect of calculating additions to the EDA at 34 percent is to ensure that distributed income has been taxed at the full corporate rate, even though, if taxable to shareholders, the

dividend would be taxed, at most, at the 31 percent maximum individual rate.

The EDA increases when a corporation pays taxes (including estimated taxes) or, as described under "Corporate Shareholders" below, receives an excludable dividend from another corporation. The EDA decreases when a corporation pays a dividend or receives a refund of taxes paid. Dividends paid when the EDA has been reduced to zero are treated as paid from preference income and are fully includable in shareholder's income.

Example. A corporation with a zero initial EDA balance earns \$75 of taxable income and \$25 of exempt income. The corporation pays \$25.50 of corporate tax and has \$74.50 available for distribution to shareholders. The \$25.50 of tax supports the addition of \$49.50 to the corporation's EDA ($\$25.50/.34 - \25.50). If the corporation actually distributes \$74.50, only \$49.50 of the dividend is excludable, because the EDA balance is \$49.50. The remaining \$25 represents a distribution of preference income that is fully subject to tax at the shareholder level.

The prototype requires corporations to report annually to shareholders and the IRS the excludable and taxable portions of dividends. In the preceding example, the corporation would report the first \$49.50 distributed as an excludable dividend and the next \$25 distributed as a taxable dividend. Shareholders would include taxable dividends in income as under current law. Corporations also would report to the IRS annually the adjustments to and balance in the EDA.

Adjustments to a corporation's tax liability for a prior year are reflected as adjustments to the corporation's EDA in the current year. Making audit adjustments to the EDA in the current year avoids the problem of recharacterizing dividends paid in prior years.¹² An increase in a prior year's tax liability increases the EDA in the year the adjustment is made and the additional tax is paid, and a decrease in a prior year's tax liability, e.g., through carryback of a net operating loss, gives rise to a refund and requires a corresponding reduction in the EDA in the year the refund is received. Refunds would be limited to the balance

in the corporation's EDA.¹³ Refunds in excess of the EDA balance would be carried forward to be applied against future corporate taxes. Similarly, an NOL carryback would not be permitted to reduce the EDA below zero; losses in excess of this amount would be carried forward.¹⁴

Corporate Shareholders

Current law limits the imposition of multiple levels of corporate taxation by permitting corporate shareholders to deduct some or all of their dividends received from domestic corporations, depending on the degree of affiliation with the distributing corporation.

Under the prototype, distributions from an EDA are excludable from the income of any shareholder, including a corporate shareholder. The recipient corporation adds the amount of excludable dividends it receives to its EDA. This prevents the imposition of a second level of tax when excludable dividends are redistributed to the shareholders of the recipient corporation.

The prototype retains current law for taxable dividends (dividends in excess of the distributing corporation's EDA) received by corporations. Thus, taxable dividends received from a U.S. corporation (and a portion of dividends from certain foreign corporations engaged in business in the United States) would entitle the recipient to a dividends received deduction (DRD). A recipient corporation allowed only a 70 or 80 percent DRD would pay tax on the remainder of the dividend. Any taxes paid on the dividend would be added to the EDA, determined in accordance with the general formula for computing additions to the EDA set forth above. To the extent the recipient corporation qualifies for the DRD, the prototype defers the investor level tax on preference income until it is ultimately distributed to individual shareholders.¹⁵

Anti-abuse Rules

We have considered whether special rules are necessary to limit a corporation's ability to target (or "stream") excludable dividends to taxable

shareholders and otherwise taxable dividends to tax-exempt shareholders. Streaming undercuts the prototype's preservation of the current level of taxation of corporate equity income paid to tax-exempt and foreign shareholders by denying refunds of corporate taxes paid. On the other hand, tax-exempt and foreign investors may enter into a variety of ordinary business structures that enable them to receive income not taxed at the corporate level, e.g., by holding debt instead of equity.¹⁶ These arrangements are permitted under current law, and they are not limited under the prototype. The ability to arrange a capital structure to minimize taxes emphasizes the point that eliminating the double tax on dividends will not, by itself, eliminate the tax system's current bias in favor of debt financing. A more comprehensive approach such as CBIT (described in Chapter 4) is required to address this systemic bias.

In the dividend exclusion prototype, concerns about streaming are balanced against the cost of complexity by restricting only a limited class of streaming transactions. In the prototype, current law rules that apply in analogous situations are extended.¹⁷ First, the prototype adopts a 45 day holding period requirement for dividends to be excludable to prevent tax-exempt shareholders from routinely selling stock to taxable shareholders just before payment of an excludable dividend and then repurchasing the stock.¹⁸ Second, depending on the treatment of capital gains, the prototype could extend application of the extraordinary dividend rules of IRC § 1059 to excludable dividends in order to prevent taxable shareholders from "stripping" excludable dividends.¹⁹ The existing rules of IRC § 305 also may be useful in preventing other kinds of streaming.²⁰

Rules like those of IRC §§ 382 through 384, which limit the use of net operating losses and other corporate attributes after a change in ownership, are not included in the prototype. An EDA balance represents fully-taxed corporate income, and, in general, integration should prevent that income from being taxed again at the shareholder level. The issue is difficult, however, because allowing unlimited use of EDA balances may

permit an acquiror to use a target's EDA balance to defer or eliminate tax on the acquiror's preference income.²¹ On balance, we decided that extending the rules would create considerable complexity and may not provide any substantial benefit in addition to the rules discussed above.²² If significant evidence of abuse develops, ownership change limitation rules could be adopted at that time.²³

Policymakers may wish to consider whether interest expense paid on debt incurred to purchase corporate stock should be disallowed under rules like those of IRC § 265(a). In a dividend exclusion system, corporate earnings generally bear only one level of tax. See the example in Section 4.G.²⁴ While the potential for rate arbitrage exists under current law, it may be less of a problem where only one of two levels of tax is eliminated. The issue is a difficult one, however, because disallowing an interest deduction for interest paid to a taxable lender will result in the imposition of two levels of tax. Moreover, in CBIT, we recommend extending the interest disallowance rules with respect to CBIT debt and equity. See Section 4.G. There may be less pressure to adopt the same rule in the dividend exclusion prototype, however, because it does not equate the treatment of debt and equity.²⁵

2.C FOREIGN SOURCE INCOME

Under the prototype, U.S. individual shareholders would continue to include in income dividends received from foreign corporations and to claim a foreign tax credit for any foreign withholding taxes imposed on the dividend. Similarly, U.S. corporate shareholders owning less than 10 percent of a foreign corporation's voting stock (the threshold requirement for the U.S. corporation being eligible to claim an indirect foreign tax credit under IRC § 902) would include in income dividends from the foreign corporation and would claim a foreign tax credit for foreign withholding taxes. The corporate shareholder would not add any amount to its EDA to reflect foreign income taxes paid by the foreign corporation or foreign withholding taxes on dividends.

U.S. corporate shareholders owning at least 10 percent of a foreign corporation's voting stock would continue to include in income dividends from the foreign corporation and to claim both a direct credit for foreign withholding taxes and an indirect foreign tax credit with respect to such dividends under the rules of IRC § 902 of current law, subject to the foreign tax credit limitation in IRC § 904. Under these provisions, the corporate shareholder receives a credit, subject to certain limitations, for foreign income taxes paid by the foreign corporation with respect to earnings out of which the dividends are paid. A U.S. corporation would increase its EDA only by an amount that reflects the residual U.S. tax (if any) imposed on the dividend income. Thus, absent any residual U.S. tax (and any EDA balance attributable to U.S. tax on U.S. source income), distributions out of foreign source income taxed abroad, in effect, would be taxed at the shareholder level as under present law.

U.S. corporations with foreign branch operations, or which receive interest, rents, royalties, or other income from foreign sources, would continue to be subject to current U.S. tax on their foreign source income with a credit under IRC § 901 for foreign income taxes. As with earnings of foreign subsidiaries, the U.S. corporation would increase its EDA only to reflect the amount of any residual U.S. tax imposed on the foreign source income.

Although we do not recommend a statutory rule permitting additions to an EDA based on payment of foreign taxes, consideration might be given to granting authority to enter into tax treaties that treat foreign taxes like U.S. taxes, where reciprocity exists.²⁶ Treating foreign taxes like U.S. taxes would allow a U.S. corporation doing business in a treaty jurisdiction to pay excludable dividends to its U.S. shareholders even if its income was entirely shielded from U.S. tax by foreign tax credits.²⁷

2.D LOW-BRACKET SHAREHOLDERS

Taxing corporate income at a uniform rate at the corporate level significantly reduces the complexity of the dividend exclusion (and CBIT) prototypes and reduces the burdens of transition to a new system because refund and credit provisions are not required to deal with "overcollections" of tax from individual taxpayers with marginal rates lower than the 34 percent corporate rate. While this simplification concern has been a major factor in our decision to recommend a schedular system, inspection of the available data also suggests that the adoption of a schedular system will not result in significantly higher taxation of corporate income than the use of individual rates for most taxable shareholders. The data indicate that approximately two-thirds of corporate dividends paid to taxable individual shareholders, i.e., shareholders who are U.S. citizens or residents, are paid to individuals with average marginal tax rates of more than 25 percent.

It might at first appear that corporate income distributed to individuals with average marginal tax rates of less than 25 percent should be taxed at a lower rate, because a lower marginal rate indicates a lower income and, inferentially, less ability to pay. On the other hand, low-bracket shareholders who receive dividends clearly own some property, i.e., stock, and it is not clear whether their low taxable incomes accurately reflect their ability to pay.²⁸ Accordingly, the dividend exclusion and CBIT prototypes do not contain provisions reducing the rate of tax collected on corporate income distributed to low-bracket shareholders.

If policymakers desired to tax distributed corporate income at shareholder rates, a dividend exclusion system could allow a tax credit that would refund all or part of the excess tax collected at the corporate level. To refund fully the

difference between 34 percent and the shareholder rate, the amount of the tax credit would equal (1) the amount of the dividend received, grossed up at the 34 percent rate, multiplied by (2) the difference between 34 percent and the shareholder's marginal tax rate. Each shareholder would calculate his own credit based on a formula (or a set of tables) and his marginal tax rate.²⁹

Example. A corporation earns \$100, pays tax of \$34, and distributes \$66 to a shareholder in the 15 percent marginal tax bracket. The shareholder would owe no tax on the dividend and would be allowed a tax credit of \$19 ($(\$66/.66) \times (.34 - .15)$), which could be used to offset other income.

Such credits would be allowed only for excludable dividends.³⁰ Allowing a shareholder tax credit for taxable dividends (dividends considered made out of preference income) would confer a shareholder level benefit for corporate level tax that had not been paid.

2.E INDIVIDUAL ALTERNATIVE MINIMUM TAX

Historically, individuals have been subject to a minimum tax to ensure that at least a small amount of tax is paid on an individual's economic income and to respond to public perceptions that permitting high-income individuals to pay little or no income tax undermines the fairness of the tax system. The exclusion for dividends described here might result in some high-income individuals paying little or no tax at the individual level, thus raising issues of public perception. The EDA, however, operates to ensure that any dividends excludable from an individual's gross income have already been subject to one level of tax at the corporate level. The investor's income tax has been prepaid at the corporate level at the 34 percent corporate rate, which exceeds the top individual rate. Including excludable dividends in the individual AMT would serve only to re-institute a double tax on dividends and would

undermine to some extent the basic goals of this system of integration.

2.F STRUCTURAL ISSUES

This section discusses several areas of current law that should be modified to reflect adoption of the dividend exclusion prototype. This section does not provide a comprehensive analysis of the technical changes required but instead raises issues for further development.

Corporate Acquisitions

The dividend exclusion prototype retains the basic rules governing the treatment of taxable and tax-free corporate asset and stock acquisitions. The prototype permits taxable asset acquisitions to be made with only a single level of tax. Corporate tax paid on gain recognized on the sale of assets would be treated like any other corporate level tax payment and would support a corresponding addition to the EDA, thus generally allowing a tax-free distribution of proceeds to shareholders when the corporation liquidates. Upon liquidation, shareholders would, as under current law, generally recognize gain to the extent liquidation proceeds exceed share basis. A shareholder's gain would be excludable, however, to the extent of a proportionate share of the liquidating corporation's EDA.³¹ Stock acquisitions may face a higher tax burden than asset acquisitions if capital gains on corporate stock that are attributable to retained earnings are taxed in full at shareholder rates. See Chapter 8.

The prototype retains current law rules that treat a qualifying corporate reorganization as tax-free at the corporate level (with the target's tax attributes, including its asset bases, carrying over to the acquiror) and at the shareholder level.³² Additional rules would be needed to coordinate the reorganization provisions with the dividend exclusion prototype. For example, the EDA of a corporation acquired in a reorganization should

generally carry over to its successor. In a divisive reorganization, the EDA should be divided proportionately between the corporations.³³

Earnings and Profits

The prototype retains the current law rules that treat a distribution as a dividend only to the extent of current and accumulated earnings and profits.³⁴ Distributions that exceed earnings and profits are treated as a return of capital to the extent of a shareholder's basis and then as gain on the disposition of the stock.³⁵ Under the prototype, only a distribution that is made out of the corporation's EDA is eligible for exclusion at the shareholder level. If a distribution is made when a corporation has no EDA balance but has earnings and profits, it is a taxable dividend; if the corporation has no earnings and profits, the distribution is treated as a return of capital to the extent of the shareholder's basis and then as gain.

Some commentators have argued that the earnings and profits rules should be eliminated under current law, essentially arguing that the complexity of the earnings and profits rules outweigh any benefits that may result.³⁶ In general, at least two alternatives to the earnings and profits rules are possible. All nonliquidating distributions to shareholders could be treated as dividends, except where a distribution results in a reduction in capital (stated or surplus) for corporate law purposes. Alternatively, all nonliquidating distributions to shareholders could be treated as dividends, subject generally to current rules allowing basis recovery with respect to transactions where a shareholder's interest in the corporation is reduced or terminated.

Under the dividend exclusion prototype, as under current law, replacing the earnings and profits rules with either of the alternative rules would simplify the determination of whether a corporate distribution is a dividend for tax purposes.³⁷ However, although the simplification benefits of eliminating the earnings and profits rules are important, we conclude that adoption of the dividend exclusion prototype, by itself, neither

compels the elimination of the rules nor demands their retention.³⁸ Thus, under the dividend exclusion prototype, earnings and profits would continue to provide a rough measure of whether, for purposes of determining the shareholder level tax, a distribution represents income from, or a return of, a shareholder's investment.³⁹

Dividend Reinvestment Plans (DRIPs)

Distributed earnings are subject to only one level of tax under the dividend exclusion prototype, but retained earnings may be subject to a greater tax burden to the extent that they increase the value of stock and are taxed as capital gains. See Chapter 8. A dividend reinvestment plan, or DRIP, is one way for corporations to extend the benefits of integration to retained earnings. In a dividend exclusion system, a DRIP would allow a corporation to treat its shareholders as if they had received an excludable cash dividend and had reinvested it in the corporation. The shareholder's basis would be increased to reflect the amount of the deemed dividend, ensuring that the shareholder would not be taxed on appreciation due to retained fully-taxed earnings when the stock is sold.

Example. A corporation earns \$100, pays \$34 in tax, and adds \$66 to its EDA. The corporation declares a deemed dividend of \$66 and reduces the EDA by \$66, and the shareholders increase their share basis by \$66.

Chapter 9 discusses DRIPs.

2.G PENSION FUNDS

Under current law, contributions to qualified pension plans are generally deductible by the employer and are not currently includable by the employee. The employee is generally taxed only when distributions of benefits are made. The deduction provided to the employer combined with the deferral of income to the employee until benefits are paid effectively exempts the investment earnings on the contribution from tax.⁴⁰ Thus, pension fund income from investments in stock bear only one level of tax—the corporate tax paid by the corporation.

The dividend exclusion prototype does not change this treatment. Under the prototype, most dividends are excludable by shareholders. Thus, if dividends were received directly by plan beneficiaries, they would be tax-free. The earnings of pension plans would be taxed when distributed, however, even if the distributions were attributable to excludable dividends received by the plan on its investments. Just as under current law,

however, the combination of the employer's deduction for contributions and the deferral of the beneficiary tax until earnings are distributed ensures that earnings on pension fund investments in stock are taxed only once. Although retaining the current treatment of pension funds in a dividend exclusion system perpetuates some bias against investments in stock by pension plans, the disincentive is no greater than under current law.

CHAPTER 3: SHAREHOLDER ALLOCATION PROTOTYPE

3.A INTRODUCTION

The dividend exclusion prototype and other distribution-related systems of integration provide relief from double taxation only for distributed income. As a consequence, they may create an incentive for corporations to distribute, rather than retain, earnings at least to the extent that fully-taxed income can be distributed to taxable shareholders.¹ In contrast, the shareholder allocation prototype would extend integration to retained earnings by allocating a corporation's income among its shareholders as the income is earned. Shareholders would include allocated amounts in income, with a credit for corporate taxes paid, and would increase the basis in their shares by the amount of income allocated, less the amount of the credit. Distributions would be treated as a return of capital to the extent of a shareholder's basis and, thereafter, as a capital gain.²

Thus, the shareholder allocation prototype treats retained and distributed earnings equally. We do not favor adopting the shareholder allocation prototype, however, because of the policy results and administrative complexities it produces. As examples of policy problems, if it is to retain parity between retained and distributed earnings, the shareholder allocation prototype must extend tax preferences to shareholders and exempt from U.S. tax foreign source income that has borne no U.S. tax. While the shareholder allocation prototype reduces (but does not eliminate) current law's bias in favor of debt financing, the same is true of the dividend exclusion prototype, which is a simpler regime.³ Administratively, shareholder allocation integration would require corporations and shareholders to amend governing instruments for outstanding corporate stock to provide for income allocations, would require corporations to maintain capital accounts similar to those used under the partnership rules, and could create significant reporting difficulties for shareholders who sell stock during a year and for corporations that own stock.

We nevertheless discuss the shareholder allocation prototype in some detail because it is the integration system advanced by advocates of traditional full integration proposals, which generally would treat a corporation as a conduit and allocate income to shareholders as earned. This chapter shows how a passthrough model of integration might be modified to conform as closely as possible with our policy recommendations and identifies some of the most difficult administrative issues.⁴

In contrast to a pure passthrough model of integration, the shareholder allocation prototype (1) does not pass through losses to shareholders, (2) retains the corporate level tax, which would assume a function similar to a withholding of shareholder level tax, (3) requires corporations to report to shareholders only an aggregate income amount, rather than separately report all items, and (4) does not extend integration benefits to tax-exempt shareholders or to foreign shareholders except by treaty.

3.B OVERVIEW OF THE SHAREHOLDER ALLOCATION PROTOTYPE

The shareholder allocation prototype continues to treat the corporation as a separate entity for many reporting and auditing purposes. All tax items, including different types of income, deductions, losses and credits, are aggregated at the corporate level rather than being passed through to shareholders. To enhance compliance and mitigate shareholder cash flow problems, the prototype requires the corporation to pay income taxes at regular corporate rates as under current law. The corporation allocates its taxable income, as reported for regular tax purposes, among its shareholders. The shareholders include the allocated amounts in income and credit corporate taxes paid and corporate tax credits claimed (including the foreign tax credit and other corporate tax credits) against their tax liability. Shareholders

with marginal tax rates less than the corporate rate may use excess credits to offset tax liability on other income but may not obtain refund of the credit.

Example. A corporation has \$100 of taxable income and owes \$31 of corporate level tax.⁵ The corporation also is entitled to a tax credit (e.g., a low-income housing credit) of \$5. Thus, the corporation pays \$26 in tax. The corporation allocates \$100 of taxable income among its shareholders, together with \$31 of tax credits (\$26 tax actually paid plus \$5 tax credit).⁶

Shareholders would increase share basis by (1) the amount of taxable income allocated to them, after subtracting corporate taxes paid (including corporate tax credits),⁷ and (2) tax-exempt income. See Section 3.E. Thus, in the examples noted above, the shareholders' collective basis increases by \$69. Share basis would decrease by the amount of distributions. Distributions to shareholders are treated as a nontaxable return of capital to the extent of a shareholder's basis in his stock. Distributions in excess of basis would be treated as gain recognized on the sale of the stock, which would generally be capital gain.⁸

Corporate losses and excess corporate tax credits would not flow through to shareholders but could be carried forward at the corporate level. Losses or excess tax credits could not be carried back to claim a refund of corporate tax, because that tax would already have been made available to offset shareholder tax on allocated income.⁹ Current law limitations on the use and transfer of corporate losses and other tax attributes would continue to apply at the entity level.

Mechanics. Corporations would allocate income and taxes paid to the holder of stock on a quarterly record date. A corporation with multiple classes of stock would allocate tax items in accordance with the terms of the stock certificate, which would designate the share of income to be allocated to each class of stock. See Section 3.F. A U.S. corporate shareholder would allocate to its own shareholders its share of the second corporation's taxable income and tax credits.

Intercorporate holdings may create difficult reporting issues. See Section 3.H.

The mechanics of shareholder allocation integration can be illustrated with a simple example.

Example. A corporation has three classes of common stock, the terms of which provide for the allocation of 30 percent of corporate income to Class A, 20 percent to Class B, and 50 percent to Class C. The corporation has taxable income of \$100, pays \$31 in corporate tax and pays a \$10 dividend with respect to Class C stock. The shareholder integration prototype allocates the income and the credit to each class of stock based on the respective percentages (so, for example, Class C would be allocated income of \$50 and credits of \$15.50). Within each class of stock, each share receives a pro rata amount.¹⁰ Holders of Class A stock would collectively increase their basis by \$20.70 ($.30 \times (\$100 - \$31)$), holders of Class B stock would increase their basis by \$13.80 ($0.20 \times (\$100 - \$31)$), and holders of Class C stock would collectively increase their basis by \$24.50 ($.5 \times (\$100 - \$31) - \10).

Tax-Exempt Shareholders. To preserve one level of tax on corporate income allocable to tax-exempt shareholders, credits for corporate tax would not be refundable to tax-exempt shareholders. See Section 3.I.

Tax Preferences. The shareholder allocation prototype would generally extend corporate level tax preferences to shareholders. See Section 3.E.

Foreign Source Income and Foreign Shareholders. A U.S. corporation would pay corporate tax on its worldwide income and, where permitted under current law, could claim a foreign tax credit for foreign taxes paid directly and by a foreign subsidiary. The corporation would then allocate its taxable income to shareholders and the foreign tax credit would be creditable by shareholders. Section 3.I discusses the difficulty of implementing appropriate shareholder level foreign tax credit limitation rules. Income of a foreign corporation would be includable in income of U.S. corporate shareholders only as under

current law, i.e., generally when distributed. The shareholder allocation prototype does not permit foreign shareholders, except pursuant to tax treaties, to claim a refund of the corporate tax or to use the credit for corporate tax to offset the 30 percent (or lower) withholding tax levied on dividends (which would continue to apply). Such treaty benefits should be provided only in return for reciprocal benefits.

Capital Gains and Share Repurchases. Chapter 8 discusses the treatment of capital gains on sales of corporate stock and the treatment of share repurchases.

Structural Issues. Section 3.G discusses the problems of midyear sales of stock, and Section 3.H discusses the reporting difficulties that arise in the case of intercorporate stock ownership. We do not discuss further the treatment of corporate taxable and tax-free acquisitions under the shareholder allocation prototype.

Impact on Tax Distortions. Table 3.1 illustrates the impact of the shareholder allocation prototype on the three distortions integration seeks to address: the current law biases in favor of corporate debt over equity finance, corporate retentions over distributions, and the noncorporate over the corporate form. For nonpreference, U.S. source income received by individuals, the shareholder allocation prototype is fully successful. All forms of income are taxed at the individual rate (t_i , which can range from zero to 31 percent). Equalization of the tax rate across all sources of income for individuals means that shareholder allocation reduces all three current law distortions. For tax-exempt and foreign investors, however, the shareholder allocation prototype makes no change in the current taxation of nonpreference, U.S. source income.

3.C CORPORATE LEVEL PAYMENT OF TAX

In theory, corporate level payment of tax is not an essential feature of shareholder allocation integration.¹¹ Shareholders could have the sole responsibility for payment of taxes on corporate

level earnings, including retained earnings. Under such a system, corporations would report income to shareholders, who would include their allocable share of corporate income with other income on their returns and pay tax on their total income. Partnerships and S corporations follow this approach under current law. However, because tax is more likely to be collected if paid at the corporate level, the shareholder allocation prototype retains the current system requiring payment at the corporate level and then allocates to shareholders the corporation's taxable income and taxes paid.

Table 3.1
Total U.S. Tax Rate on a Dollar of NonPreference, U.S. Source Income from a U.S. Business Under Current Law and the Shareholder Allocation Prototype

Type of Income	Current Law	Shareholder Allocation Integration
I. Individual Investor is Income Recipient		
Corporate Equity:		
Distributed	$t_c + (1 - t_c)t_i$	t_i
Undistributed	$t_c + (1 - t_c)t_g$	t_i
Noncorporate Equity	t_i	t_i
Interest	t_i	t_i
Rents and Royalties	t_i	t_i
II. Tax Exempt Entity is Income Recipient		
Corporate Equity:		
Distributed	t_c	t_c
Undistributed	t_c	t_c
Noncorporate Equity	t_c	t_c
Interest	0	0
Rents and Royalties	0	0
III. Foreign Investor is Income Recipient		
Corporate Equity:		
Distributed	$t_c + (1 - t_c)t_{WD}$	$t_c + (1 - t_c)t_{WD}$
Undistributed	t_c	t_c
Noncorporate Equity	t_{WN}	t_{WN}
Interest	t_{WI}	t_{WI}
Rents and Royalties	t_{WR}	t_{WR}

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Office of Tax Policy

t_c = U.S. corporate income tax rate.
 t_i = U.S. individual income tax rate.
 t_g = U.S. effective individual tax rate on capital gains.
 $t_{WD}, t_{WN}, t_{WI}, t_{WR}$ = U.S. withholding rates on payments to foreigners of dividends, noncorporate equity income, business interest, and rents and royalties, respectively. Generally varies by recipient, type of income, and eligibility for treaty benefits and may be zero.

In addition to increasing compliance, retaining corporate level payment of tax provides a mechanism for imposing tax on corporate income allocable to tax-exempt and foreign shareholders. Denying refundability of credits for corporate level tax to tax-exempt shareholders, in effect, preserves current law, which taxes corporate equity income allocable to tax-exempt shareholders at the corporate level. Nonrefundability of credits also preserves current law for foreign shareholders. See Section 3.I.

3.D PASSTHROUGH OF CORPORATE LOSSES TO SHAREHOLDERS

While it would be possible to pass through to shareholders aggregate net losses incurred at the corporate level, the prototype does not do so.¹² Passthrough of corporate losses would raise a host of fundamental policy, technical, and administrative issues. For example, one issue is whether, as for partnerships (but generally not S corporations), shareholders would be permitted to include entity level debt in their basis to determine the extent to which losses could be passed through. A second issue is whether the current at-risk and passive activity rules would apply at the shareholder level to limit the use of losses incurred by corporations. Failure to apply these rules could allow taxpayers to use corporations as tax shelters and to circumvent current restrictions applicable to partnerships and S corporations. Passthrough of corporate losses also would create significant administrative complexity. Even small shareholders would have to track losses allocated to them, including losses in excess of basis carried forward from previous years, and would have to apply the at-risk rules and the passive activity loss rules.

To avoid the complexity created by applying additional loss limitations at the shareholder level and the need for anti-abuse rules, the shareholder allocation prototype denies passthrough of corporate losses to shareholders. Instead, corporate losses may be carried forward and used to offset corporate income in later years. This allows a reasonable degree of accuracy in measuring

corporate income over time while minimizing complexity and opportunities for abuse.

3.E TAX TREATMENT OF PREFERENCES

Integration generally does not require extending the benefits of corporate level tax preferences to shareholders. Extending preferences to shareholders under integration would increase the value of corporate preferences relative to current law and would raise the revenue cost of integration. See Chapter 5. Accordingly, the dividend exclusion and CBIT prototypes are structured not to extend preferences to shareholders. See Section 2.B and Section 4.D.

In contrast, the shareholder allocation prototype generally extends preferences to shareholders. While we considered modifying the shareholder allocation prototype in order not to extend preferences to shareholders, we found such modifications to be difficult and inconsistent with the passthrough nature of the prototype. Eliminating preferences by including preference income in shareholder income as earned would treat corporate preference income more harshly than under current law.¹³ Current law generally taxes corporate preference income at the shareholder level only when the income is distributed or stock is sold. While shareholder allocation could be modified to tax preference income only when distributed, doing so would effectively convert shareholder allocation into distribution-related integration, for which less cumbersome structures can be used.¹⁴

For these reasons, the shareholder allocation prototype generally passes through preferences to shareholders, but that feature is a major reason we do not favor the adoption of shareholder allocation. If policymakers were to adopt the shareholder allocation prototype, serious consideration should be given to restricting the preference items available to corporations.

The extent to which the shareholder allocation prototype extends preferences to shareholders

depends on the type of preference. An exclusion preference, e.g., tax-exempt interest on state and local bonds, allows a corporation to earn economic income that is not included in taxable income and, thus, is not allocated to shareholders. The prototype provides a shareholder basis increase for tax-exempt income, similar to the basis increase provided under current partnership rules, which ensures that such income is not taxed to a shareholder who sells his stock or receives a distribution.¹⁵ If such a special basis increase were not provided, then preference income attributable to an exclusion preference would be taxable upon distribution or sale of stock.

A credit preference, e.g., the credit for increasing research activities, reduces corporate level taxes payable. The shareholder allocation prototype passes through a credit preference to shareholders (to the extent it is claimed by the corporation) by treating it as corporate taxes paid, which are creditable by shareholders. A basis reduction for the amounts of taxable income shielded from tax by credit preferences would make these amounts taxable either upon the sale of stock or receipt of distributions in excess of basis.

A deferral preference, e.g., accelerated depreciation, initially reduces corporate taxable income relative to corporate economic income. In later years, however, as the deferral preference turns around, the corporation's taxable income exceeds its economic income. Thus, because the shareholder allocation prototype allocates only taxable income to shareholders, a shareholder who holds stock throughout the deferral period generally benefits from a deferral preference to the same extent as the corporation. As under the partnership rules, however, a shareholder's basis increases only by the amount of taxable income (and tax-exempt income) allocated to him. Thus, a shareholder who sells stock or receives a distribution from the corporation may realize taxable gain because the shareholder's basis does not reflect the economic income that has been sheltered at the corporate level by a deferral preference.¹⁶ On the other hand, a distribution that does not

exceed basis before the deferral preference reverses will be treated as a return of basis. In such a case, the deferral preference will not be taxed to the shareholder until the stock is sold.

Certain features of shareholder allocation integration indirectly limit the flowthrough of preferences. Because the shareholder allocation prototype does not allow losses to flow through to shareholders, preferences are not passed through to the extent they create corporate losses. In addition, because corporate debt is not included in shareholder basis and inside basis in assets is not stepped up to reflect the price paid for corporate shares, there could be disparities between inside and outside basis that could limit the benefit to shareholders of corporate level preferences.

A final issue involving preferences is the treatment of the corporate alternative minimum tax (AMT). In general, the corporate AMT would be retained under integration to limit use of preferences at the corporate level. Accordingly, the dividend exclusion prototype and the CBIT prototype retain the corporate AMT. The shareholder allocation prototype does not retain the corporate AMT because we found no simple and administrable mechanism for doing so in the context of a passthrough system.

For example, the approach most consistent with the passthrough nature of the shareholder allocation prototype would continue to collect AMT at the corporate level, include corporate alternative minimum taxable income (AMTI) in shareholder AMTI, and credit corporate AMT against an individual's liability for regular tax and AMT.¹⁷ This approach would treat the corporate AMT as equivalent to a mechanism for withholding shareholder level AMT.¹⁸ However, the inclusion of corporate AMTI in shareholder AMTI would increase unacceptably the complexity of information reporting to shareholders and the calculation of shareholder tax. We considered but rejected as unworkable other solutions designed to confine the complexity of the AMT calculation to the corporate level.¹⁹

3.F ALLOCATING INCOME AMONG DIFFERENT CLASSES OF STOCK

Under the shareholder allocation prototype, once the corporation determines its taxable income and taxes paid, additional rules are needed to allocate that amount among different classes of shares. Both S corporations and partnerships must make such allocations under current law. However, neither of these models is appropriate for shareholder allocation integration. The S corporation rules, which are designed for corporations with a single class of stock and a limited number of shareholders, cannot readily be adapted to more complex capital structures.²⁰ The partnership allocation rules are sufficiently flexible, but generally are too complex, to apply to widely held corporations. Therefore, the shareholder allocation prototype adopts a modified version of the partnership approach.

Under current law, a partnership may allocate its income in any manner that has "substantial economic effect."²¹ Subject to this limitation, a partnership has great flexibility to allocate income and loss or particular items of income or deduction to particular partners. In general, an allocation of partnership taxable income or loss can have substantial economic effect only if such income or loss is allocated to the partner or partners that will receive the benefit or bear the burden of the economic consequences corresponding to the taxable income or loss. The economic consequences of partnership allocations are reflected in capital accounts maintained by the partnership in accordance with detailed regulations.²²

The shareholder allocation prototype approximates the basic approach of the partnership allocation method while reducing its complexity. It retains the principal economic advantage of the partnership system by permitting allocations of income to reflect varying economic rights among different classes of stock.

Under the shareholder allocation prototype, a corporation can allocate varying amounts of

income to different classes of stock, in accordance with the terms of the corporation's governing instruments. Within each class of stock, a corporation allocates every share a pro rata portion of the income and tax credits allocable to that class. A corporation could not allocate income separately from credits for taxes paid. Thus, while the corporation and shareholders may agree on the amount of income allocated to each class of stock, all income allocated carries a proportionate share of credits for corporate taxes paid. Allowing corporations to allocate income and credits disproportionately would allow corporations to allocate credits to taxable shareholders and income without credits to tax-exempt shareholders.

The shareholder allocation prototype simplifies the partnership model by (1) imputing to shareholders only a single amount of taxable income, (2) requiring that tax credits be allocated in proportion to income, and (3) not allocating corporate losses to shareholders. As a consequence, the prototype permits considerable flexibility in corporate capital arrangements but does not allow corporations to adopt the complex allocations possible under the partnership rules (which permit special allocations of items of income, deduction, and loss).

A substantial disadvantage is that this approach requires corporations to maintain capital accounts for each class of shares. Although, as discussed below, these capital accounts are simpler than the capital accounts required to be maintained for each partner in a partnership under the regulations under IRC § 704(b), they still add complexity to the shareholder allocation system. Capital accounts are needed, however, to help ensure that allocations of tax consequences follow allocations of economic income. As the following simplified example demonstrates, without tax rules requiring capital accounts, the corporation could allocate tax liability without regard to the economic substance of the capital structure.

Example. Two shareholders each contribute \$1,000 to a new corporation. One shareholder has a 15 percent marginal rate and enough other tax liability to absorb excess credits, and the other has a 31 percent marginal rate. The corporation issues Class

A stock, which is allocated 100 percent of the corporation's taxable income, to the low-bracket shareholder. The corporation issues Class B stock to the high-bracket shareholder and provides that no taxable income will be allocated to the Class B stock. Cash distributions, however, are to be made pro rata between the Class A stock and the Class B stock. If these allocations are respected, all the corporation's taxable income and credits for corporate taxes paid will be allocated to the 15 percent shareholder. The Class A shareholder's share basis will increase accordingly, but the Class B shareholder's basis will remain \$1,000. Thus, when the corporation is liquidated, the low-bracket shareholder will realize a loss and the high-bracket shareholder will realize a gain. In the meantime, however, the shareholders have arranged for substantial deferral of tax by having the corporation's income taxed currently at 15 percent (rather than having half taxed at 15 percent and half taxed at 31 percent, in accordance with the economic bargain between the parties).

This strategy would fail if the allocations were subject to the "substantial economic effect" requirement of IRC § 704(b). The rules under IRC § 704(b) would require the allocation of equal amounts of income to the two shareholders in order to establish capital accounts that would permit an equal division of liquidation proceeds.

Thus, some capital account mechanism is needed in the shareholder allocation prototype. The remainder of this discussion outlines generally the mechanics of maintaining capital accounts. Because we do not recommend adoption of shareholder allocation, however, we have not developed the additional technical analysis needed for a workable capital account regime.²³

Capital accounts should be easier to maintain under shareholder allocation than under the partnership rules because the shareholder allocation prototype passes through only a single item (net taxable income) and a proportionate amount of credits for taxes paid. As a consequence, capital accounts increase by the amount of income allocated, net of credits for corporate taxes paid, and decrease by the amount of distributions. Further, because each share of stock within a class of stock receives a pro rata share of the income and taxes allocated, it is not necessary to keep detailed capital accounts for each

shareholder. Instead, capital accounts can be maintained for each class of stock. Rules also would be needed to govern the allocation of losses to capital accounts. Although losses are not passed through to shareholders, losses reduce corporate assets available for distribution and should be reflected in capital accounts. Special allocations of losses among classes of stock are permitted, if appropriately reflected in capital accounts. While special allocations of losses create additional complexity, relative to a system in which losses are required to be allocated in proportion to income allocations, they seem necessary to preserve corporations' ability to issue preferred stock.²⁴ It may be difficult, however, to fashion practical rules that allow special allocations of losses to capital accounts that are liberal enough to preserve typical corporate capital structures but are restrictive enough to prevent abuse.

Existing corporations would have to seek shareholder approval to modify the terms of outstanding stock to provide for allocations of corporate income and the maintenance of capital accounts. This is likely to be a lengthy and difficult process that would substantially complicate the transition to a shareholder allocation system of integration. Accordingly, while we do not recommend shareholder allocation, if it were adopted, we would recommend a delayed implementation. See Chapter 10. Additional transitional rules may be needed to provide relief where a corporation cannot obtain the necessary shareholder approvals, for example, because of state law or contractual supermajority requirements.

3.G CHANGE OF STOCK OWNERSHIP DURING THE YEAR

Allocating both a corporation's retained and distributed income to shareholders requires a mechanism to reflect changes in stock ownership during the period to which such income relates and thereby apportion income tax consequences among the corporation's various owners. The current rules are straightforward: corporations pay dividends to the shareholder who owns the stock

on the dividend record date and the Code taxes the person who receives the dividend.

The shareholder allocation prototype requires that corporate taxable income and corresponding credits for corporate taxes paid be allocated to shareholders of record as of the end of each quarter of the corporation's taxable year.²⁵ Corporations would not close their books and file tax returns and information returns quarterly, but rather would close their books at year end and allocate net income ratably to the record holder of the stock at the end of the four quarters.²⁶

Closing corporate books at year end and allocating income pro rata among shareholders of record unavoidably creates problems in the treatment of shareholders that sell shares before corporate income and corporate taxes are known at the end of the year. As long as there is uncertainty concerning a given quarter's income, the buyer and seller of stock will not be able to price the stock accurately.

Example. At the beginning of the year, a corporation has assets of \$100. Shareholder A owns 100 percent of the single class of stock and has a basis in the stock of \$100. The corporation's taxable year is the calendar year. On July 1, when the corporation has earned \$25 of taxable income, A sells all her stock to Shareholder B for \$117.25. If the corporation's books closed on June 30, it would pay \$7.75 of corporate tax and would allocate \$25 of income and \$7.75 of tax credits to A. If A has a marginal tax rate of 31 percent, the taxable income allocated to her will be exactly offset by the allocated credits. A's basis in her stock would increase to \$117.25, and A would report no gain on the sale. Because the shareholder allocation prototype does not determine taxable income until year end, A's final basis will be determined based on her pro rata share of the actual earnings and taxes paid for the year, which will turn on events subsequent to A's sale of stock and may differ from estimated earnings as of the date of sale. For example, if the corporation's taxable income for the full year is \$80, A will be allocated \$40 of income and \$12.40 of tax credits and her basis will increase to \$127.60. She will report a capital loss of \$10.35.²⁷

Thus, while a shareholder can tentatively calculate gain on a sale at the time the sale is made, that estimate may need to be revised based

on more precise or differing information available only later and may even require the filing of an amended return.²⁸ The problem of amended returns may be particularly acute for shareholders that hold stock in corporations with taxable years other than the calendar year. The uncertainty of income allocations may result in some inefficiency in pricing sales of stock, although sellers of large blocks of stock may be able to limit uncertainty by effectively shifting the tax burden through contractual mechanisms.

This uncertainty could be reduced by requiring a quarterly closing of corporate books.²⁹ We rejected such a requirement, however, as imposing too great a reporting burden at the corporate level. Requiring quarterly filings of Form 1120 and quarterly information reports to shareholders would significantly increase the tax reporting burden on corporations. Although many large corporations must file quarterly financial statements (10-Qs) with the Securities and Exchange Commission (SEC), and most corporations must make quarterly estimated tax payments, refining that information to the degree of precision needed for tax return purposes can be a time-consuming process. Requiring a true quarterly closing of books would in effect abandon the taxable year concept and substitute a "taxable quarter" regime.³⁰

Some intermediate solution may be possible. For example, capital gains and extraordinary dispositions could be allocated to the quarter in which they occurred. Large corporations might be required to provide estimates of each quarter's income, based on 10-Q filings (if any) and the kinds of calculations used for estimated taxes. Shareholders could be permitted to report the estimated income and tax amounts and make corrections when final reports were issued after year end. Such a system would, however, allow a significant degree of latitude to corporations unless there were rules governing the quarterly estimating and annual correction process. Such rules would likely be complex.

This problem would not exist in a pure pass-through integration system with no corporate level

tax, no differences in the treatment of capital gains and losses and ordinary income and full flow through of corporate losses to shareholders.³¹ For the policy reasons stated above, however, the shareholder allocation system retains the corporate level tax and does not require a quarterly closing of books. Accordingly, unless a satisfactory intermediate solution can be devised, the uncertainty of tax consequences for midyear sales of stock is unavoidable and is one of the significant obstacles to adoption of the shareholder allocation prototype.

3.H REPORTING AND AUDITING CONSIDERATIONS

As the preceding discussion makes clear, any passthrough integration system would increase the administrative burden on corporations and their shareholders. Although the shareholder allocation prototype includes simplified reporting provisions, it does require corporations to provide information reports (not now required) to shareholders showing each shareholder's portion of corporate taxable income and credits for corporate taxes paid (including other tax credits claimed by the corporation). The information returns also would have to provide information on appropriate basis adjustments. Because basis will increase for tax-exempt income, the basis adjustment will not necessarily be the same as the allocated income less the allocated tax credits. Shareholders, in turn, must take into account both corporate income and credits for corporate taxes paid in calculating their own tax liability and will need to keep detailed records to determine share basis when stock is sold.

Another administrative problem is the timing of income reporting. For example, U.S. corporations cannot report taxable income and corporate level taxes to shareholders until they receive reports of the taxable income and credits of other U.S. corporations in which they own stock. We have been unable to devise a precise solution for these timing issues. The taxable years of members

of a consolidated group or other closely held and closely affiliated corporations can be conformed so that income is calculated at the same time. For corporate portfolio shareholders, however, timing difficulties may be severe. Before shareholder allocation could be implemented, it would be necessary to design a reporting system capable of accommodating corporate cross-ownership.³²

The shareholder allocation system also requires substantial changes in the way corporations and shareholders are audited. In theory, under a shareholder allocation system, any increase or decrease in tax as a result of an adjustment to a tax return, resulting from an IRS audit or an amended return, should be reflected in the tax liability of the shareholders. The current system for partnerships carries an adjustment back to the partners' taxable year in which the understatement arose. Thus, if in 1990, it were determined that a partnership's income for 1988 had been understated by \$1,000, the increase of \$1,000 would be allocated to those who were partners in 1988. Extending this regime to corporations under integration would require the IRS to track and adjust the returns of shareholders holding stock in prior years. Furthermore, under such a system an adjustment in one year may require related adjustments in other years.

To avoid these problems, the shareholder allocation integration prototype would treat any audit or other adjustment to corporate income as a taxable event in the year of the adjustment. Under the prototype, it is unnecessary to adjust returns of prior year shareholders because adjustments to corporate income would be treated as an increase or decrease in the corporation's current year taxes and income. The adjustments would be passed through to current year shareholders.³³ The IRS would collect deficiencies directly from the corporation, and the corporation would pass through the credits for corporate taxes paid along with the additional income. Shareholders' bases would be adjusted to reflect the additional income.

3.I TREATMENT OF TAX-EXEMPT AND FOREIGN SHAREHOLDERS

Tax-Exempt Shareholders

The shareholder allocation prototype maintains the current taxation of corporate equity income allocated to tax-exempt shareholders by making shareholder credits for corporate level taxes nonrefundable to tax-exempt shareholders. Thus, tax on corporate income allocable to a tax-exempt shareholder would be taxed at the corporate level at the corporate rate. Tax-exempt shareholders would not be subject to UBIT on corporate income allocated to them and would not be allowed to use credits for corporate taxes paid to offset UBIT liability on other income.

Foreign Shareholders

We believe that foreign shareholders making investments in the United States should not receive, by statute, the benefits of integration received by U.S. shareholders. Thus, the shareholder allocation prototype denies refunds of corporate level taxes to foreign shareholders and continues to impose U.S. withholding tax on dividends. As under current law, corporate tax would be paid at the corporate level and withholding tax would be imposed at the investor level. The branch profits tax would continue to apply to U.S. branches of foreign corporations. Although in principle, the shareholder level withholding tax might be imposed on income allocated annually, the prototype continues to impose withholding tax only when distributions are made. Annual imposition of both the corporate and the investor level taxes would increase the tax burden on foreign investments in U.S. corporations as well as the disparity in the treatment of debt and equity owned by foreign investors. Denying integration benefits to foreign shareholders under the shareholder allocation prototype does not violate U.S. tax treaty obligations. Refundability of all or a part of the credit could be considered in treaty negotiations in exchange for reciprocal benefits. See Chapter 7.

3.J FOREIGN SOURCE INCOME

We do not believe that an integrated tax system should, by statute, treat foreign taxes like taxes paid to the U.S. Government. Extending the benefits of integration to foreign taxed income, if appropriate, is more properly achieved through bilateral tax treaty negotiations. See Chapter 7. Accordingly, the dividend exclusion and CBIT prototypes are designed to collect at least one full level of U.S. tax on foreign source income earned by U.S. corporations.

In contrast, the shareholder allocation prototype treats foreign taxes paid like U.S. taxes paid. As a consequence, depending on foreign tax rates, the United States may collect only a residual U.S. tax or no tax at all on corporate foreign source income. We considered modifying the shareholder allocation prototype to account separately for foreign taxes and deny foreign tax credits to shareholders, but such modifications are complex and fundamentally inconsistent with the pass-through nature of the prototype.³⁴ Denying a foreign tax credit would be harsher than current law, which generally allows a foreign tax credit at the corporate level and defers the shareholder level tax on foreign source income until it is distributed. Modifying the shareholder allocation prototype to tax foreign source income to shareholders only when distributed would effectively convert shareholder allocation into distribution-related integration.

Accordingly, the shareholder allocation prototype allows a foreign tax credit, computed under current law rules, to offset corporate level tax. The foreign tax credit, like other corporate tax credits, is passed through to shareholders. One issue this approach raises is how, if at all, the foreign tax credit limitation rules should be applied at the shareholder level. Although the foreign tax credit limitation is computed initially at the corporate level, additional restrictions would be necessary to prevent individuals with marginal tax rates of less than 31 percent from using foreign tax credits to offset liability for U.S. tax on other income.³⁵

As under current law, the shareholder allocation prototype allows an individual U.S. shareholder holding stock directly in a foreign corporation to claim a foreign tax credit for withholding taxes paid on dividends. The prototype does not extend the indirect foreign tax credit of IRC § 902 to individual shareholders of a foreign corporation. The indirect credit was originally intended to prevent multiple taxation of corporate income earned through a foreign subsidiary. Because the shareholder allocation regime extends integration to foreign taxes, however, permitting individuals owning more than 10 percent of the stock of a foreign corporation to claim an indirect credit may merit consideration. Extending the indirect credit to U.S. individual shareholders would remove the disparity that would otherwise exist between foreign corporate stock held directly and foreign corporate stock held through a U.S. corporation. Such a change, however, would be a significant departure from current law and would exacerbate the problem of fashioning an appropriate limitation rule at the shareholder level.

Another issue for outbound investment in structuring the shareholder allocation integration prototype is whether to retain or eliminate the deferral allowed for profits earned through foreign

subsidiaries. As Chapter 7 explains, the deferral rule provides that profits of a U.S. investor earned through a foreign corporation are generally not subject to U.S. tax until the profits are repatriated. Although theoretical consistency in implementing a shareholder allocation integration system would require eliminating the deferral rule, taxing foreign income currently is not essential to shareholder allocation. As a practical matter, it would be difficult to end deferral for U.S. portfolio shareholders, because sufficient information would not be available from the foreign corporation to determine the domestic shareholder's tax liability on undistributed income. Even for large shareholders, requiring annual reporting of income and foreign taxes paid by foreign subsidiaries would compound the reporting problems discussed in Section 3.H. A corporation with foreign subsidiaries could not accurately report to its shareholders its own income for the year until its subsidiaries had paid their own taxes in foreign jurisdictions. Accordingly, the shareholder allocation prototype permits U.S. shareholders in foreign corporations to continue to take income into account only when dividends are received. The same rule applies to U.S. corporate shareholders, subject to the current Subpart F and other current inclusion rules.

CHAPTER 4: COMPREHENSIVE BUSINESS INCOME TAX PROTOTYPE

4.A INTRODUCTION

The Comprehensive Business Income Tax (CBIT) is the most comprehensive of the integration prototypes developed in this Report.¹ It is not expected that implementation of CBIT would begin in the short term, and full implementation would likely be phased in over a period of about 10 years.² The CBIT prototype represents a very long-term, comprehensive option for equalizing the tax treatment of debt and equity.

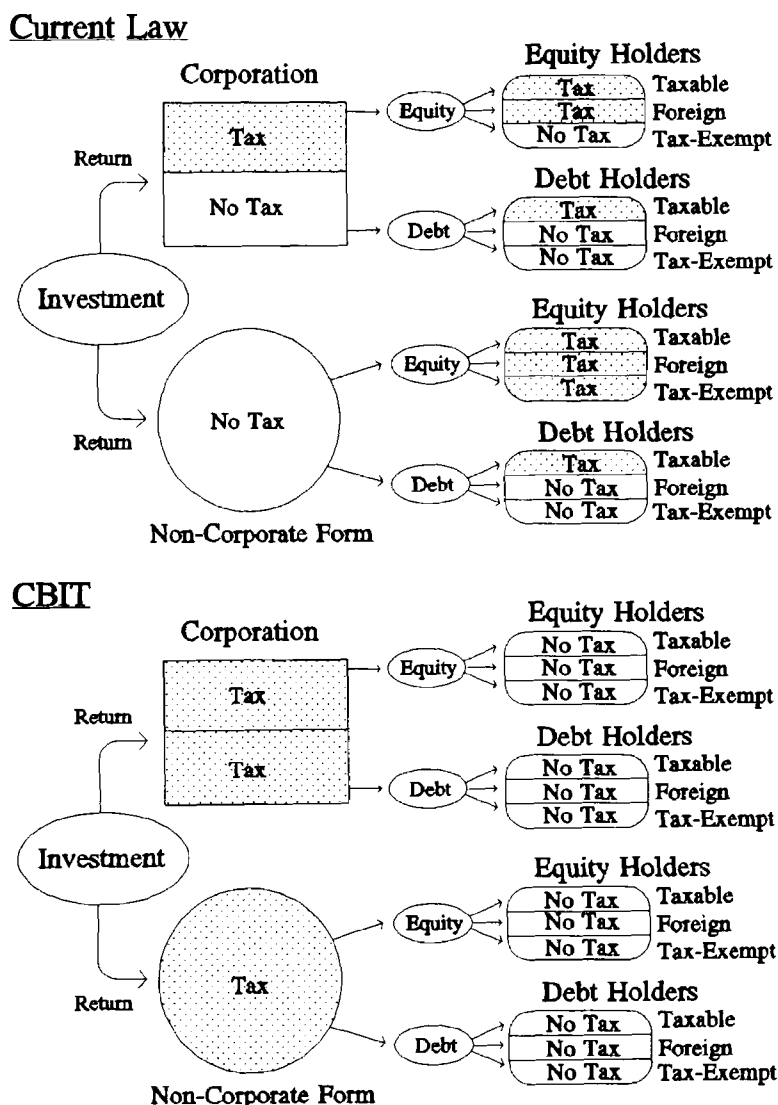
CBIT would equate the treatment of debt and equity, would tax corporate and noncorporate businesses alike, and would significantly reduce the tax distortions between retained and distributed earnings. CBIT would accomplish these results by not allowing deductions for dividends or interest paid by the corporation, while excluding from income any dividends or interest received by shareholders and debtholders. To ensure consistent treatment of corporate and noncorporate entities, CBIT would apply to all but the smallest businesses, whether conducted in corporate form or as partnerships or sole proprietorships. The result is that one—but only one—level of tax would be collected on capital income earned by businesses. An illustration of taxation under the current classical corporate tax and CBIT is depicted in Figure 4.1.

Under current law, income distributed on corporate equity generally bears two levels of tax, while interest paid to suppliers of debt capital bears at most one level of tax. CBIT not only eliminates the double taxation of corporate equity income, but also provides equal treatment for debt income. By denying a deduction for interest, the CBIT prototype subjects interest income, like dividend income, to a single level of U.S. tax equal to the top

individual rate of 31 percent rate, regardless of the lender's actual marginal tax rate and regardless of the lender's status as a tax-exempt or foreign entity.³

Without any overall revenue loss, the CBIT prototype permits a reduction in the rate of tax on corporations from 34 percent to the top individual rate of 31 percent.⁴ A lower rate of tax on capital supplied by tax-exempt, foreign or low-income

**Figure 4.1
Comparison of CBIT and Current Law¹**



¹The figures do not take into account tax preferences or taxes imposed by other countries.

investors could be incorporated into a CBIT regime, but we have chosen not to include these complicating provisions in the prototype described in this chapter.⁵ Taxing income from business capital at a 31 percent rate enhances economic efficiency and advances the policy goals set forth in Chapter 1.⁶ CBIT taxes corporate and non-corporate businesses (other than very small businesses) under identical rules, thus eliminating the current tax bias against the corporate form. CBIT also makes significant progress toward the removal of incentives to retain earnings, although a compensatory tax on distributions of preference income, if included in CBIT, would provide some incentive to retain such income.

Like the other prototypes, the CBIT prototype is structured to conform as closely as possible to the policy decisions summarized in the introduction to this part with respect to the treatment of preferences and tax-exempt and foreign investors. Since CBIT would be a greater change from current law than either distribution-related integration or shareholder allocation integration—both of which would apply only to corporate equity—a very gradual phase-in of CBIT over a long period will be necessary in order to reduce the economic dislocations and the gains and losses that might result during the transition. See Chapter 10.⁷

4.B OVERVIEW OF CBIT PROTOTYPE

General Mechanics. Under CBIT, distributions of business income as dividends or interest are not generally taxed when received by investors (see the discussion of tax preferences below). The income of all business entities, including corporations and unincorporated businesses, is measured and taxed at the entity level at a 31 percent rate.⁸ The CBIT tax base is generally the corporate income tax base under current law, except that no deduction is allowed for interest expense, and dividends and interest received from CBIT entities are excluded. Losses incurred at the entity level do not pass through to the equity holders. Unused losses can be carried over at the entity level, however, generally in the same manner as under the current law rules applicable to corporations.⁹

Small Business Exception. Because it is difficult to separate returns to capital from returns to labor in the case of very small businesses, taxing all capital income from those businesses at the 31 percent CBIT rate might overtax some labor income that otherwise would be taxable to an individual in a lower bracket. The CBIT prototype includes an exception for very small businesses. See Section 4.C.

Tax Preferences. Tax preferences available to corporations generally would be available to CBIT entities. To implement this Report's general recommendation that preferences not be extended to shareholders, a flat rate nonrefundable tax of 31 percent (a compensatory tax) could be imposed at the entity level on dividends and interest deemed paid from preference income. Alternatively, investors could be required to include in income any interest or dividends considered to be paid out of preference income. The choice between these two methods is discussed in Section 4.D. In either case, businesses would determine which distributions are made out of preference income by maintaining an Excludable Distributions Account (EDA), which is similar to the EDA described in Chapter 2 under the dividend exclusion prototype. The EDA would reflect taxes paid and the prototype would stack interest and dividend payments first against fully-taxed income.¹⁰ See Section 4.D.

CBIT Entities as Investors. CBIT entities are governed by the rules applicable to nonCBIT investors. Income from investments (other than dividends and interest from CBIT entities) is taxed to the CBIT entity as under current law. Dividends and interest from CBIT entities are not taxed in the hands of the recipient CBIT entity and would result in an appropriate addition to the recipient entity's EDA (thereby enabling the recipient CBIT entity to distribute such receipts without paying additional tax). Additional rules would be needed for taxable dividends and interest paid by CBIT entities if a compensatory tax were not adopted. See Section 4.D.

Foreign Source Income. CBIT entities would be entitled to a foreign tax credit computed as

under current law, with modifications to reflect the nondeductibility of interest under CBIT. Foreign source income shielded from U.S. tax by foreign tax credits would be treated in a manner similar to preference income when distributed and either would be subject to a compensatory tax or would be taxable at the investor level at that time. As with distributions from preference income, stacking distributions first against fully-taxed income will limit somewhat application of these rules.

Low-Bracket Investors. While the CBIT prototype does not include explicit relief for low-bracket equity holders and debtholders, it is possible to reduce the effective rate of tax on CBIT investments from 31 percent to the investor rate with an investor credit for entity level taxes paid. See Section 4.F.

Tax-Exempt and Foreign Investors. Interest and dividends paid to tax-exempt and foreign investors by a CBIT entity are net of the 31 percent entity level tax; however, in general neither tax-exempt nor foreign investors are subject to additional U.S. tax on interest or dividends received from CBIT entities. If a compensatory tax is adopted, all dividends and interest would be excludable. As Section 4.D discusses, however, the alternative to a compensatory tax is to tax preference and foreign source income at the investor level.

We recognize that, in imposing one level of source-based taxation on interest paid to foreign investors, CBIT would represent a departure from current policy on inbound debt investment. Any such departure would have to be the result of extensive international discussions with tax authorities and market participants.¹¹

Capital Gains and Share Repurchases. Chapter 8 discusses the treatment of capital gains on CBIT equity and debt and the treatment of share repurchases.

NonCBIT Interest and Other Capital Income. CBIT does not require any change in the current taxation of interest paid on debt issued by a

borrower other than an entity subject to CBIT. Thus, for example, home mortgage interest would continue to be deductible by an individual borrower and includable in the income of the recipient. State and local bond interest would remain excludable from gross income to the same extent as under current law. Interest on Treasury debt would, as under current law, be includable in income by the recipient.¹² See "Interest Not Subject to CBIT" in Section 4.G.

Impact on tax distortions. Table 4.1 illustrates the impact of the CBIT prototype on the three distortions integration seeks address: the current law biases in favor of corporate debt over equity finance, corporate retentions over distributions, and the noncorporate over the corporate form. In general, CBIT is very successful in achieving the goals of integration because it removes most differentials in the tax rates on alternative income sources for domestic and foreign investors and tax-exempt entities. The near-uniform tax rate on all nonpreference, U.S. source business income is the maximum individual income tax rate (t_i^m , 31 percent under current law). For individual investors, the only exceptions to this uniform rate are for undistributed corporate equity income (if capital gains on corporate stock continue to be taxed) and for rent and royalties, which would continue to be taxed at regular individual rates. For tax-exempt entities and foreign investors, the only exception to the uniform rate on nonpreference, U.S. source business income is the rate on rents and royalties, for which current law rates would be retained.

4.C ENTITIES NOT SUBJECT TO CBIT

In theory, CBIT would apply to all businesses, without regard to size or legal form of organization. Thus, all sole proprietorships, partnerships, S corporations and other business entities would be subject to an entity level tax. After the phase-in of CBIT, current law distortions between the corporate and noncorporate business sectors would thus be eliminated, and taxpayers' choice of business entity would depend entirely upon nontax considerations. To preserve these

Table 4.1
Total U.S. Tax Rate on a Dollar of
NonPreference, U.S. Source Income from a
U.S. Business Under Current Law and the
CBIT Prototype

Type of Income	Current Law	CBIT
I. Individual Investor is Income Recipient		
Corporate Equity:		
Distributed	$t_c + (1 - t_c)t_i$	t_i^m
Undistributed	$t_c + (1 - t_c)t_g$	$t_i^m + (1 - t_i^m)t_g$
Noncorporate Equity	t_i	t_i^m
Interest	t_i	t_i^m
Rents and Royalties	t_i	t_i
II. Tax Exempt Entity is Income Recipient		
Corporate Equity:		
Distributed	t_c	t_i^m
Undistributed	t_c	t_i^m
Noncorporate Equity	t_c	t_i^m
Interest	0	t_i^m
Rents and Royalties	0	0
III. Foreign Investor is Income Recipient		
Corporate Equity:		
Distributed	$t_c + (1 - t_c)t_{WD}$	t_i^m
Undistributed	t_c	t_i^m
Noncorporate Equity	t_{WN}	t_i^m
Interest	t_{WI}	t_i^m
Rents and Royalties	t_{WR}	t_{WR}

Department of the Treasury
 Office of Tax Policy

- t_c = U.S. corporate income tax rate.
- t_i = U.S. individual income tax rate.
- t_i^m = Maximum U.S. individual income tax rate.
- t_g = U.S. effective individual tax rate on capital gains; is zero in one version of the prototype.
- t_{WD} , t_{WN} , t_{WI} , t_{WR} = U.S. withholding rates on payments to foreigners of dividends, noncorporate equity income, business interest, and rents and royalties, respectively. Generally varies by recipient, type of income, and eligibility for treaty benefits and may be zero.

neutrality benefits, we believe that any small business exception to CBIT should be limited to very small entities.

The CBIT prototype includes an exception for small businesses with gross receipts of less than \$100,000. Such businesses would continue to deduct their interest expense, and the interest they pay would be taxable to the recipients. Any wages or profits distributed by an exempt small business would be taxable to the recipients at the

recipients' marginal tax rates. CBIT interest and dividends received by a small business would be excludable. We concluded that such an exception was desirable because of complexities that might otherwise arise in the transition from current law to CBIT and difficulties in separating capital income from labor income for very small businesses (proprietorships, in particular). Although CBIT generally taxes the income shares of creditors and equityholders at a uniform 31 percent rate, it does not alter the current progressive individual rate structure (with graduated rates from 15 to 31 percent) for taxing wages or other labor income and nonCBIT capital income. While all CBIT taxpayers would be allowed to deduct reasonable compensation paid for services to the same extent as under current law, these rules may be inadequate for small businesses. In many small businesses, income received by an owner-manager, in fact, may be a mixture of returns on both physical and human capital. Ignoring the distinction and subjecting all the owner-manager's income to the uniform CBIT rate, might overtax the labor component of the owner-manager's income. In addition, not allowing losses to flow through currently might create significant hardship where the owner-manager draws a salary. With a small business exception, however defined, all returns on capital in such nonCBIT small businesses would be taxed at the investors' separate rates instead of at the uniform CBIT rate.¹³

We concluded that an exclusion based on annual gross receipts would be the simplest to structure and estimate at the current conceptual phase of the prototype's development. For purposes of determining an entity's eligibility for the exception, dividends and interest received from CBIT entities would be included (although they would not be taxable to the receiving entity). Such a definition of the exclusion has several advantages. A gross receipts criterion is objective and easier to apply from a compliance and enforcement standpoint than the alternatives discussed below. It can be determined readily from documents currently generated for tax compliance purposes.¹⁴ So long as the lower bound of gross receipts determining CBIT status is low, we

believe that aggregation rules for nonCBIT entities should be unnecessary.¹⁵

Other criteria are possible. Ideally, the criteria should be related to the potential "blurring" of owners' capital and labor incomes. For example, businesses with substantial equity held by individuals who also supply substantial labor to the enterprise might qualify. Other definitions currently used in the Code or elsewhere include criteria such as whether the business is closely held (as measured by the number of shareholders), the value of the business (as measured by the value of stock, net worth, or the value or adjusted basis of assets), the annual amount (or average annual amount) of net income, and the number of employees. The correlation between blurring of labor and capital income of owner-managers and some of these characteristics may depend on the nature of the business, industry characteristics, and other factors. We believe the more practical course, however, is simply to exempt certain "small businesses" based on size.¹⁶

4.D TAX PREFERENCES

Introduction

We have made a general recommendation in this Report that integration should not become an occasion for extending corporate level tax preferences to shareholders. Future policymakers seem likely, however, to retain many of the preferences currently available to corporations under the Code. Absent special rules, CBIT's general exclusion of dividends and interest from income would automatically extend those preferences to shareholders.¹⁷

There are two general mechanisms which could be used to ensure that one level of tax is imposed on preference income when it is distributed. First, CBIT entities could be required to report to shareholders and debtholders the amount, if any, of each dividend or interest payment that is made out of preference income. The investor would then include that amount in income and pay tax at the investor's tax rate. This is the mechanism we recommend in the dividend

exclusion prototype.¹⁸ The alternative approach is to impose a 31 percent compensatory tax at the entity level on all distributions from preference income. Such a compensatory tax would not be refundable to tax-exempt or foreign investors.

Although both systems have advantages, the dividend exclusion prototype (and the imputation credit prototype described in Chapter 11) reject a compensatory tax in favor of shareholder level taxation of distributed preference income and foreign source income shielded from U.S. tax by foreign tax credits. As Section 11.B discusses, in those prototypes, which are limited to corporate equity, this Report would tax preference income and foreign source income at the shareholder level in order to preserve current tax and dividend policy for corporations with substantial amounts of such income.

Under CBIT, however, a compensatory tax has considerable conceptual and practical appeal. Adopting a compensatory tax would permit investors to exclude all dividends and interest received from any CBIT entity. Thus, CBIT would consistently collect tax on capital income, whether interest or dividends, at the entity level at a 31 percent rate.

A compensatory tax would be simpler at the investor level. Because all distributions with respect to CBIT investments would be excludable by investors, no information reporting to shareholders or debtholders would be required. On the other hand, if preference income distributed as interest or dividends were subject to investor level tax, CBIT entities would have to provide information reports to the IRS and to investors, indicating the extent to which a distribution is excludable. A compensatory tax under CBIT also would permit the complete repeal of the withholding tax on dividends and interest paid to foreign investors. See Section 4.E.

The principal disadvantage of a compensatory tax under CBIT is that our economic analysis suggests that it would create significant inefficiencies in corporate payout decisions. Our data indicate that even if distributions were stacked

first against fully-taxed income, a compensatory tax would impose a significant entity level tax burden on distributions. Our models of corporate behavior predict that, to avoid this additional tax, CBIT entities would increase their reliance on retained earnings as a source of finance and would rely less on both new equity and debt. Under the assumptions of our models, this effect is strong enough to distort corporate payout decisions as much as under current law. See Section 13.D. Accordingly, the remainder of this chapter describes the differences in treatment necessary under the CBIT prototype if no compensatory tax is imposed and distributed preference income and foreign source income are taxed at the investor level.¹⁹

Excludable Distributions Account

The prototype identifies distributions out of preference income and foreign source income shielded from tax by foreign tax credits by requiring CBIT entities to maintain an Excludable Distributions Account (EDA). (The EDA is similar to the EDA described in Chapter 2, except that interest payments as well as dividend payments are charged against the account.) For each \$1.00 of U.S. tax paid, approximately \$2.23 would be credited to the EDA. The annual addition to the EDA is referred to as fully-taxed income and is calculated using the following formula:

Annual additions to EDA =

$$\left(\frac{\text{U.S. tax paid for taxable year}}{.31} - \text{U.S. tax paid for taxable year} \right)$$

+ equity distributions and interest received from CBIT entities

The EDA is reduced by the amount of all dividend and interest payments, in the order in which payments are made. The EDA is also reduced by approximately \$2.23 per \$1.00 of tax refunded. Positive EDA balances may be carried forward without limitation.

The prototype stacks payments first against fully-taxed income. Distributions of interest or dividends reduce the EDA. When the EDA is reduced to zero, distributions would be subject to

compensatory tax or, alternatively, would be taxable to the investor.²⁰ As in the dividend exclusion prototype, refunds of entity level tax would not reduce the EDA below zero. Refunds in excess of the taxes reflected by the EDA balance would be applied to reduce future entity level tax payments. Similarly, net operating losses in excess of the EDA would be carried forward.

To illustrate, assume that a corporation subject to CBIT earns \$100 in taxable income and \$100 of preference income, and pays \$31 in regular CBIT taxes but neither pays nor receives dividends or interest. Its EDA is thus \$69 [$\$31 / .31 - \31]. If it then pays \$75 in interest and dividends, it will pay a compensatory tax of \$1.86 [$.31 \times (\$75 - \$69)$] or, alternatively, the \$6 of distributions that is attributable to preference income will be taxable to investors.²¹

If a compensatory tax is adopted, all distributions on equity and debt of CBIT entities will be excludable. A CBIT entity receiving a distribution would add the amount received to its own EDA. If, alternatively, distributions of preference income were taxable to investors, the prototype could either (1) tax CBIT entities currently on such distributions²² or (2) provide a deduction, similar to the current dividends received deduction, for such receipts to defer tax until the income is redistributed to a nonCBIT entity.²³

Alternative Minimum Tax Consequences of CBIT

The CBIT system retains an entity level alternative minimum tax (AMT) similar to the corporate AMT under current law. As under current law, the entity level minimum tax would ensure that some entity level tax is imposed currently on a profitable business. In a CBIT AMT, however, neither interest expense nor dividends would be deductible and dividends and interest from CBIT entities would be excluded. Because the CBIT tax base provides no deduction for interest paid, it is likely that relatively few nonfinancial businesses would have regular tax liabilities low enough to trigger a CBIT AMT imposed at the current 20 percent rate. As in the

dividend exclusion prototype, AMT would be treated as taxes paid in the same manner as the regular CBIT tax; however, the divisor in the EDA formula would still be the regular CBIT tax rate, 31 percent. Thus, a CBIT entity could not distribute all of its alternative minimum taxable income (AMTI) without triggering a compensatory tax or an investor level tax.

Adopting CBIT might permit significant simplifying modifications to the current individual AMT. If CBIT applied to all but small business entities, the individual AMT base would apply principally to two items: (1) excess itemized deductions and (2) State and local tax-exempt bond income treated as a preference under current law.²⁴ It would be inappropriate, however, to include excludable CBIT interest or equity income in an investor's AMTI because any such tax imposed would be a second level of tax on income that had already been subjected to tax at the highest individual rate.²⁵

4.E INTERNATIONAL CONSIDERATIONS

Taxation of Income from Outbound Investment

This Report recommends that the tax burden imposed by any integration prototype on income from U.S. investment in foreign businesses (outbound investment) be roughly equivalent to the tax burden imposed on such income under current law. The shift from two-tier taxation of corporate foreign source income to a single-tier tax should not result in the collection of a significantly greater or lesser amount of tax revenue from such income than under current law. See Chapter 7.

Under current law, foreign source income earned through a domestic corporation is potentially subject to U.S. tax at both the corporate and the shareholder levels. At the corporate level, foreign source income is subject to a 34 percent tax, which may be reduced substantially or eliminated by foreign tax credits. If the U.S. corporate

tax liability on foreign source income is less than the foreign tax imposed on the income, excess foreign tax credits may arise. Upon distribution, the income generally is subject to full taxation at the shareholder's marginal tax rate, without a foreign tax credit. This approach is consistent with U.S. income tax treaty commitments. No U.S. treaties require that investors in a U.S. corporation receive tax relief from foreign taxes paid by the corporation.

Foreign Source Income of CBIT Entities and Other Business Entities

Under the CBIT prototype, results comparable to those under current law are achieved by allowing the foreign tax credit (with a modified limitation, as described below) to offset the regular CBIT tax in full, but adding no amount to the EDA to reflect foreign source income sheltered from U.S. tax by foreign tax credits.²⁶

The EDA mechanism does not distinguish between foreign source income shielded from the regular CBIT tax by the foreign tax credit and U.S. source preference income. Both benefit from the stacking rule that treats distributions as arising first from income subject to the regular CBIT tax. Accordingly, as with preference income, so long as foreign source income shielded from CBIT by the foreign tax credit is not distributed, it will bear no further tax burden. The CBIT compensatory tax or an investor level tax will be triggered only when such income is distributed—the same circumstance that would result in imposition of a shareholder level tax under current law.

If a compensatory tax is not adopted, this stacking rule ensures that the total Federal tax burden on outbound investment by corporations should not vary significantly from that imposed under current law, apart from the effect of the expanded tax base for foreign branch income resulting from the nondeductibility of interest. Imposition of a compensatory tax could increase the tax revenue collected from outbound investment. In either case, the tax burden on outbound investment by corporations may actually be less

for foreign source income subject to foreign tax at a rate less than the CBIT rate, which will be subject to only a single level of residual U.S. tax.

CBIT will, however, require modification of the current rules for computing the foreign tax credit. Under current law, the foreign tax credit limitation is equal to the product of (1) the taxpayer's pre-credit U.S. tax liability on worldwide taxable income and (2) the ratio of the taxpayer's foreign source taxable income to its worldwide taxable income. This usually reduces to the product of the U.S. tax rate and the foreign source income. The foreign source income of a U.S. taxpayer is currently computed under U.S. tax principles for this purpose.²⁷ In the case of a foreign subsidiary, the amount of foreign taxes that are deemed paid by a 10 percent U.S. corporate shareholder in respect of a particular dividend distribution is equal to the total foreign taxes paid by the subsidiary, multiplied by the ratio of the dividend to the total earnings of the subsidiary. (This amount is subject to the limitation just described.)

If foreign source income were computed under CBIT principles, i.e., with no deduction for interest, problems would arise. In the case of foreign branch operations of CBIT entities, the amount of foreign source income in the limitation formula could increase dramatically. Such an increase would seriously mismatch the computation of taxable income and tax liability by a foreign jurisdiction that allowed a deduction for interest. Assuming that foreign tax rates were high enough to provide an adequate supply of credits, no U.S. tax would be collected currently on foreign source income used to pay interest. Instead, U.S. tax would be collected only when such income was deemed to have been distributed by the entity and a compensatory tax (or an investor level tax) was imposed. In the case of a foreign subsidiary, the amount of earnings in the denominator of the indirect credit fraction could increase dramatically, seriously diluting the amount of foreign taxes attributed to a particular distribution of earnings.

Accordingly, the CBIT prototype assumes that, in computing the foreign tax credit limitation, foreign source income of a branch will be reduced by interest expense claimed with respect to the foreign operations.²⁸ Similarly, in computing the indirect foreign tax credit, earnings of the foreign subsidiary will be reduced by interest expense claimed by the subsidiary.²⁹ Under this approach, CBIT entities will continue to enjoy approximately the same level of direct and indirect foreign tax credits as under current law. Some reduction will occur, however, by reason of lowering the regular CBIT tax rate to 31 percent from the current 34 percent.

Several additional effects of CBIT on the taxation of foreign source income should be noted. As explained above, CBIT would subject all business organizations to an entity level tax. This has at least two possible implications for the foreign tax credit. First, it suggests that an indirect credit for foreign taxes deemed paid by a foreign subsidiary should be available to non-corporate domestic shareholders, such as partnerships, that are CBIT entities. Under CBIT, the purpose of the indirect credit would defer the additional level of CBIT tax until the time of distribution (when a compensatory tax or an investor level tax would be imposed) to avoid the burden of an immediate tax on foreign source profits. If the indirect credit were not extended to partnerships and other noncorporate CBIT entities, there would continue to be a strong bias in favor of the corporate vehicle for multinational enterprises.

Second, the equal treatment of all business entities under CBIT means that foreign tax credits will not fully relieve CBIT tax in circumstances where U.S. tax is fully relieved under current law. If a domestic partnership or S corporation receives a dividend, interest, or royalty payment from a foreign corporation (or other foreign payor) under current law, and the payment has been subject to a foreign withholding tax, the recipient is eligible for a foreign tax credit, and no further U.S. tax is imposed to the extent that

the partners or shareholders are individuals. Under CBIT, however, the credit would only relieve the regular CBIT tax. A compensatory tax or an investor level tax would be imposed when the foreign profits are redistributed to the partner or shareholder.

Finally, CBIT requires some consideration of the treatment of foreign business entities. Under current law, deferral of U.S. tax on foreign profits is available when the profits are earned through a foreign corporation. When such profits are earned through a foreign partnership, the U.S. tax is not deferred, and the results are essentially the same as for a foreign branch office of a U.S. taxpayer. Under the CBIT prototype, foreign entities would generally be treated as nonCBIT entities. Thus, interest paid by a foreign entity would continue to be taxable to a U.S. lender, and would continue to be deductible by the foreign entity.³⁰ In addition, deferral would continue to be permitted for profits earned through a foreign corporation.

Foreign branches of CBIT entities. In the case of a foreign branch of a U.S. CBIT entity, the expanded CBIT income base of the branch would be included in the U.S. CBIT entity's income currently. Foreign source income earned by a CBIT entity through a foreign branch would be subject to residual regular CBIT tax prior to distribution. As discussed above, there will always be a residual regular CBIT tax on the portion of the foreign source income base that is excluded from the computation of the foreign tax credit. Where the foreign jurisdiction's tax is computed with an interest deduction, such income will bear, in effect, the same tax that it would have borne if earned from domestic sources. With respect to the remaining portion of the foreign source income base, a residual regular CBIT tax will be imposed if the foreign income tax liability is less than the regular CBIT liability, with the effect that such income also will bear the same pre-distribution aggregate tax (foreign tax plus CBIT tax) that it would have borne if it were earned from domestic sources.³¹ If the foreign income tax liability on the remaining portion of the foreign source income base is higher than the

regular CBIT liability, such income will bear a pre-distribution tax rate that is higher than the CBIT rate applicable to domestic source income. This disparity, which also exists under current law, is entirely attributable to higher foreign tax rates.

Foreign portfolio equity investment (less than 10 percent of total equity) by a CBIT entity. Foreign source portfolio dividends received by a CBIT entity would be subject to source country income taxation at the level of the foreign corporation and to a second level source country withholding tax upon distribution. Regular CBIT would apply to the foreign source dividend when received by a CBIT entity, subject to offset by a foreign tax credit for the source country withholding tax. In most cases, some regular CBIT would be collected, because regular CBIT liability would generally exceed the foreign withholding tax by virtue of treaty rate reductions and by virtue of the expansion of the CBIT income base to include income paid out as interest. While such income is subject to an additional level of taxation (the foreign corporate level tax) relative to income earned through investment in a U.S. subsidiary, the disparity should be approximately the same as under current law. If distributed by the CBIT entity, such income, to the extent shielded from regular CBIT by the foreign tax credit, would be subject to the CBIT compensatory tax or an investor level tax. If the CBIT entity is a corporation, this result generally will be comparable to the result under current law. To the extent residual regular CBIT is paid, the result will be better than under current law for shareholders now taxable on dividend income. A CBIT entity that is a partnership with individual shareholders or an S corporation may be treated less favorably than under current law in certain circumstances.

Foreign direct equity investment (10 percent or more of total equity). Foreign source income earned by a CBIT entity through a direct equity investment would be subject to full source country corporate level tax and to a second level source country withholding tax upon distribution of a dividend from the foreign subsidiary. The CBIT entity (whether a corporation or partnership)

would receive a credit both for the source country withholding tax and for the source country corporate level tax under IRC § 902. Thus, regular CBIT would be imposed only to the extent that the regular CBIT liability exceeded the total amount of foreign taxes paid or deemed paid. Given the opportunity to defer the CBIT compensatory tax or investor level tax by retention of foreign subsidiary profits at the CBIT entity level, the disparity between direct equity investment in a foreign subsidiary and investment in a domestic subsidiary under CBIT should not vary significantly from current law. If distributed by the CBIT entity, such income would be subject to the CBIT compensatory tax or an investor level tax to the extent it was shielded from regular CBIT by foreign tax credits. However, as with portfolio investment, the result will generally be similar to the result under current law in cases where such dividends would be taxed fully. To the extent subject to residual regular CBIT, such income will be taxed less heavily than under current law. A CBIT entity that is a partnership or an S corporation may be treated less favorably than under current law (depending on whether the IRC § 902 credit is extended to such shareholders).

Foreign debt investment. Foreign source income earned by a CBIT entity through a debt investment in a foreign entity or subsidiary would escape source country income taxation to the extent that interest is deductible for foreign income tax purposes. While such income potentially would be subject to a foreign withholding tax upon distribution as interest, the CBIT entity would receive a foreign tax credit for the withholding tax (subject to the foreign tax credit limitation). Thus, regular CBIT would be imposed only to the extent that regular CBIT liability exceeds the foreign withholding tax. Interest income received from a domestic subsidiary also would be subject to CBIT, in this case imposed on the subsidiary. Thus, outbound debt investment should not be subject to greater entity level tax than domestic debt investment until such income is distributed. The CBIT compensatory tax or an investor level tax then would apply to the extent the income had been shielded from U.S. tax by

foreign tax credits. The impact of the CBIT compensatory tax or an investor level tax, if and to the extent imposed, will be similar to the consequences described for the imposition of such tax on foreign portfolio equity investment.

Foreign Source Income Earned Directly by Individuals

Under CBIT, foreign corporations and other foreign entities would be treated as nonCBIT entities. Accordingly, as under current law, interest and dividend income received directly by a U.S. resident individual from a foreign corporation would be subject to tax at the individual's marginal tax rate. CBIT does not require the modification of the foreign tax credit allowed to individuals under current law.

Taxation of Income from Inbound Investment

As noted in Section 4.A, we view CBIT as a very long-range option for equalizing the treatment of debt and equity. We anticipate that adoption of CBIT would be preceded by a lengthy period of consideration and, when implemented, CBIT would be phased-in over a period of about 10 years. See Chapter 10.

Both the dividend exclusion prototype and the shareholder allocation prototype retain the current U.S. withholding tax on dividends paid to foreign shareholders and the branch profits tax on U.S. branches of foreign corporations. Retaining the second level of tax on equity income in those prototypes simply replicates current law and permits reduction of the second level of tax through tax treaty negotiations.

We make a different recommendation in CBIT, however. Retaining current law in the context of CBIT would require collecting two levels of tax on dividends and zero or one level of tax on interest. (Chapter 7 discusses the current law taxation of foreign investors.) Such treatment would violate the equality between debt and equity that is one of the principal goals of CBIT. To maintain parity between debt and equity, the

CBIT prototype removes the remaining withholding taxes on both interest and dividends paid by CBIT entities.³² The result is to subject both debt and equity income to CBIT taxation once at the entity level.

Elimination of the remaining withholding taxes on both dividends and nonportfolio interest under CBIT would clearly affect U.S. income tax treaty negotiations. While existing U.S. treaties provide for reciprocal reductions of source country tax rates on interest and dividends, CBIT might reduce U.S. treaty partners' incentive to grant a reciprocal exemption in future negotiations.³³ In order to obtain a reciprocal exemption, it might be necessary for the United States to make concessions either with respect to entity level tax collected on dividends and interest or CBIT compensatory taxes (if any) imposed on dividends and interest. For example, a tax credit for CBIT taxes paid could be made available only on a bilateral basis. Any such treaty concessions should be made in a manner to protect CBIT's basic goal of equating the taxation of debt and equity.

If a compensatory tax were not adopted, distributed preference income and shielded foreign source income will be taxable to investors.

We recognize that adoption of CBIT would represent a departure from current policy on inbound debt investment and that any such departure would require extensive international discussions with tax authorities and market participants.

Conduct of a U.S. Trade or Business

As under current law, income earned by a foreign investor through the conduct of a U.S. trade or business would be taxed in the same manner as income earned by U.S. residents. CBIT rules would apply to foreign business activities in the United States. Thus, interest expense attributable to a U.S. trade or business would be nondeductible, and the current law provisions governing the allocation of interest expense to effectively connected income would be unnecessary.³⁴

Small Business Exception

The small business exception would apply to inbound investment. See Section 4.C. Distributions from small, nonCBIT corporations to foreigners would remain subject to current statutory withholding at 30 percent, unless that rate is reduced by treaty provision.³⁵ In the case of a U.S. branch of a foreign corporation, the size criteria would be applied on the basis of the gross effectively connected receipts of the branch.

4.F IMPACT OF CBIT ON INVESTMENT BEHAVIOR OF LOW-BRACKET, TAX-EXEMPT, AND FOREIGN INVESTORS

Overview

Because substantial nontax factors influence investment behavior, we cannot predict with certainty CBIT's impact on the manner in which investors allocate their portfolios. Indeed, if tax considerations were paramount, there would be a strong bias under current law against any investment by low-bracket taxpayers and domestic tax-exempts in domestic corporate equities (as opposed to debt). Current experience indicates, however, that both of these groups invest in corporate equity. While special statutory withholding provisions, the statutory exemption for capital gains realized by foreign investors on property investments other than in real property, and treaty mitigation provisions make it hard to generalize in the case of foreign investors, the tax provisions of current law, if given paramount effect, would direct their investment toward domestic debt rather than corporate equity in most instances. Other nontax factors are important, however, and foreign investment in domestic equity occurs despite higher tax rates than for domestic debt.

The United States' stable economic and political climate attracts investment. The size of our consumer market attracts foreign sellers and

investors. Opportunities for diversification not available through alternative investments can override tax disadvantages. These nontax factors will temper portfolio shifts by these classes of taxpayers. Considering these countervailing forces, we believe that the best approach is to adopt a gradual phase-in of CBIT, rather than specific measures for low-bracket, tax-exempt and foreign investors although we discuss such measures below. To preserve CBIT's neutrality between debt and equity, the discussion contemplates identical treatment of debt and equity. The reductions of tax due to these mechanisms, of course, will have revenue consequences.

Interest Rate Impact of CBIT

The interest rate on CBIT debt will be less than the interest rate on nonCBIT debt, potentially by an amount up to the 31 percent entity level tax, because interest received on CBIT debt represents an after-tax return.³⁶ For example, if market interest rates on nonCBIT debt were 10 percent, a debt instrument issued by a CBIT entity might bear interest at a rate as low as 6.9 percent. If this were the case, the after-tax return on the two instruments would be the same for a taxable investor with a 31 percent marginal rate. While predicting the actual rate relationship between CBIT and nonCBIT debt is impossible, experience with the ratio of interest on tax-exempt state and local bonds to that on taxable corporate bonds suggests that the CBIT interest rate may not reflect a 31 percent tax rate, because there may be insufficient demand for CBIT debt by investors with a marginal rate of 31 percent. Thus, for example, if a nonCBIT bond bore interest at a 10 percent pre-tax rate, a CBIT bond might bear interest at 8 percent if it were necessary to attract lower-bracket investors to CBIT debt. In such a case, the 8 percent (after-tax) CBIT return would be more attractive to an investor in the 31 percent bracket than the 10 percent (pre-tax) nonCBIT return.

Because interest rates on CBIT debt should be lower than the rates on nonCBIT debt, low-bracket, tax-exempt, or foreign investors (collectively, tax-favored investors) can be expected to increase

their holdings of nonCBIT debt and decrease their holdings of CBIT debt. (Overall, these portfolio shifts may be offset by increased demand for CBIT debt and equity by taxable investors.) Depending on their tax rates, tax-favored investors, for example, might prefer a 10 percent nonCBIT bond to an 8 percent CBIT bond. For any investor with a marginal rate of less than 20 percent, a 10 percent nonCBIT return is worth more than an 8 percent CBIT (after-tax) return. While a rate differential of less than 15 percent between CBIT and nonCBIT bond rates should not affect the portfolio choices of low-bracket individual taxpayers, any rate differential could affect investment choices by tax-exempt and foreign investors since, as under current law, all nonCBIT interest paid to tax-exempt investors (and portfolio interest paid to foreign investors) is tax-free at the investor level. Domestic tax-exempt entities might be expected to decrease holdings of CBIT debt and increase holdings of governmental or other nonCBIT debt and CBIT equity.³⁷

The treatment of preference income under CBIT further complicates the analysis of the expected rate differential between CBIT and nonCBIT investments. If a compensatory tax were imposed, all CBIT investments would pay an after-tax return, and one would generally expect the risk adjusted return on CBIT investments to be the same. On the other hand, if payments of dividends and interest out of preference and foreign source income are taxable to investors, issuers with substantial preference and foreign source income may pay a higher return than issuers with substantial fully-taxed income.

If CBIT were adopted, special attention would have to be given to its impact on international capital flows.

Low-Bracket Investors

As discussed in Chapter 1, we have structured the CBIT prototype to impose a uniform 31 percent tax on earnings on capital invested in CBIT entities. However, the impact of CBIT on taxable equity holders and bondholders with marginal rates of less than 31 percent could be

lessened by providing those investors with a tax credit. This credit could be designed to give those investors a tax benefit equal to all or a portion of the difference between their marginal rate and the 31 percent CBIT rate. While the credit would not be refundable, it could offset tax on other income. The effect would be similar to full refundability for any investor with enough other tax liability to absorb the credit.³⁸ If a compensatory tax were not imposed, the credit would be available only for excludable payments.

The credit is essentially the same as the shareholder credit for low-bracket investors described in Section 2.D in the context of the dividend exclusion prototype. Because CBIT extends to both dividends and interest, the credit would be available to both equity holders and bondholders.

Example. Assume that a CBIT entity earns \$100 of income and pays \$31 in tax. It then distributes \$69 as interest to a bondholder with a marginal tax rate of 15 percent. Applying the formula set forth in Section 2.D (adjusted to reflect the 31 percent CBIT rate), a bondholder credit of \$16 (i.e., $\$69 \times .69 \times (.31 - .15)$) would produce a tax benefit equal to the difference between the bondholder rate and the CBIT rate.

Tax-Exempt Investors

Under the other prototypes described in this Report, denying refundability of corporate level taxes preserves the current law treatment of corporate equity owned by tax-exempt and foreign investors. Under CBIT, however, some offset for corporate level taxes would tend to move CBIT closer to current law by mitigating the additional tax burden the prototype places on interest earned by tax-exempt investors. As with low-bracket shareholders, the credit could be set at a rate that would refund either all or a portion of the tax imposed at the 31 percent CBIT rate. If a compensatory tax is not imposed, the credit would be available only for excludable payments.

Because tax-exempt investors have little or no tax liability, they would be unable to benefit from the nonrefundable investor credit described in the

preceding section. One possibility would make the investor credit described above refundable. An alternative approach would combine an investor level credit with a tax on investment income of tax-exempt entities. Under this approach, tax-exempt and foreign investors would be liable for tax on all investment income (interest, dividends, capital gains, rents, royalties, and other investment income). The rate of this tax could be set to produce overall revenues (taking into account the investor credit) equivalent to those currently borne by equity supplied by the tax-exempt sector. A tax-exempt entity could then use the investor level credit to offset the tax due on other investment income. See Section 6.D.³⁹

Imposing a tax on investment income and allowing a credit would treat CBIT and nonCBIT debt instruments alike (although it probably would not fully compensate for the interest rate differential between CBIT and nonCBIT debt). It generally would encourage tax-exempt entities to hold a mixture of CBIT and nonCBIT debt and equity, because the nonrefundable investor credit associated with CBIT debt and equity could be used to offset the tax due on other kinds of investment income. This approach would minimize differences between CBIT and nonCBIT investments, just as it could minimize differences between debt and equity under distribution-related integration.⁴⁰

Foreign Investors

The absence of special relief for foreign debt investors in the CBIT prototype reflects our judgment that elimination of the withholding tax on CBIT dividends and interest and elimination of the branch tax may balance the CBIT change as to debt, recognizing that, under CBIT, foreign investors may prefer nonCBIT debt to CBIT debt and CBIT equity to equity under current law.

Nevertheless, either of the mechanisms described for tax-exempt investors—a refundable credit or the investment tax and credit mechanism described in the preceding section—could be used to provide relief for foreign investors. A gradual phase-in of CBIT also would allow assessment of

the need for such mechanisms based on experience.

Impact of Relief Measures for Low-Bracket, Tax-Exempt and Foreign Investors on the CBIT Prototype

Our recommended CBIT prototype contains none of the relief mechanisms discussed in the preceding sections. Adoption of any of these mechanisms would result in a revenue loss which would have to be recovered elsewhere in the prototype or in other offsetting revenues not now required by the prototype. For example, a compensatory tax could be imposed. (The estimates for the CBIT prototype in Section 13.H do not include a compensatory tax.) In addition, the decisions to eliminate the branch tax and withholding taxes for foreign investors could be re-examined (although such a modification would be contrary to the goal of imposing a single level of U.S. tax).

4.G STRUCTURAL ISSUES

Current Law Interest Deduction Limitations Under CBIT

Under current law, interest paid or incurred by businesses generally is deductible. In special circumstances, however, the Code limits business interest deductions. These limitations serve several purposes, such as treating debt instruments with equity characteristics as equity, preventing mismatches in the timing of income and expense, and preventing tax arbitrage by borrowing to purchase tax-favored investments.

CBIT's elimination of the deduction for business interest by all but the smallest businesses could allow a major simplification in the Code by eliminating (or substantially reducing) the need for several provisions designed to prevent excessive and mismatched interest deductions. Thin capitalization will no longer be a tax concern. We believe the following Code sections could be repealed or substantially reduced in scope:

- IRC § 385 (granting Treasury the authority to define the distinction between debt and equity) and IRC § 279 (denying deductions for equity-like debt) would be repealed,
- IRC § 163(e)(5) and (i) (deferring interest deductions on high-yield discount obligations) and IRC § 163(j) (deferring excessive interest deductions on certain related-party debt—the anti-earnings stripping provision) would be repealed,
- IRC § 267(a)(2) (relating to matching of interest income and deductions between related parties) would no longer apply to interest paid by CBIT entities,
- IRC § 469 (the passive loss rules) and IRC § 465 (the at risk rules) would have no application to interest paid by a CBIT entity,
- IRC § 263A(f) (relating to capitalization of interest with respect to self-constructed assets and inventory) could be repealed, and IRC § 266 (the election to capitalize interest generally) could be repealed with respect to CBIT entities,⁴¹
- IRC § 1277 (restricting interest deductions allocable to accrued market discount) and IRC § 1282 (restricting interest deductions allocable to accrued discount) might no longer apply to interest paid by CBIT entities,
- IRC § 263(g) (requiring capitalization of interest and other costs of carrying a straddle) might no longer apply to interest paid by a CBIT entity,
- IRC § 265(a)(2) (disallowing deductions for interest incurred to purchase obligations bearing tax-exempt interest) might no longer apply to interest paid by a CBIT entity,
- IRC § 265(b) (relating to disallowance of interest deductions of financial institutions allocable to tax-exempt obligations) and IRC § 291(e)(1)(B)(ii) (an earlier version of IRC § 265(b) applicable for tax-exempt obligations acquired by financial institutions between 1982 and 1986) could be repealed,⁴² and
- IRC § 264(a)(2), (3), and (4) (denying interest deductions on certain debts relating to life insurance policies) might not apply to interest paid by CBIT entities.

CBIT will expand the scope of provisions, such as IRC § 265(a)(2) (which currently disallows deductions for interest on indebtedness

incurred or continued to purchase or carry obligations bearing tax-exempt interest) and IRC § 265(a)(1) (which currently disallows expense allocable to tax-exempt income other than interest), to apply to taxpayers who receive CBIT interest and dividends. While the expanded interest disallowance rules would not apply to CBIT entities, it would apply to individuals and small business entities to disallow interest on debt incurred or continued to purchase or carry equity or debt of CBIT entities.⁴³ Absent such expansion, much of the CBIT tax base would erode in tax arbitrage transactions illustrated by the following hypothetical example:

Example. Assume that, for each year of its operation, CBIT entity X earns \$1 million, pays \$310,000 in regular CBIT tax and pays the remaining \$690,000 as a dividend to individual A, its sole shareholder. The \$690,000 is not taxable to A.

Assume that A borrowed \$6,900,000 from tax-exempt entity C at 10 percent interest per year to purchase the X stock. If A is allowed a deduction of \$690,000 for interest paid, he can shelter up to \$690,000 in income from other sources while using his excludable CBIT dividends to pay the interest to C. C will pay no tax on the \$690,000 in interest it receives each year. If the \$690,000 deduction allowed to A shelters income otherwise taxable at 31 percent, \$213,900 of the tax paid by X will in effect be refunded to A. While the interest paid and dividend received in this example are equal, they need not be. If C is willing to loan A \$10 million against his X stock on the same terms, A's interest deduction, if used against other income, would fully offset the CBIT tax X paid with respect to the distribution to A.⁴⁴

Under current law, this is simply one of many opportunities for rate arbitrage through the issuance of debt by taxable issuers to tax-exempt and foreign lenders. CBIT, however, generally eliminates businesses' ability to pay interest to tax-exempt and foreign lenders without the payment of one level of tax. Thus, to prevent the erosion of the CBIT base, it is also necessary to prevent investor level rate arbitrage through borrowing.

Application of modified IRC § 265 would be equally appropriate if a compensatory tax is not

adopted and interest and dividends paid by CBIT entities out of preference income are taxable to investors. In either case, the potential for arbitrage is the same. See "Anti-abuse Rules" in Section 2.B.

Finally, some of the interest deduction limitations CBIT might eliminate may serve policies that would continue to be important but would require new mechanisms under CBIT. One example is current law's requirement that debt obligations be issued in registered form. Currently IRC § 163(f) denies a deduction for interest on unregistered obligations for which registration is required. This sanction would have no deterrent effect for CBIT entities because CBIT eliminates interest deductions. Because interest received from CBIT entities will not be taxed to the investor, the need for registration of debt instruments of CBIT entities for tax enforcement purposes will be greatly reduced. However, registration may be desirable for nontax law enforcement purposes, and replacement sanctions may be needed.⁴⁵

Identifying Disguised Interest

CBIT entities and their investors will be indifferent to the characterization of payments to investors as either interest or dividends, because neither will be deductible by the CBIT entity and neither will be taxable to the investor. However, tax tensions will remain and may be exacerbated by CBIT with respect to rent and royalty payments and allocations between principal and interest on the purchase of capital assets.

If the market rate of interest on CBIT debt does not fully reflect the nondeductibility of interest payments, it will generally be advantageous to a CBIT entity to restructure such payments, where possible, into deductible rental and royalty payments. Such a restructuring will generally be disadvantageous to taxable recipients since it will convert interest that is not taxed into taxable rents or royalties. No such tension will exist, however, if the recipient is a tax-exempt entity or a CBIT entity that is in a net operating

loss position. Similarly, CBIT entities can be expected to maximize principal and minimize interest payments on capital purchases, since asset basis will give rise to deductible cost recovery while interest payments are nondeductible. Again, taxable sellers may have opposing interests depending on how gains on asset sales are taxed.⁴⁶ As with rents and royalties, these tensions will not exist where the seller is tax-exempt or is a CBIT entity with a net operating loss.

CBIT therefore will put increased pressure on standards, such as those the Internal Revenue Service has developed, distinguishing finance leases (which are treated for tax purposes as loans and hence generate nondeductible interest for a CBIT entity) from true leases (which are respected as such for tax purposes and hence give rise to deductible rentals for CBIT entities).⁴⁷ We believe that it would be prudent in a CBIT regime to include standards for distinguishing interest from rents and royalties in the Code, modeling them on existing standards, such as those the Service has developed for leases, or on IRC § 467, which imputes interest to prevent uneconomic accruals of rent.⁴⁸

Purchase price allocations are inherently factual and governed by the standards of the market. While CBIT may change the tax stakes in such allocations, the problem presented is no different from that confronting the Internal Revenue Service in making fair market value determinations under current law. We do not contemplate that statutory change will be needed in this connection to implement CBIT.

The current original issue discount (OID) and imputed interest rules may be needed in order to distinguish interest from principal. For example, in the case of sales of property in exchange for debt, these rules are needed to determine the buyer's basis and the seller's amount realized.⁴⁹ Similarly, in the case of debt issued for cash, these rules are needed to distinguish payments of interest (which reduce the EDA and, when the EDA is exhausted, are subject to compensatory tax or investor level tax) from payments of principal.⁵⁰

Interest Not Subject to CBIT

CBIT does not dictate any change in the current taxation of interest paid on debt issued by a nonCBIT borrower. Thus, for example, home mortgage interest and personal investment interest incurred to carry nonCBIT assets would continue to be deductible by an individual borrower to the same extent as under current law and includable in the income of the recipient. Nonmortgage, personal interest would continue to be nondeductible by the borrower and includable by the lender. State and local bond interest would generally remain excludable from gross income to the same extent as under current law. Interest on Treasury debt would, as under current law, be includable in income by the recipient.⁵¹

One administrative issue raised by nonCBIT debt is tracking income and deductions related to such debt. For example, maintaining the current law treatment for home mortgage interest, interest on Federal debt, and debt issued by foreign and tax-exempt entities under CBIT will require special reporting rules to identify such interest as includable in income and to permit it to retain its special character when it is collected and distributed by a REMIC, REIT, or other passthrough entity.

Under CBIT, interest earned on bonds issued by State and local governments would retain its current exemption from tax,⁵² but interest income on debt issued by CBIT entities generally would be exempt. Under CBIT, the rate of interest on exempt state and local obligations may approximate the interest rate on corporate debt of similar risk and maturity. Thus, State and local governments might view CBIT as eliminating the borrowing advantage they currently enjoy relative to corporate issuers. State and local debt would, however, retain its advantage over Treasury and other nonCBIT debt such as home mortgages.

Pension Funds

As Section 2.G discusses, the immediate deduction for employer contributions to pension plans, combined with the deferral of income to

the employee until benefits are paid, effectively exempts the investment earnings on the contribution from tax. As a consequence, under current law pension fund investment earnings from investments in corporate stock bear only one level of tax—the corporate tax paid by the corporation. Investment earnings on pension fund investments in corporate debt, however, bear no tax at all under current law, because corporate income used to pay interest is not taxed at the corporate level.⁵³ Under CBIT, however, investment earnings from both CBIT debt and equity will be taxed at the payor level, with the consequence that pension plans will earn an after-tax return on such investments. The introduction of CBIT thus eliminates the deferral of tax on inside buildup.

The position of pension plan trusts under current law could be replicated in CBIT only by refunding the CBIT entity level tax on interest paid to pension trusts. This step would eliminate the need to revise pension tax rules, but would undermine CBIT's fundamental goals of treating debt and equity alike and collecting a uniform tax on business capital income regardless of the identity of the investor.

To equate the treatment of CBIT debt and equity investments by pension funds, we recommend requiring pension trusts to maintain separate accounts for CBIT income and other amounts, e.g., contributions and nonCBIT income,⁵⁴ to treat all distributions made each year as made proportionately from the income of each account, and to notify pension payees of the amount from each account included in their pension payments. Payees would be entitled to exclude from income pension distributions from the CBIT income account, thereby reducing the tax burden on corporate equity investments relative to current law.

Because pension trusts will enjoy no inside build-up advantage over other investors with respect to the CBIT assets they hold, CBIT might induce such trusts to alter their portfolio mix toward nonCBIT assets. The degree to which this occurs depends on the relationship of CBIT to nonCBIT yields and the portfolio and diversification advantages of particular investments.

If a compensatory tax were not adopted, pension funds would add only excludable CBIT income to the CBIT income account. In general, taxing distributed preference income at the investor level, rather than imposing a compensatory tax, would lessen the extent to which adoption of CBIT removes the tax-free inside build-up on CBIT investments.

Subchapter C Recognition and Reorganization Rules

As in the dividend exclusion prototype, the CBIT prototype retains the basic rules of Subchapter C governing the treatment of taxable and tax-free corporate asset and stock acquisitions. CBIT entity gain on asset sales would be taxable to the CBIT entity and payment of tax on the gains would give rise to additions to the EDA, thereby permitting distribution of the after tax proceeds of such asset sales to investors without further tax. As in the dividend exclusion prototype, the Subchapter C reorganization rules would be retained, and no special limitations analogous to IRC §§ 382 and 383 would apply to the EDA. See Section 2.F. As in the dividend exclusion prototype, EDAs would be combined in acquisitive reorganizations and allocated in divisive transactions. Liquidations would generally be treated as in the dividend exclusion prototype. A liquidating entity's EDA would generally be allocated among equity holders in proportion to the amount of other assets distributed to them, and any gain would be excludable to the extent of the allocable EDA.⁵⁵

In CBIT, however, partnerships are treated as CBIT entities. Imposing Subchapter C structural rules on partnerships would change current law significantly by eliminating the partnership rules found in IRC §§ 731-732 which permit tax-free distribution of partnership property to partners.⁵⁶ While the CBIT prototype contemplates that the existing Subchapter C recognition rules for distributions ultimately should be applied to all CBIT entities, policymakers concerned about the implications of such a rule on changes in the organization form of smaller CBIT enterprises could create carryover basis exceptions to the

Subchapter C recognition rules for smaller CBIT entities.⁵⁷

Capital Gains, Dividend Reinvestment Plans, and Share Repurchases

If a compensatory tax were adopted, a full exemption of investor level gains and losses on equity and debt could be viewed as consistent with CBIT's exemption of investor level tax on dividends and interest. However, the fundamental problem of capital gains taxation in CBIT is similar to that encountered in other integration prototypes and either resolution (to tax or to exempt capital gains) will be controversial. See Chapter 8. If capital gains are taxed under CBIT, corporations might implement a dividend reinvestment plan (see Chapter 9) to reduce the incidence of double taxation on retained earnings. The appropriate treatment of share repurchases under CBIT also depends on treatment of capital gains. See Section 8.E.

4.H CONDUITS

Treatment of Conduits under CBIT

Current law exempts certain organizations from entity level tax. These entities function as tax conduits; they either are granted complete passthrough status or are taxed only on their undistributed income. Partnerships generally are granted passthrough status if they meet certain classification tests that distinguish them from corporations.⁵⁸ Certain publicly traded partnerships are always treated as corporations.⁵⁹ Regulated investment companies (RICs) are taxable corporations but are allowed a deduction for dividends paid out of both ordinary income and capital gains.⁶⁰ A typical RIC is a mutual fund that makes diversified investments for its shareholders. Real estate investment trusts (REITs) are taxed similarly to RICs but are restricted to investing predominately in real estate.⁶¹ Real estate mortgage investment conduits (REMICs) are entities that hold fixed pools of mortgages and have both regular interests, providing for fixed, unconditional payments and taxed as debt, and a

single class of residual interests, taxed essentially like equity interests in a partnership.⁶² Holders of REMIC residual interests are taxed on their pro rata share of the REMIC's net income.

A cooperative, generally, is an organization that transacts business with and for its patrons (owners). Some cooperatives enjoy a limited exemption from tax. Subchapter T cooperatives are treated as corporations under current law but are allowed a special deduction for patronage dividends and per unit returns allocated to patrons based on business activity. While this results in effective conduit treatment of patronage distributions and allocations, other earnings of a cooperative are subjected to corporate taxation.⁶³ Typical cooperatives include farmers' cooperatives that purchase farmers' crops, sell them, and remit the proceeds to the farmers or purchase feed and seed for resale to farmers. Other cooperatives include grocery, hardware, drug, book, and clothing stores that operate on a cooperative basis.

Conduits that are not taxable entities under current law could continue as such under CBIT or could be treated as CBIT entities. To the extent that a conduit holds only CBIT equity or debt, its status as a conduit is irrelevant. A RIC, for example, that holds only CBIT bonds would pay no entity level tax even if it were treated as a CBIT entity, because all of its interest income and capital gains would be exempt from tax. Any dividends paid to shareholders also would be exempt from tax. Conduit status would be equally irrelevant, whether CBIT included a compensatory tax or instead imposed tax at the investor level on distributions out of preference income. See Section 4.D.

Thus, the treatment of nonCBIT income earned by conduits is the principal issue in deciding whether conduits should retain their passthrough status. One of the principal purposes for conduit status under current law is to provide relief from the double tax applicable to corporations. Because CBIT subjects corporate income only to a single level of tax, CBIT might replace the need for conduits. In addition, retaining conduit status for some entities would provide a

means for avoiding the CBIT regime. Conduit status permits income to be taxed at shareholders' rates (which, for tax-exempt shareholders, may be zero), rather than at the CBIT rate. Thus, there would be an incentive to have nonCBIT assets held through a conduit rather than through a CBIT entity.

Partnerships

The CBIT prototype treats partnerships as CBIT entities in order to avoid perpetuating the bias against doing business in the corporate form. Exempting partnerships from CBIT would create incentives for investors to choose the partnership form whenever the tax benefits of passthrough treatment outweighed the business costs of operating in partnership rather than corporate form.

Example. A group of investors (including some tax-exempt organizations) is considering undertaking a business venture. The investors decide to conduct business through a partnership rather than a CBIT entity so business income will be taxed at the investors' rates rather than at the CBIT rate.

By removing taxes from the determinants of organizational form, CBIT enhances neutrality.

In general, under CBIT, partnerships that do not qualify for the small business exception described in Section 4.C would be taxed like other CBIT entities. Thus, a partnership would be subject to entity level tax each year on its earnings (computed under the normal corporate tax rules but without a deduction for interest), but would not allocate earnings to equity holders. Like other CBIT entities, a partnership would maintain an EDA and would track actual distributions (rather than allocations of income) to partners and interest payments on debt. Distributions and payments in excess of the EDA would be subject to compensatory tax (or investor level tax).⁶⁴

Subjecting partnerships to CBIT may treat certain types of partnership income less favorably than under current law. For example, partnership income would be subject to tax at the CBIT rate, rather than at the partners' individual rates.

Partnership losses, preference income, and foreign tax credits would no longer pass through to partners. Distributed preference income and sheltered foreign source income would be subject to compensatory tax (or investor level tax). If these results are undesirable, policymakers may wish to expand the class of partnerships that are exempt from CBIT beyond the small business exception discussed in Section 4.C. However, the advantages of doing so should be weighed against the costs of retaining tax incentives favoring noncorporate forms of organization.

RICs, REITs, and REMICs

The analysis for these special purpose pass-through entities may be somewhat different, however. There is an argument that they should retain conduit status because they serve an important function as pooled investment vehicles for small investors. To the extent that individuals and tax-exempt organizations could purchase and hold nonCBIT investments, e.g., home mortgages, Treasury securities, and tax-exempt bonds, directly, they should be permitted to do so indirectly through a RIC or REIT.

Example. A CBIT corporation would like to issue new shares in order to purchase a new building. Corporate earnings used to pay dividends on those shares would, however, bear tax at the CBIT rate. The corporation decides instead to lease its new building from a REIT, which issues shares to fund the purchase. As a consequence, the corporation can deduct the payments of rent, and dividends paid by the REIT are taxed at shareholder rates.

While the preceding example might be viewed as avoidance of CBIT, the incentives to engage in this form of transaction under current law are as strong as they would be under CBIT. In addition, given a decision to simplify CBIT by making it a 31 percent tax on all capital income, it might be considered worthwhile to maintain investment opportunities for low-bracket investors that will bear tax at the investor's tax rate rather than the CBIT rate.⁶⁵ Maintaining conduit status for RICs, REITs, and REMICs will require the expansion of IRC § 265(a)(3) to deny such conduits the ability to deduct expenditures related to the purchase or carrying of CBIT assets. With this

modification, however, it should be possible to retain current rules for such entities. This approach will make enforcement of the leasing standards discussed under "Identifying Disguised Interest" in Section 4.G particularly important in maintaining the CBIT base.

Given the decision to treat partnerships generally as CBIT entities, it may be appropriate to make changes in the REIT qualification rules to allow entities with fewer than 100 shareholders and state law partnerships to qualify as REITs for tax purposes. This would avoid conferring an advantage on large, corporate REITs in real estate investing. Similar relaxation of the RIC qualification rules might be considered.

Cooperatives

We believe the limited conduit status granted to Subchapter T cooperatives would continue to be the appropriate model for cooperatives under CBIT. Cooperatives would thus be CBIT entities but could deduct patronage dividends.⁶⁶ As under current law, patronage dividends would generally be includable in the patron's income.

4.I FINANCIAL INTERMEDIARIES UNDER CBIT

Financial intermediaries include depository institutions, insurance companies, investment banks, and other financial services entities. Although the specific services provided by these institutions vary, financial intermediaries generally solicit funds from investors, depositors, and other lenders and use these funds to make loans or to acquire the debt and equity issues of other companies. Thus, financial intermediaries earn most of their income in the form of dividends and interest and tend to have substantial noninterest expense that is incurred to produce net interest and dividend income and gains on securities.

The following analysis suggests the basic outlines of the taxation of financial intermediaries under CBIT, although further consideration should

be given to these issues during the period CBIT is under discussion.⁶⁷

Financial Institutions Generally

CBIT would exempt from tax much of the income received by financial institutions because it is received in the form of dividends and interest from CBIT entities. In addition, if financial institutions were treated as CBIT entities, their interest expense would no longer be deductible. This raises the question of how other operating expenses of financial institutions should be treated. We have generally recommended that IRC § 265(a)(1) and (2), which operate to disallow deductions and interest allocable to tax-exempt income, be extended to cover investment in equity and debt of CBIT entities. Given the large portion of financial institution income that can be expected to come from CBIT investments as well as from tax-exempt State and local government bonds, this general rule would operate to disallow a significant portion of their operating expenses if deductions for such expenses were not allowed.

This effect is likely to be less significant for direct lenders such as banks and finance companies because they would no doubt begin to charge fees (rather than interest) to cover the costs of making a loan (as contrasted with the institution's cost of funds). Indeed, provisions requiring the borrower to pay the lender's transaction costs such as attorney's fees, filing fees, survey and appraisal expenses, inspection costs and similar items are already a common feature of negotiated loan transactions. The advantage of converting interest income into fee income would be that a CBIT borrower could deduct fees but not interest. Although the fee income will be includable in the income of the CBIT lender, the lender will be permitted to deduct operating expenses against such income without disallowance under expanded IRC § 265. Thus, recharacterizing interest income as fees may permit better matching of a financial institution's income and expenses. This strategy, however, is likely to be less successful with respect to publicly traded instruments of CBIT entities, where the intermediary, in many

instances, will be unable to negotiate borrower fee payments to cover its operating expenses. Given the prevalence of commissions and fees in the compensation paid to investment banks and securities trading entities, however, it may be that market adjustments in these amounts would solve the problem for these entities.

For revised IRC § 265(a) rules to function as described in this section, mechanical provisions which match operating expenses with related fee, commission, and reimbursement income will be necessary. In particular, a proportional allocation rule such as that found in current IRC § 265(b) would produce inappropriate results if CBIT income were included in the fraction. Instead, financial institutions should be allowed to allocate operating expenses fully to offset fee income. To the extent that fee income is insufficient to cover operating expenses, the residual expenses would be allocated between CBIT and nonCBIT income under the pro rata rule of IRC § 265(b) and the portion allocable to CBIT income could be disallowed under IRC § 265(a).

Alternatively, financial institutions could be exempted from the disallowance rule of expanded IRC § 265(a) with respect to their operating expenses.⁶⁸ This approach would increase the incentive for such institutions to generate sufficient nonCBIT income (through investments in Treasuries, home mortgages, consumer debt, and leasing activities) to absorb fully the portion of their operating expenses in excess of their fee income. Our analysis indicates that most financial institutions currently hold enough nonCBIT debt to achieve this result; accordingly, the impact of such an approach on actual investment patterns is likely to be minimal. However, there is no relationship between the nonCBIT income and the expenses related to CBIT investments; hence, the allowance of a full offset may reduce other income, rather than matching nonCBIT income.⁶⁹

Savings and Loan Associations

Savings and loan associations (S&Ls) must invest heavily in home mortgages to maintain their qualification for special tax rules. Assuming

these requirements were maintained under CBIT, S&Ls would receive primarily taxable income but receive no deduction for interest paid to depositors. There should be a significant spread, however, between the interest rates paid on home mortgages (because recipients will pay tax on such interest) and the interest rates paid to depositors (because the depositor will not be subject to tax on interest received from the S&L as a CBIT entity). This spread may be sufficient to allow S&Ls to satisfy their CBIT liabilities, and, if so, no special rules will be needed. Again, a gradual transition to CBIT would allow policymakers to study the observed impact of CBIT before finally resolving structural decisions. Because the need for a special rule for S&Ls is not clear, the CBIT prototype does not include such a rule.

If experience proves that the rate differential between interest on home mortgages and interest on CBIT deposits is insufficient to allow S&Ls to operate successfully, consideration could be given to allowing S&Ls to issue certificates of deposit that would bear taxable interest to the recipient and deductible interest to the S&L. Even such a limited provision would undermine somewhat the tax parity between debt and equity achieved by CBIT, however, and should be adopted only if it proves necessary.⁷⁰

Insurance Companies

Under the CBIT prototype, insurance companies would be CBIT entities.⁷¹ Like other CBIT entities, they would not be allowed a deduction for interest paid, but distributions to shareholders and creditors would not be taxed to the recipients.⁷² Under CBIT, IRC § 809 (which Congress intended to equalize the treatment of stock and mutual companies' equity returns) would be repealed, since equity returns from both stock and mutual companies would be exempt to the recipient under CBIT. In both types of companies, payment of tax on earnings from surplus would give rise to an EDA permitting distributions free of further tax to investors. Distributions in excess of the EDA would trigger the compensatory tax or an investor level tax, but would preserve the equal treatment of investors.

CBIT will, however, require an adjustment in the deduction permitted insurance companies for annual additions to reserves. Under current law, tax reserves are calculated on a discounted basis. Accordingly, the deduction for reserve additions each year consists of two components: (1) the discounted present value of amounts required to fund future casualty and benefit payments plus (2) the expected return for the year on reserve funds. This system permits companies to claim deductions currently rather than deducting the entire loss or claim when paid. The difference between the present value of such losses or claims and the full (or nominal) value of such payments is deducted each year as expected return until the loss or claim is actually paid. The rate used to compute expected return under current law is based on the applicable Federal rate (AFR), which reflects a taxable rate of return.

Under CBIT, reserves would be calculated with a blended market interest rate, which would be a prorated average of a taxable nonCBIT rate and a non-taxable CBIT rate, according to the mixture of assets held by each insurance company. To the extent that reserve assets are invested in CBIT securities, no deduction to shield expected return on CBIT entity dividends and interest received by an insurance company would be appropriate because such amounts would not be

included in its income and would increase the insurance company's EDA. Accordingly, insurance companies would be required to maintain CBIT and nonCBIT income accounts similar to those of pension funds under CBIT. As with pension funds, insurance companies would be required to treat their expected return on reserves as arising pro rata from the CBIT and nonCBIT income accounts. An annual deduction for expected return would be permitted only to the extent attributable to nonCBIT income. As a result of this modification, insurance companies should neither obtain new benefits nor lose current law benefits with respect to their nonCBIT investments. While insurance companies would pay no tax on dividends and interest received from CBIT entities, they would enjoy no advantage over other investors in this respect.

The prototype's preservation of reserve deductions to prevent entity level taxation of the inside build-up (the income earned on reserves held in nonCBIT assets) may be regarded as inconsistent with the neutrality principles underlying CBIT, since the prototype may lead insurance companies to prefer nonCBIT investments which benefit from this advantage. We believe, however, that a different rule is not necessary for CBIT to function effectively and would require reversal of long-standing policies underlying insurance taxation.

PART III: PRINCIPAL ISSUES

INTRODUCTION

Each of the systems of corporate integration considered in this Report would move the U.S. tax system in the direction of more neutral taxation of capital income and, in so doing, reduce current tax-induced distortions in the allocation of capital. All the systems of corporate integration would substitute a single level of tax for the existing two level classical corporate tax system. The CBIT prototype also would eliminate tax distortions in the choice between corporate and noncorporate forms of business organizations by taxing all business income uniformly, at entity level tax rates.

Each of the systems of corporate tax integration is economically equivalent if income earned by corporations and individuals were taxed at the same tax rate, all income earned by corporations were treated the same, and all investors were taxed at the same tax rates.¹ But they are not.² The existence of differing tax rates among individuals and between corporations and individuals, tax preferences for a variety of kinds of income and deductions, domestic tax-exempt and foreign suppliers of capital, and foreign source income earned by U.S. corporations create significant differences among basic systems of integration. These circumstances also raise fundamental structural issues that must be addressed within the context of each of the integration systems. How these issues are resolved in an integrated corporate tax system significantly affects the choices among the basic integration alternatives and, ultimately, the efficacy of the method chosen in reducing or eliminating the distortions associated with the classical corporate tax system.

Transition rules also must be addressed in any integration proposal. The speed and administrative ease with which integration can be implemented, the degree of distortion experienced during the

transition period, and the revenue impact of different rules may affect the feasibility and the desirability of different integration prototypes.

These issues raise important and controversial issues of tax policy apart from their effects in structuring an integrated corporate tax system. Current law reflects compromises among goals of economic efficiency, equity in taxation, and other political, social, or economic policy goals (including furthering, for example, specific categories of investment) as well as the coordination of taxation across international borders.

The appropriate connection between such policy considerations and the construction of an integrated corporate tax system is further complicated because the Internal Revenue Code to date has addressed questions concerning tax preferences, tax-exempt suppliers of corporate capital, international considerations, and tax rates only in the context of a classical corporate tax system, not within the structure of an integrated system. Indeed, in some cases, provisions of current law have been enacted, at least in part, to redress the burdens of the classical corporate tax. Therefore, the treatment of these specific issues under current law may or may not be the appropriate benchmark for resolving the issue under an integrated system. On the one hand, current law tax rules have had a major impact on economic decisions and have shaped a wide variety of existing financial arrangements; care must be exercised so unwarranted disruptions do not occur in moving to an integrated corporate tax system. On the other hand, the resolution of these issues may have considerable influence on the degree of success of an integrated corporate tax system in removing the distortions of the existing system. Our task, therefore, has been to approach these issues in a manner that advances this Report's fundamental

objective—more neutral taxation of capital income—where practical, without demanding that a move from a classical to an integrated corporate tax system be accompanied by a comprehensive reevaluation of such fundamental issues as the treatment of tax preferences or international business transactions.

Although this part discusses these issues as discrete topics, they are often interrelated. For example, decisions regarding the use of tax preferences may affect decisions concerning the treatment of tax-exempt shareholders, and decisions concerning tax-exempt shareholders may influence policies regarding foreign investors.

CHAPTER 5: TREATMENT OF TAX PREFERENCES

Under current law, the Code provides favorable treatment that is generally recognized as deviating from standard accounting rules for particular items of income or expense.¹ These tax preferences may take the form of exclusions of income or preferential rates for items of income, accelerated deductions or deferred income recognition rules or credits. Some preferences (like the exclusion for interest on certain state and local bonds) create a permanent reduction of tax liability. However, most corporate preferences (like accelerated depreciation) offer deferral of tax, rather than outright exemption.

Under current law, there are two mechanisms for restricting the use of business tax preferences: the earnings and profits rules and the corporate and individual minimum tax provisions. The earnings and profits rules define the pool of corporate earnings that is taxable as dividends (rather than as a return of basis or as capital gain) when distributed to shareholders. Earnings and profits are calculated to include most corporate tax preferences. Thus, income that is tax-preferred at the corporate level is generally subject to tax when it is distributed to noncorporate shareholders.² Thus, under current law, tax preferences may provide corporations with retainable, but not necessarily distributable, tax-preferred funds.

A strengthened minimum tax for both individuals and corporations was a central feature of the Tax Reform Act of 1986. Under current law, the alternative minimum tax (AMT) is payable only if the computation of the minimum tax produces a tax greater than the tax due under the regular computation. For individuals, the AMT is imposed at a 24 percent rate on an expanded tax base that includes most tax preference items. In the case of corporations, the AMT is imposed at a 20 percent rate on a tax base that includes a broad list of tax preference items. The corporate minimum tax serves to limit the capacity of tax preferences to reduce tax on retained, as well as distributed, earnings.

The expanded tax bases for the AMT and the relatively narrow rate differentials between the regular and minimum taxes make the minimum tax provisions of current law a powerful revenue source with widespread impact on the tax planning of both high-income individuals and corporations. If the corporate AMT were repealed, a significant increase in the corporate tax rate would be required to offset the revenue loss. The minimum tax provisions not only raise revenue directly but also serve to increase the regular income tax paid by individual and corporate taxpayers who limit their use of preferences to avoid being subject to the AMT.

In integrating the corporate and shareholder income tax systems, the fundamental question about tax preferences is the continuing role of limitations on corporate tax preferences. Some commentators have suggested that integration implies giving to shareholders tax reductions due to corporate level tax preferences.³ They argue that if integration is to achieve tax neutrality between corporate and noncorporate investments, extending preferences to shareholders is appropriate. The cost of not extending to shareholders preferences that are available to noncorporate businesses is retaining a bias against the corporate form for any activities that are granted tax preferences. Such activities will tend to be performed by noncorporate firms. As discussed in Chapter 1, an economic loss results to the extent that such activities could be carried on by corporations at lower costs.⁴

With respect to deferral preferences, such as those permitting rapid depreciation or amortization of capital expenditures, some analysts regard distribution of the related income to shareholders as the appropriate occasion for ending tax deferral and view the earnings and profits provisions of current law as appropriately serving that function. Retaining the approach of current law and taxing preferences when distributed to shareholders would continue some disadvantages for

distributed, as opposed to retained, earnings, but this could be mitigated by treating distributions as coming first from fully-taxed income. Where corporate tax preferences are intended to alleviate the classical system's double taxation of equity income, they serve no function in an integrated system and, at a minimum, should not be passed through to shareholders. Some analysts, for example, consider the reduced rate on the first \$100,000 of corporate income as a tax preference intended to reduce the degree of double taxation for small corporations that decline to elect (or are ineligible for) S corporation status.

In addition, there are substantial revenue costs to extending corporate level preferences to shareholders just as there are in cutting back on the AMT.⁵ The revenue cost of extending preferences to shareholders or limiting the impact of the AMT would increase the cost of corporate integration, require higher tax rates to produce equivalent revenues, and, in effect, increase the value of tax preferences relative to taxable income. Maintaining current law restrictions on tax preferences would reduce the need to raise tax rates and thus reduce the efficiency costs associated with such rate increases.⁶ Hence, the issue of the proper treatment of preferences involves a comparison of these possible costs with the benefits provided by the preferences in an integrated world.

Finally, if a goal of integration is to tax corporate income once, corporate tax preferences should not be extended to shareholders. In an integrated system, extending preferences to shareholders may eliminate both the individual level and the corporate level tax. Foreign systems generally do not allow corporate preference income to be distributed tax-free to shareholders. Belgium, Canada, Denmark, and Japan are exceptions.⁷

Integration of the corporate and individual tax systems provides an opportunity to review both corporate and noncorporate tax preferences to

determine whether they are justifiable in an integrated system, but such a comprehensive review of tax preferences is beyond the scope of this Report. This Report concludes, however, that, where practical, integration of the corporate tax should not become an occasion for expanding the scope of tax preferences. Neither equity nor economic efficiency would be enhanced by such an expansion.

In practice, this conclusion implies that in a distribution-related integration prototype, specific mechanisms must be devised to play a role similar to the earnings and profits provisions of current law to ensure that preferences are not extended to shareholders. Similarly, the role and function of both the corporate and individual AMT must be reexamined to prevent the extension of the scope of current tax preferences.

A simple dividend exclusion or shareholder imputation credit method of distribution-related integration will not produce the desired result with respect to preference income.⁸ Integrated tax systems outside the United States that do not extend corporate tax preferences to shareholders have principally relied on either or a combination of two mechanisms.⁹ The first is an imposition of corporate level tax on the distribution of preferences through a compensatory tax system.¹⁰ The second is a tracing mechanism or overall limitation that restricts the amount of relief from tax at the shareholder level to actual corporate level taxes paid.¹¹ The limitation mechanism eliminates the benefit of preferences on distributed income by imposing tax at the shareholder rate on distributed preference income. The two methods can vary significantly when the shareholder tax rate differs from the corporate tax rate, and would, for example, impose very different tax burdens on distributions of corporate preference income to tax-exempt shareholders.¹²

The choice between the two mechanisms is a close one and a different alternative may be more appropriate depending on the method of

integration adopted. In the distribution-related integration prototypes described in this Report, we have recommended limiting tax relief at the shareholder level to the amount of corporate taxes paid and imposing shareholder level tax on distributed preferences. Under the dividend exclusion prototype, this is accomplished by requiring corporations to keep an account limiting

excludable dividends.¹³ In CBIT, this mechanism also is possible; on the other hand, since all tax is paid at the entity level, a compensatory tax may have more appeal.¹⁴ We conclude that it is not practical to attempt to retain the current law tax on distributed preference income under the shareholder allocation prototype.¹⁵

CHAPTER 6: TAX-EXEMPT AND TAX-FAVORED INVESTORS

6.A INTRODUCTION

Current law defines many different types of tax-exempt entities (including pension funds, charities, hospitals, educational institutions and business leagues) and imposes various conditions in order for them to obtain or retain their tax-exempt status (including nondiscrimination rules, minimum payout requirements, limitations on maximum contributions and restrictions on investments). Tax exemption is generally limited to income received by the entity that is either passive in nature or substantially related to an exempt function.

Tax-exempt entities may be grouped into two general categories. One group, which includes pension funds, 401(k) plans, and similar plans (collectively, pension funds), is characterized by an exempt entity that holds claims to property on behalf of specific individuals, with the earnings of the fund untaxed as earned but taxed when distributed to the individuals. The second group, which includes charities, hospitals, educational and religious institutions, is characterized by investment income that does not inure to the benefit of any particular individuals.¹

Tax exemption provides both groups with a higher after-tax rate of return on investment income than if the earnings were currently taxable. Retirees receive higher after-tax retirement income than if pension fund earnings were taxed currently or they had invested in taxable savings plans themselves, and charities and educational institutions can provide more services or activities than if the income on their assets were taxable. Despite the differences in the mechanics of taxing pension funds and other exempt entities, the present value benefit is the same. The pension fund tax exemption, employer deductibility of contributions to the fund and deferral of employee tax is equivalent to simply exempting from income tax the pension fund's investment income.²

The Code exempts these entities from income tax on all receipts other than net income from a business unrelated to the entity's exempt purpose. Such unrelated income, whether earned directly or through a partnership, is subject to the unrelated business income tax (UBIT), which generally is calculated under the regular corporate income tax rules.³ The tax generally applies only if the business income is unrelated to the organization's exempt purpose. Thus, engaging in a particular activity might result in the imposition of UBIT on one type of exempt organization but not on another. The Federal Government and State and local governments or their instrumentalities (except colleges and universities) are exempt from all tax including UBIT. The Code explicitly excludes income from certain passive investments from UBIT, including dividends, interest, rent from real property, royalties, and gains from the sale of capital assets. Despite the general exclusion, passive income generally is subject to UBIT to the extent that it is financed with debt.

The tax-exempt sector plays a major role in U.S. capital markets, and in the corporate capital market in particular. At the end of 1990, pension funds and other exempt organizations held over one-quarter of total financial assets in the United States (Table 6.1). Holdings of the tax-exempt sector represented even larger fractions of corporate equity and corporate debt—approximately 37 percent of directly held corporate equity and 46 percent of outstanding corporate debt.

Pension funds dominate tax-exempt sector corporate investments, holding more than one-quarter of all directly held corporate stock and more than two-fifths of corporate bonds. Figure 6.1 illustrates the dramatic growth in the share of corporate debt and equity held by pension funds since the 1950s. As the share of corporate capital held by pension funds has grown, an increasing share of the associated corporate income has avoided the investor level tax.

Table 6.1
Financial Assets of the Tax-Exempt Sector
End of Year 1990

	Total Credit Market Assets ¹		Corporate Equity		Corporate Debt ²	
	(billions of dollars)	(percent)	(billions of dollars)	(percent)	(billions of dollars)	(percent)
Foreigners	1,636	12	218	6	203	12
Pension Funds ³	2,695	19	967	28	722	44
IRAs & Keoghs ⁴	560	4	141	4	11	1
Nonprofit Institutions ⁵	515	4	130	4	10	1
Total Tax-Exempt Sector	5,450	39	1,457	43	946	58
Total All Sectors	13,996	100	3,416	100	1,629	100

Department of the Treasury

Office of Tax Policy

¹Total Credit Market Assets: total credit market debt owed by domestic nonfinancial sectors plus corporate equities (excluding mutual funds).

²Corporate Debt includes some foreign bonds. The total amount includes bonds held by the financial sector.

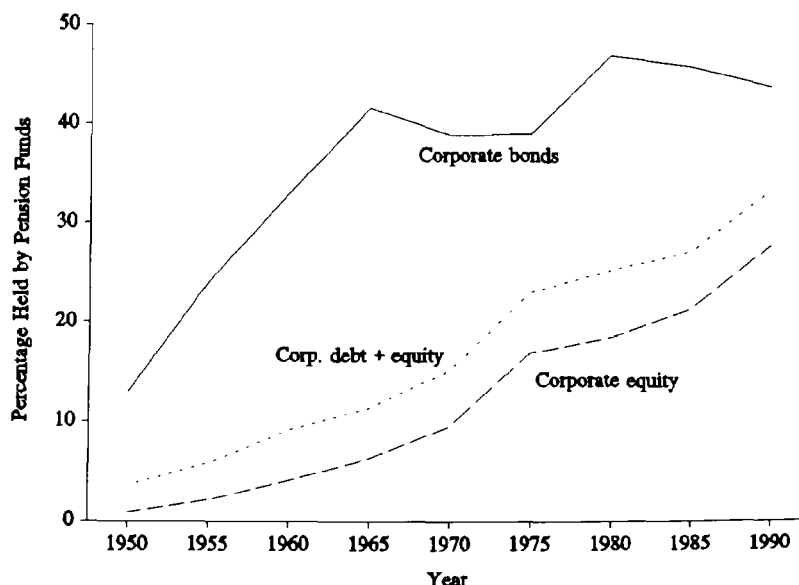
³Pension Funds include private pension funds (including Federal Employees Retirement Thrift Savings Fund), state and local government employee retirement funds, and pension fund reserves held by life insurance companies.

⁴Individual Retirement Accounts (IRAs) and Keogh accounts: figures estimated.

⁵Nonprofit institutions include charitable, educational, and similar institutions. Estimated as percent of household holdings in Flow of Funds.

Sources: Federal Reserve Board, *Flow of Funds* (March 1991 revised); Investment Company Institute, *Mutual Fund Fact Book* (1991), p. 60; and Office of Tax Policy calculations.

Figure 6.1
Pension Fund Holdings of Corporate Capital, 1950-1990



Sources: Hoffman (1989) and calculations based on Federal Reserve Board, *Flow of Funds* (March 1991 revised).

Under current law, tax-exempt investors, in fact, are not exempt from the corporate level tax on income from their corporate equity investments. Although dividends paid to tax-exempt shareholders are not taxed to the recipients, the earnings attributable to such investors are taxed at the corporate level whether or not distributed. By contrast, corporate earnings paid to tax-exempt investors as interest escape both the corporate level tax and the investor level tax.

The fundamental question addressed here is whether under an integrated tax system this treatment of corporate income of tax-exempt investors should continue, or, alternatively, whether tax-exempt investors should be subject to a tax increase or receive a tax reduction from integration. The current level of taxation of corporate equity income received by tax-exempt investors can be retained under integration as demonstrated in this Report. Integration does not necessarily require either an increase or a reduction in tax on income from capital supplied by tax-exempt entities to corporations.

On the other hand, corporate integration presents an opportunity to reexamine the incentives under current law for tax-exempt investors to prefer

debt rather than equity investments in corporations. The specific question raised by corporate integration is whether the current distinction in the treatment of corporate equity investments by tax-exempt entities (which bear the corporate, but not the shareholder level tax) versus corporate debt investments (which bear neither corporate nor debtholder level tax) should be retained or decreased. An integration system best fulfills its goals if it provides uniform treatment of debt and equity investments by tax-exempt investors. Equating the tax treatment of debt and equity will require either an increase or decrease in the taxes on corporate capital supplied by tax-exempt investors or the introduction of a separate tax on investment income of these investors. As Section 6.D discusses, such a tax could be designed to maintain the current level of tax on income from corporate capital supplied by tax-exempt investors while equalizing the treatment of debt and equity.

6.B DISTORTIONS UNDER CURRENT LAW

Current law encourages tax-exempt investors, like taxable investors, to invest in debt rather than equity. Only two types of income from capital supplied to corporations by tax-exempt entities are actually tax-exempt. Interest paid by corporations is both deductible by the corporate payor and exempt from tax in the hands of the tax-exempt recipient. Corporate preference income distributed to tax-exempt shareholders also is exempt from tax at both the corporate and the shareholder level.⁴ Non-preference income is taxed at the corporate level, but is not taxed at the shareholder level whether it is received by the exempt investor as capital gains from the sale of shares or as dividends from distributions. Thus, under current law, corporate income paid to tax-exempt investors in the form of interest is not taxed at either the corporate or investor level, while non-preference income retained or distributed to tax-exempt shareholders is subject to tax at the corporate level.

Current law does not, however, encourage tax-exempt investors to invest in equity of

noncorporate rather than corporate businesses, because, in both cases, the income is subject to one level of tax. While corporate income (other than preference income) allocable to tax-exempt shareholders is subject to tax at the corporate level, the noncorporate unrelated business income of tax-exempt investors generally is subject to UBIT.⁵ For tax-exempt investors who invest in equity, current law generally also does not affect their preferences for distributed or retained earnings. Because corporate income (other than preference income) is subject to current corporate level tax and both distributed and retained earnings are exempt from tax at the shareholder level, a tax-exempt shareholder has no tax incentive to prefer distributed earnings over retained earnings.

6.C NEUTRALITY UNDER AN INTEGRATED TAX SYSTEM

Because of the asymmetric treatment of debt and equity investments by tax-exempt entities under current law, an integrated system can achieve neutrality between debt and equity investments for tax-exempt investors only by either decreasing the tax burden on equity income or increasing the tax burden on interest. A straightforward decrease in the tax burden on equity investments might be accomplished by removing the corporate level tax on earnings distributed as dividends to tax-exempt investors. A deduction for corporate dividends, for example, would achieve this result. The contrary approach might subject interest income on corporate debt earned by tax-exempt investors to one level of tax (at either the corporate or the investor level).

The first approach, taxing neither dividends nor interest paid to tax-exempt investors, would lose substantial amounts of tax revenue relative to current law. Extending the benefits of integration to tax-exempt investors would add costs of approximately \$29 billion annually under distribution-related integration and approximately \$42 billion annually under shareholder allocation. This revenue loss would increase the costs of integration and would require offsetting increases in other taxes or in tax rates, which might create or increase other distortions. This approach also

would distort the choice between corporate and noncorporate investment for tax-exempt investors if UBIT remained in place for noncorporate investment. If corporate dividends were tax-exempt at both the corporate and investor level, while earnings from businesses conducted directly or in partnership form were subject to UBIT, a tax-exempt investor would always prefer corporate dividends. Indeed, anti-abuse rules might be required to preclude tax-exempt organizations from avoiding UBIT altogether simply by incorporating their unrelated businesses.

The second approach, taxing both interest and dividends at a single rate, would reduce the current advantage of tax-exempt investors relative to taxable investors. Tax-exempt investors would no longer enjoy an after-tax return on a given corporate equity or debt investment higher than that available to taxable investors. The principal advantage of this approach is that it would equate the treatment of debt and equity while maintaining the neutrality between corporate and noncorporate equity for tax-exempt investors.⁶

6.D GENERAL RECOMMENDATIONS

This Report recommends that a level of taxation at least equal to the current taxation of corporate equity income allocated to investments by the tax-exempt sector be retained under integration. The dividend exclusion prototype, described in Chapter 2, essentially continues present law treatment of tax-exempt investors under an integrated tax system, so fully-taxed corporate profits would continue to bear one level of tax and preference income would not be taxed at either the corporate or shareholder level.⁷ A similar result can be accomplished under an imputation credit system of integration, but a dividend deduction system would eliminate the current corporate level tax on distributed earnings on equity capital supplied by tax-exempt investors.⁸ Under the shareholder allocation prototype described in Chapter 3, taxes are collected at the corporate level on corporate income allocable to investment by tax-exempt shareholders and no refund is provided to nontaxable shareholders.

Maintaining one level of tax on equity investments by tax-exempt entities would promote one of the primary goals of integration: achieving tax neutrality for all investors between corporate and noncorporate investments. This choice is consistent with a move to integration for taxable shareholders, because choosing to reduce the double tax burden on corporate income distributed to taxable investors does not necessarily dictate a commensurate reduction in the tax burden on tax-exempt investors. Finally, continuing to tax equity investments by the tax-exempt sector avoids the revenue loss that would result if such investments were completely tax-exempt. Increasing other tax rates to compensate for such a revenue loss would entail other inefficiencies.

Some countries that have adopted integration have chosen to tax separately corporate and other income allocable to tax-exempt investors. For example, in moving to an integrated corporate tax, Australia and New Zealand imposed a tax on the income of pension funds, thus reducing the number of tax-exempt investors. In both countries, the remaining tax-exempt investor base, such as charities, is small. Australia imposed a 15 percent tax on investment income earned by pension funds and made available the full 39 percent imputation credit from dividends as a nonrefundable offset. Australia did not project collecting more than a token amount of tax from this tax on investment income: it devised the mechanism to remove distortions between investing in domestic corporations (which pay Australian tax) and investing in foreign corporations (which generally do not). The new Australian system also removes distortions between investing in equity and investing in debt. New Zealand went further and repealed entirely the tax exemption of pension funds; they now function basically as taxable savings accounts. Under the U.K. distribution-related integration system, the corporate level tax is not completely eliminated, with the consequence that income distributed to tax-exempt shareholders bears some tax burden.⁹

This Report also encourages an effort to achieve uniform tax treatment of corporate debt and equity investments by tax-exempt investors.

Because of the important role played by the tax-exempt sector in the capital markets, failing to create neutrality for debt and equity investments by the tax-exempt sector would limit the extent to which integration could achieve tax neutrality between the two kinds of investments. This is achieved under CBIT by treating tax-exempt shareholders and debtholders generally like other suppliers of corporate capital, with tax imposed at the corporate level.¹⁰

One potential alternative approach would tax all corporate and noncorporate income allocable to investment by the tax-exempt sector at a rate lower than the rate applicable to taxable investors.¹¹ Such a tax on the investment income, including dividends and interest income, received by tax-exempt entities could be set to achieve overall revenues equivalent to those currently borne by corporate capital supplied by the tax-exempt sector. Under the imputation credit

prototype discussed in Chapter 11, for example, imputation credits for corporate taxes paid would be allowed to tax-exempt shareholders. To the extent that the credit rate exceeds the tax rate on investment income, the excess credits could be used to offset tax on interest or other investment income. In addition to the substantial advantage of equating the tax treatment of debt and equity held by such investors, such an approach would allow tax-exempt investors to use shareholder level credits for corporate taxes paid to the same extent as taxable shareholders.¹² By doing so, this approach would limit both portfolio shifts and other tax planning techniques that might otherwise be induced by efforts to distinguish among taxable and tax-exempt investors in integrating the corporate income tax. A revenue neutral rate for such a system would be in the range of 6 to 8 percent depending on the prototype.¹³ This would approximate the current law corporate tax burden on investments by tax-exempt shareholders.

CHAPTER 7: TREATMENT OF FOREIGN INCOME AND SHAREHOLDERS

7.A INTRODUCTION

International issues are important in designing an integrated tax system because there is substantial investment by U.S. persons in foreign countries (outbound investment) and investment by foreign persons in the United States (inbound investment). At the end of 1990, private U.S. investors owned direct investments abroad with a market value of \$714 billion, and \$910 billion in foreign portfolio investment, while private foreign investors owned \$530 billion in direct investment in the United States and \$1.34 trillion in U.S. portfolio investment. U.S. investors received a total of \$54.4 billion of income from their direct investments abroad in 1990, and \$65.7 billion of income from their foreign portfolio investments, while foreign investors received \$1.8 billion from their direct investments in the United States in 1990 and \$78.5 billion from their U.S. portfolio investments.

The income from transnational investments may be taxed by both the country in which the investment is made (the host or source country) and the country of residence of the investor (the residence country). The United States uses two primary instruments for mitigating the potential problem of double taxation: the foreign tax credit and bilateral income tax treaties entered into between the United States and about 40 other countries.

Taxation of foreign investment by U.S. investors. The United States taxes the worldwide income of its residents.¹ The U.S. tax on income earned by U.S. corporations or individuals through foreign corporations is generally deferred until such income is repatriated through dividend or interest payments to U.S. shareholders or creditors.²

The United States allows taxpayers to claim a foreign tax credit for qualifying foreign income taxes paid (the direct foreign tax credit). Current

law also allows corporate taxpayers that receive dividends (or include Subpart F income) from at least 10-percent owned foreign subsidiaries to claim a foreign tax credit for a ratable portion of the qualifying foreign taxes paid by the subsidiary on the income from which the dividends are paid (the indirect foreign tax credit). The portion of the foreign taxes which taxpayers may claim as an indirect credit is proportional to the fraction of the earnings of the foreign subsidiary distributed or deemed distributed. The dividend income for U.S. tax purposes is grossed up by the amount of the direct and indirect credits claimed.³ The indirect foreign tax credit, like the dividends received deduction available domestically, prevents multiple taxation of corporate profits at the corporate level.

The Code limits the maximum foreign tax credit to prevent the foreign tax credit from offsetting taxes on domestic source income. Separate limitations apply to several different kinds of foreign source income (baskets) in order to restrict the use of foreign tax credits from high-taxed foreign source income against low-taxed foreign source income. For each basket, the Code limits the amount of foreign taxes paid on income in that basket which a taxpayer may claim as a credit in the current year to a fraction of the taxpayer's pre-credit tax on worldwide income in the same basket. The fraction is the ratio of the taxpayer's foreign source taxable income in the basket to the taxpayer's total worldwide taxable income in the same basket. Credits that a taxpayer cannot use in a given year because of the limitations may be carried back two years or forward five years. Additional limitations apply to taxpayers subject to the alternative minimum tax.

Taxation of foreign investors. The taxation of U.S. investment income of foreign individuals or corporations generally depends upon whether they are engaged in a trade or business in the United States. Foreign corporations and individuals engaged in a U.S. trade or business generally are

taxed on their net business income under the same rules that apply to a U.S. corporation or citizen engaged in the same business.

The treatment of domestic and foreign investors differs, however, at the shareholder and creditor level. Foreign investors not engaged in a U.S. trade or business are not subject to the individual or corporate income tax.⁴ Instead, subject to significant exceptions noted below, they are subject to a 30 percent withholding tax on their gross dividend, interest and other income. Capital gains realized by a foreign investor on the sale of stock or securities (except stock in certain U.S. corporations owning U.S. real property) generally are exempt from tax.

The Code exempts from the 30 percent withholding tax qualified portfolio interest and interest earned by foreign investors on U.S. bank deposits. Interest does not qualify as portfolio interest if the investor has a 10 percent or greater equity interest in the borrower or is a controlled foreign corporation related to the borrower or if the interest is paid on a bank loan made in the ordinary course of a banking business.

Under bilateral tax treaties, interest (if not already exempt) and dividends and other income paid to residents of a treaty country may qualify for a significantly reduced rate of withholding tax. The reduced rate of withholding tax applicable to dividends is often 15 percent and may be as low as 5 percent on dividends distributed by a U.S. subsidiary to a foreign direct corporate investor. Tax treaties may reduce the rate of withholding on otherwise taxable interest income paid to foreign investors (in particular, related foreign investors) to 5 or 10 percent or, in many cases, zero.

The current U.S. tax treatment of cross-border investment generally reinforces the biases created by other features of the classical system of corporate taxation: against equity compared to debt and for retention rather than distribution of corporate earnings. Statutory exemptions for cross-border interest payments, together with more favorable treaty provisions for interest than for dividends,

reinforce the bias against equity. Likewise, the potential for deferral of U.S. tax liability on non-Subpart F income reinforces the bias towards retention of such income by foreign subsidiaries.

The major international issues that must be addressed in any integrated system are:

- Should foreign taxes paid by U.S. corporations be treated identically to taxes paid to the U.S. Government? If so, the foreign tax credit for corporate taxes paid, in effect, would be extended to shareholders. As a consequence, income that is taxed abroad at a rate equal to or greater than the U.S. tax rate would not be subject to U.S. tax either at the corporate level or at the shareholder level.
- Should the benefits of integration be extended to foreign shareholders? If so, income allocable to (or paid to) foreign shareholders would be subject to only one level of U.S. tax, at either the corporate or shareholder level. If the tax is imposed only at the shareholder level, U.S. income tax treaties may substantially reduce the tax.

This Report recommends that: (1) foreign income taxes paid with respect to outbound investment not be treated the same as U.S. taxes paid for integration purposes, (2) foreign shareholders not receive by statute benefits of integration received by U.S. shareholders, and (3) the United States' income tax treaties with other countries be used as the appropriate vehicle for relaxing either of the preceding rules where reciprocal benefits are given by the foreign country to U.S. taxes or investors in their integration systems.

7.B OVERVIEW OF U.S. INTERNATIONAL TAX POLICY

As indicated above, cross-border investments are potentially taxable in at least two countries: the residence country (the country where the investor resides) and the source country (the country where the investment is made). Sovereignty unavoidably complicates international tax policy: a country may set its own tax policies, but not the policies of other countries, even though the policies of other countries have a direct

impact on the first country's welfare. As a result, a residence country generally must respect a source country's claim to tax income that is derived within the source country's borders. However, the source country has little control over the ultimate level of aggregate taxes paid by foreign investors on profits earned in the source country. By choosing to impose additional tax on an investor's income from the source country, by exempting such income from its own tax, or by choosing some intermediate policy, the residence country, not the source country, makes the final decision about the tax burden borne by the residence country's investors.

Normative Guidance for International Tax Policy

No consensus exists about the proper norms for capital taxation in economies with international capital and labor mobility. Integrating models of capital taxation and international trade, policy-makers have suggested two principles for taxation of international investments:

- **Principle 1 (Capital Export Neutrality).** Investors should pay equivalent taxes on capital income, regardless of the country in which that income is earned.
- **Principle 2 (Capital Import Neutrality).** All investments within a country should face the same tax burden, regardless of whether they are owned by a domestic or foreign investor.

Maintaining both principles simultaneously is not a practical option, however, because it would require that capital income be taxed equally in all countries. That will never occur as long as sovereign countries establish different tax rates.

National tax systems, such as that of the United States, can approach capital export neutrality while taxing worldwide income of resident multinational enterprises (the worldwide method of taxation), if either the residence country provides credits to its enterprises for taxes remitted to foreign governments or the source country surrenders the right to tax income from foreign investments within its borders. Capital import neutrality can be achieved if the residence country

decides not to tax income earned from foreign jurisdictions and allows the source country to be the sole taxing authority for international investment income.

Since capital export and capital import neutrality cannot be attained simultaneously when international differences exist in capital income taxation, a clear advantage for one or the other would be useful. However, analyses of international taxation by economists specializing in international trade generally offer no strong endorsement of one principle relative to the other.⁵ Capital taxation in open economies (economies in which international borrowing and lending occur) can distort both the level of saving within an economy and its allocation among alternative investments at home and abroad. Capital import neutrality can enhance worldwide economic efficiency if domestic savings are inefficiently low by reducing the tax burden on savings.

Capital export neutrality, in contrast, enhances worldwide efficiency in the allocation of savings. It may be a guiding principle when efficiency costs of distortions in the allocation of savings are significant relative to costs of tax-induced distortion in the level of savings. Most available evidence supports the proposition that the sensitivity of domestic savings with respect to changes in net return is small relative to the sensitivity of the location of investment with respect to changes in net return.⁶ Accordingly, many economists and policymakers presume that capital export neutrality offers better guidance for international tax policy. Nonetheless, given the existence of tax-induced distortions in both savings and investment, the complexity of the modern multinational enterprise (relative to two-country examples often considered in theory), and the possibility of international tax competition, some compromise between capital export and capital import neutrality is inevitable.⁷

Outbound Investment

Since 1918, through the foreign tax credit, the United States has generally implemented the

principle of capital export neutrality unilaterally and without interruption.⁸ Since 1921 the foreign tax credit has been limited so it does not exceed the U.S. tax liability incurred on the foreign source income in the absence of the credit. The limitation seeks to prevent the credit from offsetting U.S. tax on U.S. source income. However, because the limitation allows a foreign tax rate that is higher than the U.S. tax on the relevant income to go unrelieved, the limitation works against the policy of capital export neutrality.

A taxpayer generally receives a foreign tax credit only for income taxes paid to a foreign government on the taxpayer's own income. Thus, a shareholder generally may claim a credit for foreign taxes withheld from a dividend payment includable in the shareholder's income but may not claim a credit for the foreign taxes paid by the corporation on the income out of which the dividend is paid. The only exception to this principle is the indirect foreign tax credit allowed for a domestic 10 percent corporate shareholder of a foreign corporation for the foreign income taxes paid by the foreign subsidiary on the income out of which the dividend is paid.⁹

In other respects, however, the U.S. taxation of outbound investment tends toward capital import neutrality—the tax rate on foreign source income of a U.S. investor is determined by the tax imposed by the source country. First, the U.S. tax regime generally allows deferral. That is, the U.S. tax on foreign source income of U.S. owned foreign companies is deferred until such profits are repatriated in the form of dividends. Deferral affects a U.S. investor's initial decision to make or forgo a foreign investment because, even if the investor is obligated to pay the residual U.S. tax (a capital export neutral result), the time for paying this tax may be postponed indefinitely. Deferral thus substantially reduces, and under some conditions virtually eliminates, the present cost of the residual U.S. tax (a capital import neutral result).¹⁰ Deferral, however, is not significant with respect to dividends paid from current earnings, or where foreign tax rates equal or exceed the U.S. corporate rate. In addition, certain foreign corporations controlled by U.S.

residents are subject to current U.S. tax on certain types of undistributed income under the Code's Subpart F rules. The advantage of deferral also is less where the domestic corporate ownership interest is less than 10 percent of the voting stock in the foreign corporation. In that case, the indirect foreign tax credit is not available. Thus, dividends will incur both the foreign corporate level tax and, after deduction of the foreign tax, the U.S. corporate level tax.

Second, the U.S. tax regime allows averaging. That is, in determining the residual U.S. tax on foreign profits, a high foreign tax imposed on one item of foreign income may be averaged against a low foreign tax imposed on another item of foreign income, as long as the different items of income are both within the same statutory basket for purposes of the foreign tax credit limitation rules. If the foreign tax rate on an item of foreign income is higher than the U.S. rate, the U.S. investor may or may not bear the cost of the higher foreign rate, depending on the opportunities for averaging. If the investor must bear the higher rate, it is placed in parity with local investors in the foreign country, a capital import neutral result. If, on the other hand, the investor is able to average the high foreign tax rate on the income in question against low foreign rates on other foreign income, then the investor will avoid the extra burden of the high foreign rate. This should render the investor capital export neutral with respect to the highly taxed foreign income (since averaging will reduce the total tax on such income to the U.S. rate, but no lower), but also should render the investor capital import neutral with respect to the lower taxed foreign income (because the investor is able to escape some of the residual U.S. tax on such income). The opportunities for averaging have been reduced since the 1986 Act created separate foreign tax credit limitation baskets for specific types of income.

Inbound Investment

U.S. tax policy on inbound investment generally asserts a substantial source country claim to tax on certain types of income coupled with a policy of nondiscrimination against foreign

investors. For foreign owned corporate investment, the United States generally imposes two levels of tax. Thus, the United States taxes the business profits of foreign owned domestic corporations or U.S. branches of foreign corporations similarly to the profits of U.S. owned domestic companies and imposes significant withholding taxes on dividends paid to foreign investors. The U.S. rules for taxing the U.S. branch of a foreign corporation also are designed to impose on the branch's profits the same amount of tax that would be imposed if the branch were a subsidiary of a U.S. corporation. The major exceptions to the general U.S. policy are the exemption of much of the interest income that is paid from U.S. sources to unrelated foreign lenders (other than banks), the decision to exempt capital gains not effectively connected with a U.S. business or attributable to a U.S. real property interest, and the reduction of withholding taxes on dividends, non-exempt interest, and royalties paid to foreigners (whether or not related) through bilateral treaties.¹¹

The United States's network of bilateral income tax treaties significantly modifies the statutory orientation toward source country taxation. In general, tax treaties boost the tax claims of the residence country, largely by substantially reducing the withholding rates at source on investment income. In addition, tax treaties may require higher levels of business activity (a permanent establishment) before asserting a U.S. claim to tax business profits.¹²

7.C INTERNATIONAL TAX POLICY AND INTEGRATION

Outbound Investment— Treatment of Foreign Taxes

This Report generally recommends that, in an integrated tax system, the statutory treatment of foreign taxes paid by corporations should differ from the treatment of the taxes they pay to the U.S. Government. Equal statutory treatment of foreign and U.S. corporate level taxes would significantly reduce the current U.S. tax claim against foreign source corporate profits and often

would completely exempt such profits from U.S. taxation at both the corporate and shareholder levels. Such unilateral action would result in a significant departure from the prevailing allocation of tax revenues between source and residence countries.¹³

The integration systems recommended in this Report, therefore, generally retain the corporate level foreign tax credit but do not extend to shareholders the benefits of a foreign tax credit for foreign taxes paid by the corporation. However, where foreign income is taxed at a foreign rate that is lower than the current U.S. corporate rate, there would be less double taxation than under current law, because corporate level residual tax would be treated identically to any other U.S. corporate taxes.¹⁴ Foreign source income subject to tax in the source country at source country rates higher than the U.S. rate would continue to be subject to a single level of U.S. tax when distributed. Thus, although foreign source income earned by U.S. corporations might be subject to more tax than domestic income, foreign source income generally would not be subject to double taxation to any greater extent than under current law. Retaining a single level of tax on foreign income should not harm the ability of U.S. firms to compete in foreign markets relative to current law.

Critics of continuing to impose any U.S. tax on foreign profits might contend that, because the United States currently is willing to give up entirely its tax on certain types of foreign profits, it should be willing to do so generally for foreign corporate profits in an integrated corporate tax system. This argument is not compelling, however. To be sure, the United States does not always currently insist on a single level of tax on foreign source income, as evinced by its unilateral decision to grant a foreign tax credit to individuals earning foreign income directly or through a partnership. Individual profits from foreign sources, however, have been a small fraction of the foreign source profits earned by U.S.-based multinational corporations, and the revenue loss from such a policy has therefore been small compared to that which would occur if foreign

taxes paid by corporations eliminated U.S. tax at both the corporate and shareholder levels. Moreover, allowing a foreign tax credit to individuals on the foreign source income directly earned alleviates the burdensome tax structure that would otherwise arise under current law, because deferral would not be available and the foreign and U.S. taxes would both be imposed currently.

Another potential criticism is that failure to pass through foreign tax credits to shareholders would violate capital export neutrality and, hence, would be inconsistent with our underlying goal for integration: to enhance economic efficiency. As discussed above, however, it is not apparent that export neutrality does, in fact, lead to an efficient allocation of capital. In any case, if foreign tax credits were available to offset the single level of tax in an integrated system, the revenue loss would be serious—approximately \$17 billion a year. Taxes would have to be raised elsewhere, and that would generate its own inefficiencies.

Finally, passing through foreign tax credits to shareholders would pose significant administrative difficulties. The foreign tax credit limitation and sourcing rules would have to be applied at the individual shareholder level both to ensure that taxpayers claimed the proper credit for foreign taxes and to prevent the U.S. Treasury from bearing the cost of high foreign tax rates. Without these rules, shareholders in corporations with foreign income that is taxed at a rate greater than the U.S. rate could use the excess credits to offset tax liability on domestic income, with the consequence that the U.S. Treasury would in effect provide domestic shareholders with refunds of corporate taxes paid to foreign countries.¹⁵ This is a particularly serious issue because tax rates in many foreign jurisdictions are higher than current U.S. tax rates. The difficulty of ensuring the availability of adequate information concerning foreign taxes to both the shareholder and the IRS would complicate application of these rules at the shareholder level for widely held, non-U.S. controlled foreign corporations.

From a legal point of view, continuing to impose a single shareholder level of residence

country taxation on foreign source income would not violate the United States' treaty commitments to eliminate double taxation by granting a foreign tax credit. Because U.S. tax treaties generally reflect an assumption that treaty partners have classical systems of corporate-shareholder taxation, the United States' treaty obligations require that U.S. corporations be allowed a foreign tax credit against the U.S. tax on foreign source income received directly by the corporation, and that individuals be allowed a credit for foreign source income received by the individual. No treaty obligation requires the United States to grant further relief with respect to foreign taxes paid or deemed paid by a domestic corporation, e.g., by eliminating the shareholder tax on a taxable dividend under the dividend exclusion prototype (or CBIT) or, if a compensatory tax is imposed under CBIT, refunding the compensatory tax. In specific circumstances, however, the United States might agree to extend, by treaty, the benefits of integration to foreign taxes on profits of U.S. multinationals.

Under the dividend exclusion prototype, a problem with maintaining a single level of U.S. tax on foreign earnings is a continued bias in favor of the noncorporate, rather than the corporate, form for foreign investment, although, as a practical matter, this problem may not be very serious. Individuals would be entitled to a foreign tax credit for foreign taxes imposed on their direct investments but not for taxes imposed on the investments of corporations of which they are shareholders. Thus, by not treating foreign corporate taxes equivalently to U.S. corporate taxes, an incentive to structure foreign investment through partnerships would continue. If the corporate form could not be avoided, there also would continue to be an incentive to make foreign investments in the form of debt, which would reduce the foreign tax base and convert foreign profits to domestic profits. Large investors might achieve similar effects by using rental or royalty payments or by aggressive transfer pricing.

The dividend exclusion and imputation credit prototypes implement our policy recommendations by maintaining the current foreign tax credit rules

and by limiting the amounts of excludable dividends to corporate income on which U.S. taxes have been paid (or limiting shareholder imputation credits to U.S. taxes paid).¹⁶ In effect, dividends paid out of foreign source income not previously subject to U.S. tax because of foreign tax credits would be taxed fully at the shareholder level, as under current law. Under CBIT, the U.S. tax may alternatively be imposed through a compensatory tax at the corporate level on distributions of foreign source income shielded from regular CBIT by the foreign tax credit.¹⁷ In either case, corporations are allowed to treat dividends as paid first out of U.S. taxed income. Under the shareholder allocation prototype, foreign taxes, in essence, would be treated as equivalent to U.S. taxes, and this is among the reasons that this prototype is not recommended in this Report.¹⁸

Inbound Investment— Treatment of Foreign Investors

The basic issue that an integration proposal must resolve for inbound investment is whether, by statute, the United States should continue to collect two levels of tax on foreign owned corporate profits or whether foreign investors should receive benefits of integration similar to domestic investors.¹⁹ For the reasons set forth below, this Report recommends that, except in the case of CBIT, foreign shareholders not be granted integration benefits by statute, but instead that this issue be addressed on a bilateral basis through treaty negotiations. Most of the major trading partners of the United States that have integrated their corporate tax regimes have followed this approach.²⁰

At least two basic obstacles restrain unilateral extension of integration benefits to foreign shareholders. The first is the inherent limitation on any source country's taxation of foreign investors. The residence country, not the source country, ultimately decides the tax burden that should be borne by its resident investors. As a consequence, if the United States unilaterally extended the benefits of integration to foreign shareholders, it would abandon its right to source country taxation of dividends with no assurance that the foreign

investors would not be subject to a second level of tax in their country of residence. Substantial revenue would be lost without any necessary increase in efficiency of capital allocation.

The second obstacle is the interaction between a U.S. integration system and existing treaty obligations. For example, extending a refundable imputation credit to foreign shareholders by statute, combined with traditionally low treaty withholding rates on dividends, could significantly reduce the aggregate U.S. tax on profits distributed to foreign shareholders, without any comparable reduction in foreign taxes on U.S. investments in the treaty country.²¹

Thus, there is no reason for the United States by statute unilaterally to extend the benefits of integration to foreign shareholders. Integration seeks to provide relief for investors using the corporate form, not for foreign governments. If a second level of tax is to be collected, no obvious conceptual or practical reason exists why the source country should sacrifice its claim to this tax revenue for the sake of consistency.

Several of our treaty partners adopting imputation credit systems have concluded that refusing to extend integration benefits by statute to foreign shareholders residing in treaty countries would not violate the provisions of tax treaties that prohibit discrimination based on capital ownership. These countries argue that, under an imputation credit system, all profits are taxed at the corporate level at the same rate (34 percent, for example), without regard to "capital ownership," and allowing or denying the imputation credit to the shareholders is an issue of how to tax the shareholder, not the corporation. No treaty requires that foreign shareholders receive the same tax credits as domestic shareholders. Thus, there is no treaty violation. Similar arguments could be made about the dividend exclusion prototype.²²

As Chapter 2 indicates, the dividend exclusion prototype generally would not provide any integration benefits to foreign shareholders, because current withholding taxes would continue to apply.²³ Similarly, inbound investment in an

imputation credit system would remain subject to two levels of U.S. tax because imputation credits would not be made available to foreigners and current withholding taxes would continue to apply. Neither approach would treat inbound investment more harshly than under current law, because deferral of the second level of tax would continue.²⁴ A dividend deduction system, on the other hand, would automatically extend the benefits of integration to foreign shareholders, unless a rule were adopted to deny the deduction for dividends paid to foreigners — a rule that would violate U.S. treaty obligations. The shareholder allocation prototype avoids extending the benefits of integration to foreign shareholders by imposing corporate level tax, continuing to impose withholding tax on dividends, and denying refunds of corporate taxes paid to foreign shareholders.²⁵

In contrast, to ensure parity between debt and equity, the CBIT prototype generally removes the withholding tax on both dividends and interest of CBIT entities and repeals the branch profits tax. The result is that both debt and equity income would be subject to tax once.

The United States may consider extending the benefits of integration to foreign shareholders resident in countries that have treaties with the United States. The fundamental policy issue in deciding whether and how to extend integration by treaty to foreign shareholders is how to divide the tax revenue from corporate profits between the source country and the residence country. As noted above, traditional treaty rules reflect an allocation of revenue based on the classical,

two-tier tax system for corporations and shareholders: the source country generally has the exclusive right to tax business profits earned therein by a domestic corporation and the two countries divide the right to tax the profits when distributed, with the greater share of this revenue going to the residence country. Integration, of course, alters the original pool of tax revenue by decreasing the total (assuming no offsetting rate increases) and by reallocating it between the shareholder and corporation. Thus, moving to an integrated corporate tax system may upset the balance of interests traditionally reflected in the treaty rules of the United States.

Various methods can be devised for extending integration by treaty to inbound and outbound investment, and these different methods will produce differing allocations of the taxes collected from the corporation between the source country and the residence country. For example, the dividend exclusion prototype could be adopted to permit the source country to retain its corporate tax revenues: the source country would eliminate its withholding tax on distributions to treaty residents and the residence country would credit the source country taxes against the direct and ultimate shareholders' tax liabilities in the residence country and collect any residual tax. An alternative approach would impose a tax on foreign shareholders at a rate that would approximate the current level of revenues now collected by the United States on U.S. source corporate income from foreign investments and allow a credit against this tax for corporate level taxes paid.²⁶

CHAPTER 8: THE TREATMENT OF CAPITAL GAINS IN AN INTEGRATED TAX SYSTEM

Moving from a classical to an integrated corporate tax system raises issues relating to the taxation of capital gains on sales of corporate stock. While each of the integration prototypes reduces the biases of the classical system, rules selected for taxation of capital gains on sales of corporate stock will affect the degree of neutrality achieved by each prototype. Taxing shareholder level capital gains on stock attributable to earnings that have been taxed at the corporate level is not appropriate in an integrated system. Taxing such gains on stock could perpetuate the classical system's biases against the corporate form and against investments in equity rather than debt. In addition, a higher effective tax rate on retained earnings could provide a tax incentive for corporations to distribute earnings as dividends. On the other hand, a failure to tax shareholder level stock gains may result in significant deferral or even elimination of tax attributable to unrealized corporate asset appreciation.¹

8.A TAXATION OF CAPITAL GAINS ATTRIBUTABLE TO RETAINED TAXABLE EARNINGS

When a corporation retains earnings, its stock will generally increase in value. There is some controversy about the extent to which an incremental dollar of retained earnings translates into share appreciation.² In integration prototypes that tax earnings at the corporate level, e.g., the dividend exclusion and CBIT prototypes, dividends would not generally be taxed again at the investor level. Under these prototypes, to preserve neutrality in the taxation of corporate capital income, shareholders' capital gains attributable to retained earnings that have already been taxed fully at the corporate level should not be taxed

again at the shareholder level. Imposition of a capital gains tax in this case would be a double tax on the retained earnings of the corporation.

The second level of tax, however, may prove temporary. If the corporation subsequently distributes the retained earnings, the value of the stock may decline to reflect the distribution of corporate assets. As a consequence, the tax on the selling shareholder's gain may be effectively reversed by an offsetting capital loss of the purchasing shareholder. The extent to which the capital loss reverses the double tax will depend on the timing of the distribution of the retained earnings and of the realization and treatment of the capital loss.³

When the tax reduction from the later capital loss precisely offsets the tax on the earlier capital gain, the system will collect only one tax on corporate earnings. However, a subsequent capital loss deduction allowed to a taxpayer different from the one who originally is taxed on the capital gain will often be an imperfect offset. For example, the tax on the gain may occur in a year earlier than the tax reduction from the capital loss. The acceleration of tax may even approximate, in present value terms, double taxation if there is a substantial period between the payment of capital gains tax by the first shareholder and the recognition of an offsetting capital loss by a subsequent shareholder. In addition, limits on the deductibility of capital losses may prevent the purchasing shareholder from fully using the offsetting capital loss. The additional burden imposed by a capital gains tax also depends on the marginal tax rates of the purchaser and seller of stock,⁴ and the fact that shareholders with different marginal tax rates will generally face identical market prices for their stock further complicates analysis of the extent of double taxation.

8.B SOURCES OF CAPITAL GAINS OTHER THAN TAXABLE RETAINED EARNINGS

Not all capital gains from increases in the value of corporate equity arise from accumulated retained earnings. Gains from other sources may imply different tax consequences than those applicable solely to gains from fully-taxed retained earnings.

First, capital gains on corporate stock may be attributable to retained preference income. In that case, taxing capital gains on corporate stock does not impose a second level of tax, because no tax has been paid at the corporate level. Taxing such capital gains produces a single tax on those earnings at the shareholder level. If, as we recommend in Chapter 5, integration should not extend corporate level preferences to shareholders, such gains should be taxed. Providing relief for capital gains attributable to retained preference income would exacerbate the incentive to retain rather than distribute preference income or to distribute preference income in a nondividend distribution in which capital gain treatment might be available.⁵

Second, capital gains may be attributable to real unrealized appreciation in the value of corporate assets. In that case, the unrealized corporate level gain, in effect, will be realized first at the shareholder level upon the disposition of the stock. The gain also will be realized at the corporate level when the corporation disposes of the asset. Although such gains eventually will be taxed at the corporate level, in a realization-based income tax system, taxing the shareholder level gain seems appropriate, since that is the first realization event with respect to the appreciation. It may, however, be appropriate to prevent double taxation when the corporation subsequently disposes of the appreciated asset.⁶

Third, capital gains may be attributable to changes in the anticipated value of corporate earnings, due, for example, to management changes or revised estimates of profits from new products or inventions. Tax considerations for

gains attributable to such factors are similar to those concerning unrealized appreciation in tangible corporate assets. Accordingly, taxing the appreciation when the shareholder sells the stock seems appropriate.

Finally, taxable capital gains may result from inflation. In an unindexed system, capital gains tax liability can result simply because nominal asset values rise with inflation, although a taxpayer may have no increase in real income. Taxing such gains can lead to high effective tax rates on capital gains. Indeed, granting relief to capital gains to offset the effects of inflation has been one of the principal justifications advanced for measures such as lower rates on capital gains or indexation of such gains.⁷

8.C ADJUSTMENTS TO ELIMINATE DOUBLE TAXATION OF RETAINED CORPORATE EARNINGS

Although avoiding the double taxation of corporate retained earnings is an important factor to be taken into account, how capital gains are treated in an integrated corporate tax system will turn ultimately on the resolution of basic policy issues that have long been controversial under the income tax. Considerations such as the desire to stimulate investment and entrepreneurship and to avoid the overtaxation of inflationary gains support preferential rates or exclusions for all or a part of capital gains income. On the other hand, some analysts will contend that capital gains and ordinary income should be taxed similarly.

Integration of the corporate income tax can proceed and will serve to reduce substantially the distortions of the current system whichever of these options for taxing capital gains is chosen. However, in designing an integrated corporate tax, one must consider the treatment of capital gains, as well as dividends, in developing rules that minimize distortions in corporate and individual financial behavior.

As discussed in Chapter 3, the shareholder allocation prototype would allocate corporate

taxable income to shareholders each year and would provide a system of shareholder level basis adjustments similar to those used for partnerships or S corporations under current law.⁸ Share basis would increase to reflect the corporation's taxable income and certain preference income and would decrease to reflect distributions. Thus, under such a system, any capital gains on sale of corporate stock would be attributable to preference items for which no basis adjustment is allowed, unrealized appreciation, or inflation.

On the contrary, the dividend exclusion prototype, set forth in Chapter 2, does not provide any adjustments to share basis to reflect the corporation's retention of income that has been taxed at the corporate level. As a consequence, taxing capital gains could impose an additional shareholder level tax on retained earnings that have already been taxed in full at the corporate level. Because retained fully-taxed earnings would face a greater tax burden than distributed earnings, corporations would have an incentive to distribute rather than retain fully-taxed earnings. This problem can be limited by allowing a dividend reinvestment plan (DRIP), which would permit a corporation to declare deemed dividends to the extent of its EDA balance and treat the amount of dividend as reinvested in the corporation. Under such a system, a shareholder would be treated as receiving an excludable dividend and would increase stock basis to reflect the deemed recontribution. Chapter 9 discusses DRIPs in detail.

If corporations were to use a DRIP to declare deemed dividends equal to their fully-taxed income each year, the resulting basis adjustments would ensure that such income would not be taxed again as capital gains. If, however, nontax considerations lead corporations not to elect DRIP treatment for all their fully-taxed earnings, an elective DRIP would not eliminate the potential additional tax on retained corporate earnings. For example, a corporation that expects to earn substantial preference or foreign source income shielded by foreign tax credits might want to retain some EDA balance to enable it to continue to pay excludable cash dividends in future years. If no

DRIP is allowed, or if it is expected that corporations will not elect to make deemed distributions of all fully-taxed income, one could reduce or eliminate the potential disadvantage for retained earnings by adopting a preferential rate (or, equivalently, a partial exclusion) for capital gains.

Taxing capital gains on equity and debt investments in business entities creates special issues under CBIT. If a compensatory tax is imposed under CBIT, all business income would be taxed at the entity level, and investors would exclude from income all dividends and interest payments received. In that case, taxing capital gains would create an even greater disparity between retained and distributed income than under the dividend exclusion prototype. Thus, if CBIT includes a compensatory tax, a complete investor level exemption for capital gains (and nonrecognition of losses) on equity and debt would be consistent with CBIT's general exemption from investor level tax of dividends and interest. If CBIT does not include a compensatory tax, but instead taxes dividends and interest considered to be paid out of corporate preference income at the investor level (see Section 4.D), the case for relief for capital gains is essentially the same as under the dividend exclusion prototype.

If CBIT includes a compensatory tax, exempting gains and losses from the sale of equity interests in CBIT entities could be justified on the ground that those gains and losses either have been, or will be, taken into account in calculating the income tax imposed at the entity level. Retained taxable income has already been subject to tax, retained preference income will be subject to compensatory tax under CBIT when distributed, and unrealized appreciation represents anticipated higher future earnings that will be subject to entity level tax if and when they are realized.⁹ Exempting capital gains on CBIT equity and debt would promote simplicity in the CBIT prototype. For example, exempting capital gains on CBIT debt and equity would remove the need for a DRIP mechanism to allow holders to increase basis to reflect earnings taxed at the corporate level.

The principal disadvantage of exempting gains on CBIT equity is the potential for deferral of tax on appreciation in an entity's assets. A realization-based tax system may allow a significant delay between the realization of gain by an equity investor (through the sale of his equity interest) and the realization of future earnings or built-in gain at the entity level. Foregoing the opportunity to tax gains realized upon a sale of an equity interest thus increases the potential for the deferral of tax on unrealized appreciation at the entity level.¹⁰ Although additional realization rules at the entity level could limit deferral,¹¹ sale of an equity interest traditionally has been viewed as an appropriate realization event and the more traditional solution to the problem of double taxation has been to adjust entity level asset basis to reflect investor level realization.¹²

CBIT also raises issues relating to capital gains on debt. Some, but not all, changes in the value of debt reflect gains and losses that have been or will be taxed at the corporate level.¹³ For example, one source of capital gains on debt is an increase in the creditworthiness of the issuer, which may reflect an increase in the corporation's expected future earnings. If an increase in creditworthiness is due to earnings that will be taxed at the corporate level, the issues created by taxing capital gains on debt are similar to those for equity.¹⁴ Capital gains and losses on debt (and corresponding losses and gains to issuers) also may arise from unexpected movements in market interest rates.¹⁵ The movement to a CBIT system does not demand an exclusion of gains on CBIT debt that are due to changes in interest rates, and it is impossible as a practical matter to distinguish between gains attributable to interest rate movements and gains attributable to other sources.¹⁶

8.D OTHER COUNTRIES

Many countries recognize the possible distortion caused by taxing capital gains on sales of corporate stock and have taken measures to mitigate this effect. Table 8.1 shows the tax treatment of capital gains of the G-7 countries with integrated tax systems. All the countries

provide some preferential treatment for capital gains on corporate stock through a lower effective tax rate. For example, Canada, France, and Germany all provide for an alternative or reduced tax rate applied to such gains. These reductions can be substantial. In Germany, for example, all gain on securities held more than 6 months may be excluded. The United Kingdom does not permit a reduction in its marginal tax rate, although the tax base is indexed for inflation, but instead allows a specific "dollar" exemption. Gains exceeding the exemption are taxed at the applicable marginal rate.

8.E SHARE REPURCHASES

The differences in taxation of gains from similar transactions complicates analysis of the proper treatment of capital gains on corporate stock under integration. The treatment of share repurchases is one example. A shareholder who sells stock to a person other than the corporation that issued the stock or who receives a liquidating distribution generally can recover the basis in the stock against the amount realized on the sale. In contrast, current law may treat a redemption of stock by the issuing corporation as a dividend or as a sale of stock. A redemption generally qualifies for sale treatment if it is "not essentially equivalent" to a dividend or is substantially disproportionate among shareholders.¹⁷ For redemptions treated as a dividend, no basis recovery is permitted (although, generally, the basis in the redeemed stock is allocated to the remaining stock and will be recovered eventually).

Current law favors share repurchases because dividends are taxable to shareholders in full, while redemptions generally permit recovery of basis by shareholders and may permit taxation of gain at the maximum rate of 28 percent for long-term capital gains (rather than at the higher marginal rates for ordinary income).¹⁸

In general, each of the integration prototypes should greatly reduce current law's incentive to engage in share repurchases. Shareholder allocation integration, which treats both distributions and sales of stock as tax free to the extent of

Table 8.1
Taxation of Individuals on
Long-Term Gains on Securities
Select Foreign Countries

Foreign Country	Amount of Gain Exempt	Maximum Individual Tax Rate (Capital Gains) ¹
France	All, if the sale proceeds do not exceed FF307,760 (\$55,323) ²	16%
United Kingdom	All inflationary gains plus an annual exemption of £5,000 (\$8,885) of non-inflationary gains	40%
Canada	25% exclusion, plus a lifetime exemption of C\$100,000 (\$88,480)	22%
Germany	All gain on securities held more than 6 months ²	0%

Department of the Treasury
Office of Tax Policy

¹National tax only. Subnational taxes are relevant in Canada only. Provincial taxes (non-deductible) amount to roughly 50 percent of the Federal tax.

²The exemption does not apply in certain cases where the seller held a "substantial interest" in the corporation whose shares are being sold.

share basis and capital gain thereafter, would treat share repurchases and dividends similarly.¹⁹ The dividend exclusion prototype, which treats dividends paid out of fully-taxed earnings as tax free to shareholders, generally would encourage corporations to distribute fully-taxed earnings to taxable shareholders as dividends rather than through share repurchases. Corporations that had exhausted their EDA balance and could pay only taxable dividends, however, would have an incentive to distribute earnings through share repurchases. Even corporations with sufficient EDA balances might desire to make selective share repurchases from tax-exempt shareholders to distribute earnings without reducing the corporation's EDA.²⁰ The incentives for share repurchases under CBIT are generally the same as those under the dividend exclusion prototype, except that the incentive to make share repurchases out of preference income may be more

pronounced if a compensatory tax is imposed on dividends but not on share repurchases. Avoiding the compensatory tax would allow preference income to be distributed to tax-exempt and foreign investors without tax at either the corporate or the shareholder level.

One way to eliminate the remaining incentive for share repurchases under the dividend exclusion and CBIT prototypes would be to treat redemptions like dividends. In that case, share repurchases, like dividends, by a corporation with sufficient earnings and profits would not permit basis recovery. Share repurchases would be tax-free to shareholders to the extent of the corporation's fully-taxed income

(and would reduce the corporation's EDA). Any portion of payments to repurchase shares that were made out of preference income would be taxable to shareholders, in a dividend exclusion system, or subject to compensatory tax or an investor level tax, in CBIT.²¹ This result may be inappropriate, however, in a system in which capital gains are subject to tax, because a shareholder's basis would be taken into account on a sale to a third party, but not in a corporate repurchase. In theory, dividend treatment could be extended to all sales of shares, including sales to persons other than the issuing corporation. However, it may be impractical to extend dividend treatment to third-party sales, given the large volume of daily trading in corporate stock.²² Limiting dividend treatment to redemptions would, however, create disparities between sales of stock to the issuing corporation and to third parties.

The treatment of capital gains also may affect the desirability of measures to equalize the treatment of dividends and share repurchases under the dividend exclusion and CBIT prototypes. A preferential rate for capital gains, for example, might reduce, but not eliminate, the disincentive for share repurchases out of fully-taxed income while increasing the incentive for share repurchases out of preference income. On balance, we believe that any of the integration prototypes will sufficiently decrease incentives for share repurchases as compared to current law that policymakers may avoid adopting any additional rules and let the passage of time demonstrate whether the shifting of EDA balances among shareholders requires additional measures.²³

8.F CAPITAL LOSSES

In general, the treatment of capital losses on corporate stock under integration should parallel the treatment of capital gains. As Section 8.A discusses, a purchaser's capital loss may serve to reverse the tax imposed on a seller's capital gain attributable to retained earnings that have

previously been taxed at the corporate level. However, if relief is provided for capital gains on corporate stock, the corresponding loss need not be allowed in full as an offset. For example, an exemption (or partial exclusion) for capital gains on corporate stock might imply a disallowance (or partial disallowance) of capital losses on corporate stock. Policymakers may, however, decide to tax capital gains on corporate stock, on the grounds that the second level of tax on retained earnings may prove temporary and that preferential treatment could exempt from tax other gains (like some of those discussed in Section 8.B) that may appropriately be taxed under integration.

Other capital losses on corporate stock may arise from unrealized depreciation in corporate assets, just as capital gains may arise from unrealized appreciation.²⁴ As Section 8.B notes, in a realization-based tax system, it seems appropriate to allow such losses, although it may be appropriate to make adjustments to prevent a second loss at the corporate level, e.g., by adjusting corporate asset basis. As under current law, the desirability of such measures must be weighted against their complexity.²⁵

CHAPTER 9: DIVIDEND REINVESTMENT PLANS

Under the dividend exclusion and CBIT prototypes, corporations (and other entities subject to CBIT) may desire to retain earnings but allow their shareholders to increase share basis to reflect earnings which have been taxed at the corporate level. Allowing basis adjustments would reduce the extent to which taxes on investor capital gains would be a second tax on retained earnings and would reduce the tax incentive for corporations (and other CBIT entities) to distribute fully-taxed income. See Chapter 8. We contemplate that this would be permitted through an elective dividend reinvestment plan (DRIP).¹ DRIPs may be adopted by corporations under current law; such plans commonly are used by mutual funds and utilities. Because dividends are taxable to shareholders under current law, participation in DRIPs generally requires an election by the shareholder. Unlike existing DRIP arrangements, however, deemed dividends reinvested under an integration prototype would not be taxable to shareholders and the DRIP could be adopted by the corporation (or CBIT entity) without the consent of the individual shareholder.² Adopting a DRIP would simply represent a corporate decision to reduce the corporate EDA in order to increase share basis.

9.A MECHANICS

By adopting a DRIP, a corporation would elect to treat shareholders as receiving excludable dividends in an aggregate amount not to exceed the balance in the corporation's EDA. The amount deemed distributed would be deducted from the EDA. The shareholders would then be deemed to recontribute the distributed amount, and their share basis would increase by the amount of the deemed distribution. Share basis would increase only by the amount deemed reinvested (rather than by the corporation's pre-tax earnings), because that would be the result had the shareholder actually reinvested a dividend.

Mechanically, the electing corporation would declare deemed dividends in the same manner that it declares actual dividends. A corporation would

choose the amount of deemed dividends and the classes of stock on which they would be paid. The corporation's ability to stream deemed dividends to taxable shareholders would be constrained by the anti-streaming rules generally applicable under the prototypes for payments of excludable dividends.³ The corporation would allocate the deemed dividends to holders of stock on the chosen record date and would provide information reports to those shareholders showing the amount of the deemed dividend and the associated basis increase.

Dividends are generally paid on a per share basis, and the share basis increase under the DRIP also would be on a per share basis. It would be desirable to have a uniform convention governing the allocation of such basis, e.g., equally to each share or in proportion to the existing basis.

Example 1. Corporation X adopts a DRIP and makes a deemed distribution of \$100 to Shareholder A. The fair market value of X shares on the date of the deemed distribution is \$20 per share. A owns 10 shares of X which he purchased in two lots, Lot A (5 shares at \$4 each) and Lot B (5 shares at \$6 each). If basis is allocated on a per share basis, the basis of each Lot A share will be \$14 and each Lot B share will be \$16.

Although a shareholder may have purchased various shares of a corporation's stock for different amounts, the treatment of each share under current law as having a separate basis may be questioned. If the shares are economically equivalent, it may be appropriate to require the shareholder to recognize the same gain or loss regardless of which shares are actually sold. For example, a DRIP could be used to reduce basis disparities.

Example 2. The facts are the same as in Example 1, except that the fair market value of X shares on the date of the deemed distribution is \$15 per share. The DRIP basis increase could be allocated between the Lot A and Lot B shares so that the shares in each lot have a basis of \$15.

For some shareholders (particularly those with recently purchased shares), a DRIP may create

share basis in excess of fair market value, with the result that capital losses will be realized when the shares are sold. Such losses may serve the same function as those discussed in Section 8.A, simply "reversing" the double tax imposed on the seller of shares. In other cases, however, it may be appropriate to craft anti-abuse rules to prevent a DRIP from being used to create basis in excess of fair market value.⁴

The dividend exclusion and CBIT prototypes generally adopt stacking rules that treat distributions as made first from fully-taxed income. If a DRIP is adopted, further stacking rules would be necessary to determine whether cash distributions on a class of stock following deemed dividends on that class of stock are first a recovery of basis from the DRIP or out of other earnings. Thus, issuers would keep an account of deemed dividends made on each class of stock (the deemed dividend account), in addition to the EDA.⁵ To simplify the operation of these accounts and minimize the double taxation of retained earnings, we recommend that all cash distributions, including cash distributions on shares on which deemed dividends have previously been paid, be treated first as payments out of any remaining balance in the corporation's EDA. Then cash distributions on a class of stock on which deemed dividends had been paid would be treated as a return of capital to the extent of the balance in the deemed

dividend account for that class of stock. The deemed dividend account would be reduced by the amount of dividends treated as a return of capital under this rule. Distributions in excess of the deemed dividend account for a class of stock would be governed by the prototype's rules applicable to distributions in excess of the EDA.⁶

9.B DESIGN CONSIDERATIONS

We anticipate that deemed distributions will, in practice, be made only to holders of common (or at least participating) equity, because holders of preferred stock typically require cash dividends. Restrictions limiting DRIP distributions to common and participating equity could be considered if it were feared that DRIPs could permit inappropriate losses, e.g., distributions on preferred stock bearing limited dividends and a fixed liquidation or redemption value might create such a result.⁷

In addition, DRIPs could be made mandatory on the theory that double taxation of retained earnings through capital gains taxation could be minimized by forcing basis allocations as promptly as possible.⁸ However, there seems to be little reason why corporations should not be permitted to control this, as other aspects, of their distribution policy.

CHAPTER 10: TRANSITION CONSIDERATIONS

10.A INTRODUCTION

Under current law, investors and corporations generally have made decisions and commitments based on the two-tier corporate tax system. Investors' decisions to invest in corporate or noncorporate entities or in debt rather than stock, and corporations' decisions to distribute earnings, to issue debt or equity, or to recognize gains inherent in appreciated assets all likely have been made with an expectation that corporate equity income will likely continue to be subject to tax at two levels. Introduction of an integrated system will alter these expectations. We believe that a transition period is appropriate to prevent undue dislocation and to mitigate transitional gains and losses.

We anticipate that shifts in investors' portfolios will occur under any integration proposal and, in some cases, such shifts may be substantial. While the magnitude of such shifts will vary with the degree of difference between the integration proposal and current law, prudence suggests that phased-in implementation will permit adjustment to the new system while mitigating transition gains and losses. It also will provide an opportunity for midcourse corrections, if needed. A phase-in appears to be the simplest form of transition for both taxpayers and administrators to implement. It will not require complicated rules of uncertain duration for preenactment assets.

10.B TAXATION OF TRANSITIONAL GAINS AND LOSSES

Some believe that it is important for transitional rules to deal explicitly with gains and losses arising from the shift to an integrated system.¹ Several sources of such transition gains and losses can be identified. First, the shift to integration may affect the value of corporate shares.² Second, at the time of the shift, corporations may hold assets with unrealized built-in gains or losses and hence face different tax consequences upon

realization than under existing law. (Absent specific transitional rules for built-in gains and losses, the second effect will likely become a part of the first effect.) Finally, some corporations may have retained earnings which have been realized and taxed while others may have distributed such earnings. The former may gain advantage if the retained earnings are not taxed on distribution.³

While we favor a phase-in of integration primarily to allow for gradual portfolio shifting and to allow assessment of integration's impact as it is implemented, we do not favor other explicit transitional rules to deal with transition gain and loss. Phase-in itself will mitigate the impact of any change in share values.⁴

Built-in gains and losses are likely to be reflected in share value; in any event, the differing tax consequences that will occur arise primarily by virtue of the realization concept fundamental to current income tax law. Prior law changes (including significant rate changes) generally have not attempted to capture this form of transition gain (other than through phase-in) and we believe that result is appropriate in the shift to integration as well.

Differences in earnings distribution policies are likely to be significant only in certain forms of integration. They could be significant, for example, in the shareholder allocation prototype. Because that prototype taxes only current corporate income and treats distributions as a return of capital, corporations that retained earnings realized under current law could be significantly favored over those that distributed such earnings. In contrast, the dividend exclusion and CBIT prototypes' EDA mechanisms will cause distributions from earnings retained before the establishment of the EDA to be taxable to the shareholder when distributed.⁵ Accordingly, both the dividend exclusion prototype and CBIT will produce results for pre-integration retained earnings similar to current law.⁶

As an alternative, some form of grandfathering of existing assets or activities could be used to limit or eliminate transition gains and losses from the shift to integration. Under such an approach, current law treatment would be retained for assets that otherwise would be treated more favorably under integration to preserve asset values that reflect the classical corporate tax system. In moving to integration, however, a permanent grandfather rule would require maintaining a distinction between pre-enactment and post-enactment assets and equity interests and, in CBIT, old and new debt as well. Making such distinctions over an extended period would create difficult, if not impossible, reporting burdens and administrative complexity and would inevitably result in uneven enforcement.⁷ Such an approach also could require an extensive array of rules to prevent transformation of old equity into new equity and to govern conversions of non-corporate entities to corporate status.⁸ More importantly, preserving a dual system to limit the benefits of integration to new equity, would thwart the goal of economic reform by perpetuating the very distortions the new system seeks to eliminate.⁹ We have rejected such an approach on grounds of both efficiency and simplicity.

10.C PHASE-IN OF INTEGRATION

Phase-ins have been used in recent legislation to moderate the harsh effects of significant changes in the tax law. For example, the passive loss disallowance rules, the personal interest disallowance rules, and the new investment interest limitations adopted in the Tax Reform Act of 1986 all were phased in.¹⁰

We generally recommend that a phase-in approach be used to implement the transition from the classical system to an integrated corporate tax. A phase-in approach would moderate the transition effects of integration, while avoiding the serious drawbacks of limiting integration to new equity. While some transition gains and losses may occur, fundamental structural changes in the tax law, such as those proposed here, simply are not feasible if substantial changes in values of taxpayers' assets must be avoided. Indeed, such

changes have typically been ignored in connection with rate changes that raise similar concerns. A phase-in also would mitigate the revenue effects relative to immediate change. A phase-in would delay application of the new rules, however, and the delay would reduce the present value of the desired economic changes.

Under a phase-in approach, integration would be introduced gradually over a designated period. This approach would reduce the magnitude of transition gains and losses. A phase-in would not distinguish between old and new equity or, in the CBIT prototype, old and new debt. Although there would be some delay in full implementation of integration under a phase-in approach, this delay would be of limited duration, in contrast to the virtually indefinite delay that would result from limiting integration to new equity. The length of the phase-in period should depend on a variety of factors, including the particular integration prototype adopted. An appropriate period should be selected by striking a balance between the need to mitigate the disruption to the status quo and the desire to achieve as expeditiously as possible the full value of the anticipated gains of the new system, taking into account administrative costs.

The dividend exclusion prototype could readily be phased in. The EDA would automatically limit the amounts of dividends excludable by shareholders to the amount of earnings taxed after enactment, although stacking distributions first against the EDA would tend to accelerate the benefits of integration. See Section 2.B. Additional rules distinguishing pre-enactment from post-enactment earnings would not be necessary. Because the dividend exclusion prototype requires relatively few changes to current law, the appropriate phase-in period for that prototype might be relatively short, e.g., 3 to 5 years. Mechanically, a phase-in approach would allow a corporation to pay excludable dividends to the extent of its EDA balance but would limit additions to the EDA to reflect the phase-in, e.g., amounts based on 25 percent of corporate taxes paid in the first year after enactment, 50 percent in the second year, and so on.¹¹

In contrast, a phase-in of the shareholder allocation prototype appears complex. Attributing a portion of corporate tax to shareholders in a manner that would increase the portion of corporate income so taxed over time, would require a complex system for tracking corporate income and making share basis adjustments, for example, to determine how subsequent distributions of phase-in years' earnings would be taxed. On balance, if a shareholder allocation system were desired, it might be preferable to enact the system in its entirety with a delayed effective date. A delayed effective date would have effects similar to a phased-in effective date in reducing transition gains and losses, would allow taxpayers an opportunity to plan for the shift, while avoiding the complexity of a phase-in of the shareholder allocation prototype.¹²

The CBIT prototype generally eliminates the investor level tax on dividends and interest and disallows the interest deduction to corporations and other CBIT businesses. In addition to the transition gains and losses that might occur under the other integration prototypes, under CBIT lenders to CBIT entities might enjoy an increase in the value of existing debt with the elimination of tax on interest received. The magnitude of the increase would depend on a variety of factors, including the remaining term of the debt. From the borrower's perspective, the disallowance of interest deductions would effectively increase the cost of borrowing for corporations unable to call their bonds or otherwise refinance their debt.¹³

CBIT, therefore, should probably be phased in over a longer period than would be appropriate for the dividend exclusion prototype. Longer phase-ins have greater effect in reducing transition gains and losses. Because, as detailed in Chapter 4, a CBIT regime will continue to have certain types of includable interest (such as interest on Treasury securities) even when fully phased in, proportionate adjustments during the phase-in period would add complexity but should not create insurmountable recordkeeping problems for investors.

Although eliminating the interest deduction ultimately could make certain limitations on interest deductibility applicable to CBIT entities unnecessary,¹⁴ they would remain important during the phase-in period. Indeed, a phase-in of CBIT may require some strengthening of rules to prevent acceleration of interest deductions to earlier years of the phase-in, as well as deferral of interest income into later years of the phase-in. Transition rules also would have to address the timing mismatches that arise where interest has been deducted by the payor but not yet included in income by the lender or where interest has been included by the lender but not yet deducted by the payor. Alternatively, transition to CBIT could be accomplished by beginning with implementation of the dividend exclusion prototype.

10.D MECHANICS OF A PHASE-IN

Dividend Exclusion Prototype. A dividend exclusion could be phased in over 4 years, for example, by crediting the EDA with an increasing percentage of the fully phased-in EDA amount in each transition year, i.e., 25 percent of the formula amount in the first year, 50 percent in the second, 75 percent in the third. Offsetting revenues could be phased in on the same schedule. By limiting additions to the EDA at the corporate level, shareholder level phase-in will not be required. However, only 25 percent of income taxed at the corporate level in the first year could be distributed tax-free to shareholders. Distributions in excess of this amount, like other distributions in excess of the EDA, would be taxable to the shareholder.

CBIT. CBIT is self-financing through the disallowance of the entity level interest deduction. Accordingly, the CBIT phase-in must coordinate the dividend and interest exclusions for shareholders with entity level interest disallowance. For each year of the CBIT phase-in, the EDA would be credited with an increasing percentage of the fully phased-in EDA amount and the same percentage of corporate interest deductions would be disallowed, i.e., 10 percent in the first year,

20 percent in the second, etc.. In addition, it would be necessary to credit the EDA with an additional amount equal to the phase-in percentage for the year multiplied by the sum of the allowable interest deduction for the year plus interest paid during the year but deducted in a year before phase-in begins.¹⁵ Absent this adjustment, the CBIT compensatory tax or investor level tax on distributions in excess of the EDA would treat allowable interest like a preference and the income it offsets would be taxed when distributed. Unlike the dividend exclusion prototype, CBIT requires investor level phase-in to mitigate and smooth portfolio shifts during the phase-in period. Thus, debtholders would exclude 10 percent of interest received from a CBIT entity in the first year while shareholders would exclude 10 percent of dividends received.

Example 1. A CBIT entity earns \$109 of gross income and has \$10 of interest expense in the first year of a 10 year phase-in of CBIT. If the CBIT phase-in percentage were 10 percent, the CBIT entity would deduct \$9 of interest (\$10 minus (10 percent of \$10)). It would thus have taxable income of \$100 and pay CBIT of \$31.

The amount added to the entity's EDA is \$7.80, computed as follows:¹⁶

\$6.90	(10% of (\$31/.31 - \$31))
<u>+ .90</u>	(10% of \$9 interest allowed as a deduction)
\$7.80	

Debtholders would be entitled to exclude \$1.00 of the \$10.00 in interest they receive, thereby reducing the EDA to \$6.80.¹⁷ If the entity distributed its remaining after-tax earnings of \$68 (\$109 minus \$10 interest minus \$31 tax) to shareholders, shareholders could exclude \$6.80 from income, thereby reducing the EDA to zero.

Example 2. The facts are the same as in Example 1 except that the entity made no distribution to shareholders in the first year and it has identical income and interest in the second year. Thus, it has \$109 of gross income and is allowed an \$8 interest deduction, resulting in \$101 of taxable income.

The entity's EDA is computed as follows:

\$ 6.80	(balance of EDA from year 1)
13.94	(20% of (\$31.31/.31 - \$31.31))
<u>1.60</u>	(20% of \$8 interest allowed)
\$22.34	

Debtholders in this year would be entitled to exclude \$2.00 of the \$10.00 in interest they receive, reducing the EDA to \$20.34. If the entity distributed its \$68 in after-tax earnings from year 1 plus its \$67.69 in after-tax earnings from year 2 (\$109 minus \$10 interest minus \$31.31 tax), shareholders would be entitled to exclude 20 percent of the \$135.69 dividend or \$27.14. This amount exceeds the EDA balance of \$20.34 because only 10 percent of the earnings from year one are reflected in the EDA. To compensate for the 20 percent exclusion at the shareholder level, a 31 percent compensatory tax of \$2.11 is imposed on the \$6.80 differential. (Thus, the differential amount is treated like retained earnings from pre-CBIT years.)

Example 3. The facts are the same as in Example 1, except that the entity earns \$20 in preference income in addition to the \$109 in gross income. Thus, its after-tax earnings available for distribution to shareholders in year 1 would be \$88 (\$68 + \$20). If it distributed the entire \$88 in year 1, shareholders could exclude 10 percent of that amount, or \$8.80. As a result, a 31 percent compensatory tax of \$.62 is imposed on the \$2.00 by which the shareholder exclusion exceeded the EDA balance (\$8.80 - 6.80). This amount also is 10 percent of the entity's preference income.

As the foregoing examples indicate, a uniform investor level phase-in of CBIT could be more easily accomplished if the prototype includes a compensatory tax. If CBIT does not include a compensatory tax, and instead investors are subject to tax on preference and sheltered foreign source income, a phase-in might be accomplished by limiting the portion of dividends and interest that are excludable to the lesser of (1) the phase-in percentage multiplied by the amount of the payment and (2) the EDA balance. As a consequence, all payments would be excludable up to the phase-in percentage to the extent of the EDA, and all payments thereafter would be taxable.

PART IV: THE ROADS NOT TAKEN

INTRODUCTION

Under an imputation credit system, a shareholder would be taxed on the gross amount of a dividend, including both the cash dividend and the associated tax paid at the corporate level. The shareholder would receive a credit equal to the amount of corporate tax associated with the gross dividend. From an individual shareholder's viewpoint, this system would mean that the corporate tax on earnings distributed as dividends would generally resemble the current withholding tax on wages and salaries. An employee includes gross wages in his taxable income and receives a credit against tax liability equal to the amount of tax withheld by the employer. Because of the prevalence of imputation credit systems abroad, such a system would facilitate international coordination of corporate tax regimes, especially in the context of bilateral treaty negotiations.¹ We therefore had expected to recommend an imputation credit system as our preferred form of distribution-related integration.

After a close examination of the imputation credit system, reflected in Chapter 11, we determined that its principal advantage is its flexibility to respond to different policy judgments on the

most important issues of integration. For example, an imputation credit can extend the benefits of integration to tax-exempt and foreign shareholders by allowing refundability of imputation credits or it can deny such benefits by denying refunds. Its major drawback is its complexity in creating an entirely new regime for taxing corporate dividends. On balance, we concluded that the dividend exclusion prototype set forth in Chapter 2 was the preferable distribution-related integration alternative because it would implement our policy recommendations, including such issues as the treatment of preferences and tax-exempt and foreign shareholders, in a substantially simpler manner.

An imputation credit system may not be the most straightforward distribution-related integration alternative even if policymakers were to choose policy goals different from ours. A dividend deduction system, described in Chapter 12, also would be simpler than an imputation credit system if policymakers chose to extend the benefits of integration to tax-exempt and foreign shareholders.²

CHAPTER 11: IMPUTATION CREDIT SYSTEM

11.A OVERVIEW OF IMPUTATION CREDIT PROTOTYPE

In producing this Report, we looked carefully at the integration systems of other countries. See Appendix B. The imputation credit prototype set forth in this chapter is the one we consider to be most consistent with our policy recommendations. It closely resembles the system that New Zealand adopted in 1988.

Mechanics. Corporations would continue to determine income under current law rule and pay tax at a 34 percent rate. Shareholders receiving a distribution treated as a dividend would include the grossed-up amount of the dividend in income—including both the amount of cash distributed and the imputation credit allocated to the dividend—and could use the credit to offset their tax liability. The credit would be non-refundable; it could reduce tax liability to zero, but would not produce a refund. Credits would be allowed only for taxes paid after the effective date of the proposal.

Allowing a credit for the full amount of corporate tax paid with respect to distributed earnings would eliminate the corporate level tax if the shareholder's tax rate at least equals the corporate rate. Even if the shareholder rate were less than the corporate rate, the corporate tax could be eliminated if the credit were allowed against tax on other income or as a refund. Currently, the maximum statutory rate for individual shareholders (31 percent) is less than the corporate rate of 34 percent. Thus, if the credit were computed at the full corporate rate, most shareholders could shelter other income from tax or claim refunds. This need not be permitted, however, if the goal of the imputation credit prototype is simply to ensure that distributed earnings that are taxed at the corporate level are not taxed again to shareholders. Accordingly, rather than allowing a credit for the full amount of corporate tax paid on a distribution, the prototype computes the amount of the credit at the 31 percent maximum shareholder rate. This approach does not

eliminate the corporate level tax. However, it would generally permit shareholders to pay no additional tax on distributions of corporate earnings that have already been taxed fully at the corporate level, while ensuring that shareholders taxable at the maximum individual rate do not use excess credits to shelter other income from tax or to claim refunds.¹ Section 11.B explains how taxes paid at the corporate rate are converted into imputation credits at the shareholder rate.

A corporation would maintain an account of its cumulative Federal income taxes paid, computed as though its taxable income had been subject to tax at a rate of 31 percent (the shareholder credit account or SCA). A corporation could elect to attach a credit to a dividend (frank the dividend) in any amount, provided it does not exceed the lesser of (1) the adjusted corporate level tax (computed at the 31 percent rate) on the pre-tax earnings that generated the dividend (the grossed-up dividend),² or (2) the balance in the SCA.³ The corporation would reduce its SCA balance by the amount of credits used to frank dividends and by refunds of corporate tax. It would increase its SCA by payments of corporate tax and by credits attached to dividends received from other corporations.

Tax-Exempt Shareholders. The prototype would effectively retain the current level of taxation of income earned on corporate equity supplied by tax-exempt shareholders. The credit would be nonrefundable, and fully-taxed income distributed to tax-exempt shareholders would continue to bear one level of tax: the corporate tax. Preference income distributed to tax-exempt shareholders generally would continue to be untaxed both at the corporate and shareholder level.

Corporate Shareholders. The dividends received deduction would be increased to 100 percent for all intercorporate dividends, and any imputation credits attached to a dividend would be added to the recipient corporation's SCA.

Tax Preferences and Foreign Source Income.

By adding only U.S. taxes to the SCA and requiring that imputation credits be paid out of the SCA, the prototype ensures that the credit is allowed only to the extent of U.S. corporate tax payments. By generally allowing corporations to decide how much credit to attach to a particular distribution, the prototype allows a corporation to treat distributions as coming first from fully-taxed income and then from preference income and foreign source income shielded from U.S. tax by foreign tax credits. The prototype does not impose a compensatory tax on distributions out of preference or shielded foreign source income. Therefore, the prototype permits a corporation to make distributions out of preference or shielded foreign source income without incurring additional corporate level tax liability. However, shareholders may not claim credits with respect to such distributions. This results in distributed preference income and shielded foreign source income continuing to be subject to the same level of taxation as under present law.

Foreign Shareholders. The prototype also retains the current law treatment of foreign shareholders. The credit would be nonrefundable to foreign shareholders, absent treaty provisions to the contrary, and dividends would be subject to U.S. withholding tax to the same extent as under current law.

Anti-abuse Rules. The imputation credit prototype generally permits a corporation to frank dividends in any amount (subject to a maximum), even if they have a remaining SCA balance. This treatment is more liberal than the dividend exclusion prototype, which requires corporations to pay fully excludable dividends (equivalent to fully franked dividends) until their EDA is exhausted. Permitting this additional flexibility in the imputation credit prototype may require additional anti-abuse rules to prevent corporations from attaching credits to distributions to taxable shareholders and

not attaching credits to distributions to shareholders with low or zero U.S. tax liability, such as tax-exempt and foreign shareholders. See Section 11.F.⁴

Capital Gains and Share Repurchases. Chapter 8 discusses the treatment of capital gains on sales of corporate stock and the treatment of share repurchases.

Structural Issues. The prototype generally maintains current law rules for corporate acquisitions, although new rules would be needed to govern the carryover or separation of corporations' SCA balances in acquisitive and divisive reorganizations.

Impact on tax distortions. Table 11.1 illustrates the impact of the imputation credit prototype on the three distortions integration seeks to address: the current law biases in favor of corporate debt over equity finance, corporate retentions over distributions, and the noncorporate over the corporate form. The only difference between the current law treatment of nonpreference, U.S. source business income and its treatment under the imputation credit prototype is on corporate equity income distributed to individual investors. The prototype would reduce the tax rate on such income to t_c (when $t_i = t_i^m$) or a lower rate (when $t_i < t_i^m$), but as long as $t_c > t_i^m$, the rate will be greater than t_i . Thus, while the rate on corporate equity income distributed to individuals would be reduced, it would still be higher than the rate (t_i) imposed on noncorporate equity income and on interest. It would be lower, however, than the rate on undistributed corporate equity income. Some bias toward debt finance and the noncorporate form would remain, while the bias toward corporate retentions would tend to be reversed, in the absence of a DRIP. See Chapter 9 and Section 11.I. For tax-exempt and foreign investors, there would be no change in the tax treatment of nonpreference, U.S. source income.

11.B CHOICE BETWEEN A CREDIT LIMITATION SYSTEM AND A COMPENSATORY TAX SYSTEM

Introduction

As set forth in Chapter 5, this Report recommends that integration not become an occasion for extending the benefit of corporate tax preferences to shareholders. In implementing this decision in an imputation credit system, the most significant choice is between a shareholder credit limitation system (in which tax is collected only at the shareholder level on distributed preference income) or a compensatory tax system (in which a tax, creditable by shareholders, is collected at the corporate level on distributed preference income). The choice between a credit limitation system and a compensatory tax system also is influenced by the policy recommendations set forth in Chapters 6 and 7 not to eliminate the corporate level tax on earnings distributed to tax-exempt and foreign shareholders and not to treat identically U.S. corporate level taxes paid and foreign taxes on corporations' foreign source income. These policy recommendations imply that imputation credits should not be refundable to tax-exempt or foreign shareholders and that foreign corporate level taxes should not be creditable by shareholders.

The choice between a credit limitation system and a compensatory tax system may differ depending upon the kind of integration mechanism adopted. For example, in the dividend exclusion prototype, we chose to follow a credit limitation-type approach and to tax distributed preference income only at the shareholder level. This allows adoption of the dividend exclusion prototype with minimal changes from current law and would continue current law treatment of dividends paid out of preference or foreign source income. In

Table 11.1
Total U.S. Tax Rate on a Dollar of NonPreference, U.S. Source Income from a U.S. Business Under Current Law and an Imputation Credit Prototype

Type of Income	Current Law	Imputation Credit Prototype
I. Individual Investor is Income Recipient		
Corporate Equity:		
Distributed	$t_c + (1 - t_c)t_i$	$[(1 - t_i)t_c + t_i - t_i^m]/(1 - t_i^m)$
Undistributed	$t_c + (1 - t_c)t_g$	$t_c + (1 - t_c)t_g$
Noncorporate Equity	t_i	t_i
Interest	t_i	t_i
Rents and Royalties	t_i	t_i
II. Tax Exempt Entity is Income Recipient		
Corporate Equity:		
Distributed	t_c	t_c
Undistributed	t_c	t_c
Noncorporate Equity	t_c	t_c
Interest	0	0
Rents and Royalties	0	0
III. Foreign Investor is Income Recipient		
Corporate Equity:		
Distributed	$t_c + (1 - t_c)t_{WD}$	$t_c + (1 - t_c)t_{WD}$
Undistributed	t_c	t_c
Noncorporate Equity	t_{WN}	t_{WN}
Interest	t_{WI}	t_{WI}
Rents and Royalties	t_{WR}	t_{WR}

Department of the Treasury
Office of Tax Policy

t_c = U.S. corporate income tax rate.

t_i = U.S. individual income tax rate.

t_i^m = Maximum U.S. individual income tax rate.

t_g = U.S. effective individual tax rate on capital gains.

t_{WD} , t_{WN} , t_{WI} , t_{WR} = U.S. withholding rates on payments to foreigners of dividends, noncorporate equity income, business interest, and rents and royalties, respectively. Generally varies by recipient, type of income, and eligibility for treaty benefits, and may be zero.

addition, because the dividend exclusion prototype applies only to corporate equity, a compensatory tax would tend to increase the incentive for corporations with preference income to issue debt rather than equity to tax-exempt and foreign investors. For similar reasons, we adopt a credit limitation approach in the imputation credit prototype.

Experience in other countries makes clear that an imputation credit system can accommodate

either a credit limitation or a compensatory tax, however. Australia and New Zealand, for example, adopted credit limitation systems, while France, Germany, and the United Kingdom adopted compensatory tax systems.⁵

Comparison of a Compensatory Tax and Credit Limitation

Under current law, preference income distributed to tax-exempt shareholders is not subject to tax at either the corporate or the shareholder level. If a compensatory tax were imposed on preference income at the corporate level and not made refundable to tax-exempt shareholders, a compensatory tax would impose an additional tax on such income.⁶ Similarly, under current law, preference income distributed to foreign shareholders is subject only to the 30 percent withholding tax (often reduced to as little as 5 percent by treaty). If distributed preference income were subject to a compensatory tax at the corporate level and the imputation credits could not be used against the foreign shareholders' withholding tax, the net tax burden on that income would increase.

A similar problem arises with distributions of foreign source income earned by a U.S. corporation and taxed abroad. As discussed in Chapter 7, this Report recommends that foreign taxes remain creditable at the corporate level, but that foreign taxes not be treated the same as U.S. taxes paid in determining imputation credits. Under such a rule, distribution of foreign source income that has not borne any residual U.S. tax would be fully taxable at the shareholder level, as under current law. A nonrefundable compensatory tax on distribution of foreign source income shielded from U.S. corporate tax by foreign tax credits would increase the tax burden on distributions of such income to foreign and tax-exempt shareholders relative to the burden on such income under current law.

Because of the additional corporate level tax imposed by a nonrefundable compensatory tax on preference and foreign source income distributed to tax-exempt or foreign shareholders, the compensatory tax and credit limitation systems have

very different implications for corporations that currently pay little U.S. tax, due either to substantial use of tax preferences or to foreign tax credits. Under current law these corporations incur little or no United States corporate level tax, but the dividends paid do bear a shareholder level tax (except in the case of tax-exempt shareholders).

A credit limitation system allows corporations to continue to pay dividends out of preference or foreign source income without incurring any additional corporate level tax. In contrast, a compensatory tax system would require such corporations to pay an extra corporate level tax in order to maintain their current level of dividend payments. In practical terms, a compensatory tax may create an extra tax cost for corporations engaged in tax-favored activities, such as research and experimentation and oil and gas exploration⁷ and may affect large multinational corporations doing business in high-tax foreign jurisdictions, such as certain European countries. In addition, U.K. experience with a nonrefundable compensatory tax suggests that corporations that would be subject to such taxes will engage in tax planning behavior to avoid its burdens. Nevertheless, a compensatory tax does promote simpler administration, since it collects tax on distributed corporate preference or foreign source income at the corporate level.⁸

The extent to which additional tax burdens would be created by a compensatory tax system depends on the method for determining when a distribution is made out of income that has not borne U.S. tax.⁹ A stacking rule that treats all distributions as having borne tax at the full corporate rate (to the extent possible based on total corporate tax paid) may mitigate the imposition of a compensatory tax. If distributions do not exceed fully-taxed income, no compensatory tax is due. Choice of a particular stacking rule also affects both the revenue effects of distribution-related integration and corporate incentives to pay dividends. In this and other prototypes, we have consistently rejected a stacking rule that would treat dividends as made first from preference income, and we have been unable to discover any

country that stacks preferences first in its distribution-related integration system. Although that rule would reduce the revenue loss from adoption of distribution-related integration, it also would discourage payment of dividends.¹⁰ Most foreign systems stack preferences last. See Appendix B.

A credit limitation system may be somewhat more complex to administer than a compensatory tax system, because it requires shareholders to apply a different rate of gross-up and credit for each distribution from each corporation. In contrast, under a compensatory tax, all distributions from all corporations are subject to gross up and credit at the same rate. From the shareholder's point of view, however, a credit limitation system may not be significantly more complicated. Under either system, the shareholder must compute tax using two pieces of information—the amount of the cash dividend and the associated credit (also used to compute the grossed-up dividend). The only necessary difference between the two systems is that under a compensatory tax system the credit rate can be provided by instructions to the tax form, while under a credit limitation system it would have to be provided by information returns, which may reflect differing amounts of credit for different corporations and in different years.

Both compensatory tax systems and credit limitation systems have posed problems for countries that have adopted them. For example, the United Kingdom imposes a compensatory tax by collecting Advance Corporation Tax (ACT) on all distributed earnings at the time of distribution. ACT is then creditable against regular tax.¹¹ The United Kingdom has found that many corporations with a large amount of preference or foreign source income have built up substantial excess ACT accounts rather than reduce their dividend payments. The likelihood of excess ACT accounts has led to tax planning efforts to avoid imposition of compensatory taxes and the existence of excess ACT accounts promotes efforts at trafficking in tax attributes. However, credit limitation systems have had problems in creating and enforcing effective antistreaming rules. Both the Australian and New Zealand systems contain an extensive network of such rules.

On balance, we believe that a credit limitation system is preferable to a compensatory tax in both the imputation credit prototype and the dividend exclusion prototype. In both cases, a credit limitation system would permit corporations to maintain their current dividend policy without the imposition of additional corporate level tax.

Mechanics of a Shareholder Credit Limitation System

Under the imputation credit prototype, corporations would keep track of cumulative taxes paid by maintaining a Shareholder Credit Account (SCA)—an account of cumulative creditable taxes paid. A corporation would be allowed to attach a credit to a dividend (frank the dividend) in any amount, up to a limit. The credit attached could not exceed the lesser of (1) an amount equal to the product of (a) the distribution and (b) the ratio of the current maximum shareholder tax rate to 1 minus the current maximum shareholder tax rate, or (2) the balance in the SCA. The corporation would reduce the balance in the SCA by the amount of credits used to frank dividends and refunds of corporate tax and increase the SCA by payments of corporate tax (including estimated tax) and imputation credits attached to dividends received.

For example, consider a corporation with taxable income of \$100. Assuming a 34 percent corporate tax rate and a 31 percent shareholder rate, it would pay a tax of \$34 and have \$66 available for distribution. The corporation would add \$29.65 to its SCA account. The amount added to the SCA is determined using the following formula:

Annual additions to SCA =

$$\left(\frac{1}{.69} - 1 \right) \left(\frac{\text{U.S. tax paid for taxable year}}{.34} - \text{U.S. tax paid for taxable year} \right)$$

+ imputation credits on dividends received

This is the amount of tax that would fully frank, at the 31 percent shareholder rate, the corporation's actual after-tax income of \$66 (\$100 - \$34).¹²

If the corporation distributed a cash dividend of \$33, the corporation could elect to frank the dividend in any amount up to \$14.83 (determined by multiplying the amount of the distribution by .4493 (the shareholder rate divided by one minus the shareholder rate)). The corporation would reduce the SCA by the amount of the credit. Thus, if the corporation chose to fully frank the dividend, the shareholder would report as income the gross dividend of \$47.83 (\$33 plus \$14.83) and claim a credit of \$14.83 against the individual tax. If the \$14.83 credit exceeded the shareholder level tax imposed on the \$47.83 gross dividend, a low-bracket shareholder could use the excess credit to offset tax imposed on other income. For example, a shareholder in the 31 percent bracket would incur tax liability on the gross dividend of \$14.83 ($.31 \times \47.83) and would receive a credit of \$14.83, exactly offsetting the tax due. A shareholder in the 15 percent bracket would incur tax liability on the gross dividend of \$7.17 ($\47.83×15 percent) and would receive a credit of \$14.83, leaving an excess credit of \$7.66 to offset other tax liability.¹³

The imputation credit prototype requires corporations to report annually to each shareholder and to the IRS the amount of dividend distributions to shareholders and the associated imputation credits. The imputation credit prototype also requires corporations annually to report to the IRS the adjustments to and balance in the SCA. This would permit the IRS to verify aggregate allowable credits to a corporation based on the amount of taxes paid and to compare the allowable amount with credits reported by shareholders.

A liquidating corporation would distribute the remaining balance in its SCA among shareholders in proportion to the amount of other assets distributed to them. As with any other distributions for which imputation credits are allowed, the amount of the shareholder credit would be included in income and could be used to offset gain on the liquidation or, in the case of excess credits, other income.

The imputation credit prototype, like the dividend exclusion prototype, treats adjustments to

prior years' tax liability as adjustments made in the current year.¹⁴ Thus, an increase in corporate tax liability for a prior year would result in an increase in the SCA for the year of the audit adjustment. A decrease in a prior year tax liability could give rise to a refund, but only to the extent of the current balance in the SCA. Any excess amount would be carried forward to be applied against future corporate taxes.¹⁵

This method ensures that an adjustment that affects a corporation's prior year tax liability would not affect shareholders' individual tax positions for the prior year. Shareholders may thus claim the credits reported to them as allowable by the corporation, without concern that subsequent corporate level adjustments might require them to file amended returns.¹⁶

The imputation credit prototype allows corporations to carry back losses to claim refunds only to the extent of any balance in their SCA, with the SCA being reduced by the amount of the refund. This limitation prevents corporations from carrying back losses in order to obtain a refund of taxes that already have served to reduce shareholders' taxes through imputation credits attached to dividends.¹⁷ Any unused losses can be carried forward as under present law.¹⁸

The prototype generally permits corporations to choose the extent to which dividends are franked, with the consequence that there is no need for a mandatory stacking rule. This flexibility allows a corporation with preference or foreign source income to continue to determine its dividend policy by weighing the business reasons for maintaining a particular level of cash distributions against the possible detriment to shareholders of receiving unfranked dividends. In contrast, the dividend exclusion prototype requires excludable dividends to be paid until the EDA balance is exhausted. This is equivalent to an imputation credit system that requires corporations to pay fully franked dividends to the extent of the SCA. Permitting the additional flexibility to pay partially franked dividends requires anti-abuse rules in addition to those adopted in the dividend exclusion prototype to prevent corporations from

paying franked dividends to taxable shareholders and unfranked dividends to tax-exempt shareholders. See Section 11.F.

Corporate Shareholders

The imputation credit prototype allows a corporate shareholder a 100 percent dividends received deduction (DRD) for both franked and unfranked dividends, regardless of the degree of affiliation.¹⁹ Moving to a single level of tax under integration does not require increasing the DRD to 100 percent for unfranked and partially franked dividends. The dividend exclusion prototype, for example, retains current law for taxable dividends. See Section 2.B. The imputation credit prototype contains a 100 percent DRD for all dividends, however, because retaining current law for partially franked dividends would create unwarranted complexity.²⁰

As under current law, the DRD would be available for dividends from domestic corporations and for a portion of dividends from certain foreign corporations engaged in business in the United States. Any imputation credit associated with a dividend would be added to the corporation's SCA. Adding the credit to the corporate shareholder's SCA preserves imputation credits for individual shareholders when the earnings are ultimately distributed out of corporate solution.

Because the 100 percent DRD would be equally available for fully franked and unfranked dividends, distributions of corporate preference income would be taxed only when ultimately distributed to individual shareholders. Mechanically, this result occurs because unfranked dividends do not increase the recipient's SCA.²¹ Retaining the DRD for preference income is consistent with the rationale for a credit limitation system discussed above. Requiring immediate taxation in full of preference income received by corporate shareholders would represent a significant departure from current law and would increase the cost of intercorporate dividends. Preserving the DRD means that the ultimate taxability of preference income is determined at the individual level.²²

Other countries adopting distribution-related integration have dealt with the issues presented by affiliated groups in a variety of ways. In most cases, these countries have permitted the extension of preferences while the income remains in corporate solution, as we suggest here. For example, New Zealand generally exempts intercorporate dividends from taxation and corporate shareholders are permitted to add credits from franked dividends to their own SCA. Similar rules apply in Australia for dividends received by public corporations and for franked dividends received by private corporations from within the same closely held group. In the United Kingdom, although the intercorporate dividends are generally subject to ACT, a "group dividend election" can be made to avoid the ACT and the imputation of credits with respect to distributions between closely affiliated corporations. See Appendix B.

11.C ROLE OF THE CORPORATE ALTERNATIVE MINIMUM TAX

Under current law, the corporate alternative minimum tax (AMT) seeks to ensure that, in each taxable year, corporations pay a minimum amount of tax on their economic income. A corporation must pay the higher of the AMT or the regular tax liability on its alternative minimum taxable income (AMTI) for the taxable year. Congress adopted the corporate AMT system in 1986 partly in response to widely publicized reports of major companies not paying taxes in years in which they reported substantial earnings and, in some cases, paid substantial dividends to shareholders.²³

The imputation credit prototype retains the corporate AMT.²⁴ Because the imputation credit prototype described here does not substantially alter the current treatment of either retained or distributed preference income, the AMT would continue to serve its current function of limiting corporate tax preferences and ensuring that corporations continue to pay some minimum amount of tax on retained income.²⁵

Since some corporations are subject only to the AMT and pay no regular corporate tax for

long periods, the question whether the AMT should be considered taxes paid and added to the SCA is important. For these taxpayers, the corporate AMT is the only tax paid, and, despite the current law provisions that allow the AMT to be credited against regular corporate tax in subsequent years, it would not be realistic to view the AMT simply as an advance deposit against ultimate corporate tax liability. We therefore treat the AMT in the same manner as regular corporate taxes paid. Thus, each dollar of AMT is converted into an SCA balance using the formula set forth in Section 11.B.²⁶ At the corporate level, any AMT paid would continue to be carried forward and credited against regular corporate tax in subsequent years, but regular corporate tax that is not paid by reason of the credit allowed for AMT previously paid would not be treated as tax paid. Accordingly, under the prototype, both regular taxes paid and AMT paid would be added to the SCA, and regular tax that is offset by the AMT credit would not be added to the SCA. If the AMT were not treated as taxes paid, distributions attributable to earnings that have been subject to AMT would be taxed twice, and a higher rate of tax would be imposed on preference activities. However, if distributions are made with shareholder credits arising from payments of AMT, such reductions in the SCA will reduce the corporation's ability to pay franked dividends when the AMT reverses and the corporate tax is reduced by AMT credits.

11.D FOREIGN SOURCE INCOME

In general, the prototype permits a U.S. corporation to claim foreign tax credits against corporate tax to the same extent as under current law. A U.S. corporation, however, would increase its SCA only by the amount of the residual U.S. tax (if any) imposed on its foreign source income. Distributions out of foreign source income shielded from U.S. corporate tax by foreign tax credits generally would be unfranked and, therefore, would be taxed at the shareholder level as under present law.

Thus, U.S. corporate shareholders owning less than 10 percent of a foreign corporation's voting

stock (the threshold requirement for claiming an indirect foreign tax credit under IRC § 902) would include in income, as under current law, dividends from the foreign corporation and claim a foreign tax credit for foreign withholding taxes. The corporate shareholder, however, would not add foreign income taxes paid by the foreign corporation or foreign withholding taxes on dividends to its SCA.

U.S. corporate shareholders owning at least 10 percent of a foreign corporation's voting stock would continue to include in income dividends from the foreign corporation and to claim a foreign tax credit for foreign withholding taxes on the dividend as well as foreign taxes paid by the foreign corporation. The corporate shareholder would add to its SCA only the U.S. residual tax, if any, paid on the dividend.²⁷

U.S. corporations with foreign branch operations would continue to be subject currently to U.S. tax on their worldwide income with a credit for foreign income taxes imposed thereon.²⁸ As with earnings of foreign subsidiaries, the U.S. corporation would increase its SCA only by the amount of any residual U.S. tax imposed on the foreign source income.

The imputation credit prototype does not change the treatment of individuals owning stock in foreign corporations. U.S. individual shareholders would continue to include in income dividends received and claim a foreign tax credit for any foreign withholding taxes imposed on the dividend. Individual shareholders would not receive an imputation credit for any income taxes paid by the foreign corporation.

In connection with treaty negotiations with countries that have imputation credit systems, the United States may wish to consider whether imputation credits for foreign taxes paid could be extended on a bilateral basis. Serious complexities would arise, however, in applying at the individual shareholder level the foreign tax credit limitations that are designed to ensure that foreign taxes paid are not credited against U.S. taxes at tax rates in excess of the applicable domestic tax rate.

On the other hand, ignoring the foreign tax credit limitation would reduce or eliminate U.S. taxes on U.S. source income, in effect transferring domestic revenues to foreign treasuries. A possible approach might be to extend the benefits of foreign corporate taxes paid to individual U.S. shareholders in the form of a shareholder level exclusion of foreign source corporate income. Even in this event, care would need to be taken to avoid inappropriate results.²⁹

11.E CHOICES REQUIRED BECAUSE OF SHAREHOLDERS WITH DIFFERENT RATES

Tax-Exempt Shareholders

As discussed in Chapter 6, this Report recommends that integration retain the current treatment of corporate income distributed to tax-exempt shareholders.³⁰ Corporate taxable income would continue to bear one level of tax. Corporate preference income and foreign source income shielded from U.S. corporate tax by foreign tax credits would continue to be exempt from U.S. tax at both the corporate and shareholder level to the extent distributed to tax-exempt shareholders. Imputation credits could not be used against UBIT liability.³¹

Foreign Shareholders

Chapter 7 of this Report recommends that foreign shareholders making inbound investments should not by statute receive the benefits of integration available to U.S. shareholders, and that any such extension of the benefits of integration should occur only through treaties. Accordingly, the imputation credit prototype does not permit foreign shareholders to claim a refund of the imputation credit or to use the credit to offset withholding tax imposed on dividends. The 30 percent statutory withholding tax would continue to apply to the amount of the dividend without gross up, subject to applicable treaty reductions. The branch profits tax would continue to apply to U.S. branches of foreign corporations. Thus, a U.S. branch of a foreign corporation would be

taxable on its income effectively connected with a U.S. business (subject to any available treaty exemptions), and the branch's earnings withdrawn from the U.S. business (the dividend equivalent amount) would be subject to the branch profits tax under IRC § 884(a) (as modified by any applicable treaty), without credit for U.S. taxes paid on effectively connected income.

Denying imputation credits to foreign shareholders follows the approach generally adopted by our trading partners that have integrated corporate tax systems. Although the imputation credit would not be available to foreign shareholders as a statutory matter, a dividend to a foreign shareholder would reduce the distributing corporation's SCA by the same amount as if the distribution had been to a taxable domestic shareholder.³²

Low-Bracket Shareholders

The imputation credit prototype uses a rate of 31 percent to compute the shareholder credit. Consequently, taxpayers subject to maximum tax rates below 31 percent would receive imputation credits on dividends received that may exceed the shareholder level tax that would otherwise apply to dividends received. Unlike the dividend exclusion or CBIT prototypes, no additional mechanism (such as addition of a credit) is required to adjust the tax burden to the shareholder's rate because the franking process provides the shareholder with the data necessary to compute shareholder level tax (the grossed-up income and credit amounts). The prototype allows these taxpayers to use excess imputation credits to offset tax that would otherwise apply to unfranked dividends or other sources of income. This feature of the imputation credit system produces an additional revenue loss in comparison to the dividend exclusion prototype. Taxpayers who could not fully use such credits against other income could not claim a refund of the excess credits.³³

11.F ANTI-ABUSE RULES

Adopting an imputation credit system in which imputation credits are not refundable to tax-exempt and foreign shareholders may create

incentives for taxpayers to "stream" fully franked dividends to taxable shareholders and unfranked dividends to tax-exempt shareholders.³⁴ Similar incentives arise under the dividend exclusion prototype, in which corporations would prefer to pay excludable dividends to taxable shareholders and taxable dividends to tax-exempt shareholders. Section 2.B discusses the anti-abuse rules we consider appropriate to limit streaming in the dividend exclusion prototype, and we would adopt similar rules in the imputation credit prototype. Thus, for example, a holding period requirement would have to be met for a taxpayer to claim an imputation credit.

In general, opportunities for streaming would be reduced if the imputation credit prototype required corporations to pay fully franked dividends until their SCA balance were exhausted. In that case, the imputation credit system would be substantially similar to the dividend exclusion system, which requires corporations to pay excludable dividends to the extent of their SCA balances.³⁵

Application of this rule in an imputation credit context, however, could interfere with corporate dividend practices by making the franking level (and hence shareholder tax consequences) of dividend distributions dependent on taxable income. To permit corporations to smooth the pattern of dividends, including the pattern of associated credits, the prototype permits corporations to pay partially franked dividends. Using this flexibility, a corporation could reserve a portion of its SCA balance to pay future franked dividends.

Because the imputation credit prototype permits corporations to pay partially franked or unfranked dividends even when they have an SCA balance sufficient to frank the dividend fully, two additional anti-abuse rules would be required. First, to prevent excessive franking of dividends, the prototype limits the amount of credit that can be attached to a dividend. The imputation credits attached to any dividend should not exceed the maximum creditable tax on the pre-tax earnings that generated the dividend. See Section 11.B.

Second, the prototype requires corporations to frank all dividends paid during a year to the same extent. This rule prevents corporations from paying unfranked dividends on one class of stock held by taxable shareholders and unfranked dividends on another class of stock held by tax-exempt shareholders. This rule is essentially the same as that adopted by New Zealand.³⁶ This latter rule, while necessary to avoid distortion of corporate dividend payment practices, could give rise to significant complications for a corporation with multiple classes of dividend paying stock.

11.G STRUCTURAL ISSUES

Corporate Acquisitions

The imputation credit prototype retains the basic rules of current law governing the treatment of taxable and tax-free corporate asset and stock acquisitions. Adopting the imputation credit prototype would permit taxable asset acquisitions to be made with only a single level of tax. Corporate tax paid on gain recognized on the sale of assets would be added to the SCA and would create imputation credits to offset shareholder tax when the corporation liquidates and distributes the proceeds from the sale. Stock acquisitions may face a higher tax burden than asset acquisitions under distribution-related integration if capital gains on corporate stock that are attributable to retained earnings are taxed in full at shareholder rates. See Section 8.A. This problem could be mitigated by a dividend reinvestment option. See Chapter 9.

Nothing in the movement to distribution-related integration would require a fundamental change in the basic pattern of taxing qualifying corporate reorganizations. Current law treats a qualifying corporate reorganization as tax-free at the corporate level (with the target's tax attributes, including its asset basis, carrying over to the acquiror) and at the shareholder level. The policy underlying the reorganization provisions is that imposition of tax is inappropriate where a corporate reorganization merely effects a readjustment of shareholders' continuing interests in corporate property under modified corporate forms. This

policy applies equally under distribution-relation integration, because it reflects a judgment about when income should be recognized under a realization-based tax system that does not require corporate assets or stock to be marked to market, not a judgment about whether two levels of tax should be imposed on recognized corporate income.³⁷

Rules would be needed to divide a corporation's SCA when it engages in a divisive reorganization. Rules are needed to discourage the use of divisive reorganizations to isolate amounts in the SCA in one corporation for the benefit of one group of shareholders.³⁸ Current law rules generally provide that earnings and profits of the distributing corporation in a divisive reorganization that qualifies as a D reorganization under IRC § 368(a)(1)(D) are divided between the distributing corporation and the controlled corporation based on the relative fair market value of their assets. A similar rule could be adopted to govern the allocation of SCA balances in divisive reorganizations.

For the reasons set forth in Chapter 2, we do not urge any rules limiting the use of SCA balances following an ownership change. See "Anti-abuse Rules" in Section 2.B.

Earnings and Profits

The imputation credit prototype, like the dividend exclusion prototype, retains the current earnings and profits rules for determining when a distribution is treated as a dividend rather than a return of capital. See Section 2.F.

11.H EXTENDING THE IMPUTATION CREDIT PROTOTYPE TO DEBT

Adopting any of the methods of integrating the corporate and individual income taxes discussed in this Report would narrow significantly the differences in taxation of debt and equity. Under integration, only one level of tax generally would be imposed on corporate earnings distributed as dividends. Retaining the interest deduction also

ensures that no more than one level of tax is collected on corporate earnings distributed as interest. Accordingly, the introduction of integration, without any change in the rules for taxing debt, would create greater parity in the taxation of debt and equity.

Because the dividend exclusion and imputation credit prototypes are designed to retain the existing level of corporate taxes on equity capital supplied by foreigners and tax-exempt entities, however, some disparities will remain in the treatment of debt and equity capital supplied by those investors. Retaining the interest deduction in an integrated system would permit earnings that are used to pay interest to tax-exempt and certain foreign bondholders to continue to escape U.S. tax entirely.

Thus, for tax-exempt and foreign investors at least, the dividend exclusion and imputation credit prototypes generally maintain current law's bias in favor of debt financing. Eliminating this bias is a principal argument for CBIT, which represents a natural extension of the dividend exclusion prototype to debt and imposes tax once at the entity level. Equating the treatment of debt and equity in an imputation credit prototype would require a different approach—a bondholder imputation credit system.

Under a bondholder credit system with no corporate level deduction for interest, the mechanics would generally follow the rules applicable to dividends. Corporate tax paid on earnings used to pay interest or dividends would be passed through to bondholders and shareholders as imputation credits. Bondholders and shareholders would include in income the amount of the cash interest or dividend payments plus the imputation credits and could use the credits to offset tax on interest income.³⁹ Tax-exempt and foreign shareholders would not be entitled to claim refunds of imputation credits, and taxable shareholders could use excess credits to offset tax on other income but not to claim refunds.⁴⁰

A bondholder credit system differs in certain ways from CBIT, which equates the treatment of

debt and equity at the business, rather than at the individual, level. An imputation credit system would tend to impose taxation on the supplier of business financial capital rather than on the entity. The two approaches are similar when the business and its suppliers of capital would be taxed at the same rates but will diverge if the tax rate of the supplier of capital is different from the CBIT rate.⁴¹ Thus, for example, if both borrower and lender are taxable, but the lender's rate is less than the borrower's rate, CBIT will tax the interest income at the CBIT rate, while the bondholder credit system will generally tax the income at the lender's rate.⁴²

Although the bondholder credit system would generally mirror the imputation credit prototype detailed in this chapter, addition of a bondholder credit may require reexamination of the treatment of foreign investors. The issues would be similar to those posed in moving from the dividend exclusion prototype to CBIT. Retaining current law would require collecting two levels of tax on dividends and zero or one level of tax on interest. Such treatment would, however, violate the equality between debt and equity that is the goal of adopting a bondholder credit system. Accordingly, to maintain parity between debt and equity, imputation credits should not be refundable to foreign investors, but the 30 percent withholding tax now applicable to dividends and nonportfolio interest (and the branch profits tax) should be repealed.⁴³

11.I DIVIDEND REINVESTMENT PLANS (DRIPs)

Chapter 9 discusses how a corporation might use an elective DRIP in the dividend exclusion and CBIT prototypes to allow shareholders to increase share basis to reflect earnings that have been taxed at the corporate level. A DRIP minimizes the extent to which taxing capital gains on

sales of corporate stock imposes a second level of tax on such earnings. See Chapter 8.

An elective DRIP could be made a part of an imputation credit prototype as well. A corporation would be permitted to declare deemed dividends up to the amount that can be fully franked by the balance in its SCA.⁴⁴ Shareholders would include in income the amount of the deemed dividend plus the associated imputation credit and could use the credit to offset tax due.⁴⁵ Share basis would increase by the amount of the deemed dividend.⁴⁶

Permitting a DRIP in the imputation credit prototype requires one additional rule to limit streaming of credits. As discussed in Section 11.F, the prototype limits streaming through cash dividends by requiring each corporation to frank all cash dividends paid during a year in the same proportion (the consistency rule).⁴⁷ The consistency rule is necessary because the imputation credit prototype, unlike the dividend exclusion and CBIT prototypes, permits corporations to determine the extent to which dividends (and interest payments, if a bondholder credit were adopted) are franked.

Absent additional restrictions, a corporation could use a DRIP to stream by paying unfranked cash dividends on classes of stock held by tax-exempt shareholders and fully franked deemed dividends on classes of stock held by taxable shareholders. To limit this practice, the prototype permits corporations to use an elective DRIP only if all cash dividends paid during some defined period before and after the deemed dividend are fully franked. This rule effectively extends the consistency rule to deemed dividends and limits the benefits of a DRIP to corporations that pay insufficient cash dividends to carry out its SCA balance—not those that underfrank cash dividends and distribute the remainder of the SCA through the DRIP.⁴⁸

CHAPTER 12: OTHER PROPOSALS TO REDUCE THE BIAS AGAINST CORPORATE EQUITY

12.A DIVIDEND DEDUCTION

We have not developed a dividend deduction prototype in this Report. However, the 1984 Department of the Treasury Report on tax reform recommended a 50 percent dividends paid deduction and the President's 1985 tax proposals included a 10 percent deduction.¹ A dividend deduction system produces results contrary to our general recommendations that integration not be the occasion for eliminating the corporate level tax imposed under current law on distributions to tax-exempt and foreign shareholders.² We view these general recommendations as important in ensuring that corporate income distributed to such shareholders continues to bear tax similar to that under current law. In addition, a dividend deduction proposal would be substantially more expensive than either a dividend exclusion or imputation credit system.³

The primary arguments for a dividend deduction approach are that it results in equivalent treatment for debt and equity and that it taxes distributions at the shareholder rate. The first claim is not strictly accurate to the extent that interest is deductible as it accrues while dividends are deductible only when paid.⁴ The second claim is correct but will exacerbate the bias toward distribution of earnings inherent in any distribution-based system, particularly when, as under current law, the corporate rate exceeds individual rates.

If policymakers were to select a dividend deduction system, it would be important to incorporate a mechanism analogous to the EDA of the dividend exclusion prototype to limit the amount of deductible dividends to the amount on which U.S. corporate tax has been paid.⁵ Absent such a restriction, a dividend deduction system would allow a deduction for dividends paid out of preference income and foreign source income sheltered

from U.S. tax by foreign tax credits. Allowing such deductions would not simply eliminate corporate taxes paid on that income (because, by definition no U.S. corporate taxes have been paid) but instead would permit the corporation to shelter earnings on which U.S. corporate tax would otherwise be imposed.⁶

It is not altogether clear how a dividend deduction system would treat foreign shareholders. Presumably, the deduction would be allowed for dividends paid to foreign shareholders, and the 30 percent withholding tax on dividends would be retained, although treaty provisions reduce the withholding tax to as low as 5 percent. Similarly, the branch profits tax on domestic branches of foreign corporations presumably would be retained with a modification to provide parity with the dividend deduction for domestic corporations.

Since dividends would be taxable only to the recipient in a dividend deduction proposal, there would be no dividends received deduction for corporations.⁷ A DRIP probably would not be appropriate in a dividend deduction approach because it could result in allocation of taxable income to shareholders without receipt of cash sufficient to satisfy the shareholder's resulting tax liability.⁸

While we have not developed a dividend deduction prototype in this Report, we review below two proposals for dividend deduction systems, one made in 1991 by the Capital Taxes Group of the Institute for Fiscal Studies in the United Kingdom and one made in 1989 by the Reporter for the American Law Institute's Federal Income Tax Project (Subchapter C). These proposals are not presented here as fully as other integration prototypes but are included as related proposals intended to improve the neutrality of the tax treatment of debt and equity finance for corporations.

12.B INSTITUTE FOR FISCAL STUDIES PROPOSAL

The Capital Taxes Group of the British Institute for Fiscal Studies (IFS) proposed the introduction of an "Allowance for Corporate Equity" (AFCE).⁹ Under this approach, a corporation would be allowed to deduct in its calculation of taxable income an allowance based on shareholders' equity employed in the business. The intent of this proposal is to enhance neutrality by treating equity finance like debt finance.¹⁰

The deductible AFCE allowance would be equal to the product of "shareholders' funds" (generally the corporation's total equity capital)¹¹ and an "appropriate nominal interest rate." The interest rate used for calculating the AFCE would be set by the government for all corporations and, in general, should reflect a normal market rate of return. The IFS recommends that the rate be established each month equal to the rate for a medium-term government security. Because firms with risky opportunities or facing informational imperfections in capital markets would have costs of funds significantly higher than the allowable rate for deduction, mature, less risky firms would receive a greater relative benefit from the AFCE system.

The AFCE system prevents double counting of intercorporate investments by reducing shareholders' funds by the amount of funds invested in other firms. It also prevents allowance of both an interest deduction and an AFCE allowance with respect to intercorporate equity investments funded by debt by imputing a negative AFCE adjustment to the borrower.¹²

The AFCE proposal is designed to operate in a classical corporate tax system to reduce the tax bias against equity finance. The IFS proposal is not a true integration proposal. Corporate equity income in excess of the AFCE allowance would remain subject to a second level of tax when such income is distributed or when shareholders are taxed on capital gains attributable to such income. As a consequence, the IFS proposal would not

eliminate the bias against the corporate form and the incentive to retain rather than distribute corporate equity income in excess of the AFCE allowance.

12.C AMERICAN LAW INSTITUTE REPORTER'S STUDY DRAFT

In 1989, the Reporter for the American Law Institute (ALI) Federal Income Tax Project (Subchapter C) outlined a set of four proposals for reform of the corporate tax.¹³ The Reporter's Study Draft proposals are not integration proposals. They are intended to revise the classical corporate tax system to reduce the tax bias against new equity finance and to eliminate the tax bias against dividend distributions relative to non-dividend distributions, e.g., share repurchases. The latter goal would be accomplished by increasing tax rates applied to nondividend distributions rather than by decreasing tax rates applied to dividend distributions.

The Reporter's Study Draft advances two proposals to reduce the tax bias against new equity finance. First, corporations would receive a deduction for dividends paid on new equity capital (Qualified Contributed Capital or QCC).¹⁴ The deduction would be equal to a prescribed interest rate multiplied by net contributed capital less extraordinary dividends and nondividend distributions. The prescribed interest rate for deductions would be limited to the long-term borrowing rate specified under IRC § 1274, plus 2 percent.

Second, the Reporter's Study Draft would limit corporate interest deductions to the net amount of debt capital raised. In particular, no deduction would be allowed for interest on "converted equity," including debt incurred to finance an extraordinary dividend or stock acquisition, share repurchase, or any other nondividend distribution. The deduction allowed for interest on any other type of debt also would be limited to the long-term borrowing rate specified under IRC § 1274 plus 2 percent.

Taken together, these two proposals are designed to reduce the tax bias against new equity finance.¹⁵

The concern over the tax bias against dividend distributions relative to nondividend distributions motivates the other two proposals in the Reporter's Study Draft. First, the ALI Reporter proposes a "minimum tax on distributions" (MTD) equivalent to 28 percent of the gross amount of any extraordinary dividend or nondividend distribution, including distributions in redemption and liquidation and any purchase of shares. The tax would be collected by the distributing corporation, and would be creditable against a shareholder's tax on the distribution (but not against other income).¹⁶

Second, in the case of direct investments in a corporation by another corporation, the Reporter's Study Draft would treat a purchase of shares in a corporation by another corporation that owns at least 20 percent of the shares as a nondividend distribution subject to the MTD and other applicable rules. However, intercorporate dividends

would not be subject to tax, and basis adjustments similar to those provided under the current consolidated return regulations would be made. For portfolio investments, on the other hand, the investor corporation would be taxed in full like any other investor and no dividends received deduction would be allowed.¹⁷

The Reporter's Study Draft proposals would reduce the tax bias against new equity finance, while maintaining the tax bias against dividend payments from accumulated equity. The economic assumptions underpinning the ALI proposals seem to be those of the "new view" of dividend taxation, in which the taxes on dividends from accumulated equity are capitalized into share values and do not affect dividend decisions. As a result, extending dividend relief to accumulated equity is perceived as conferring a windfall gain to "old" equity, since under the assumptions of the new view, dividend distributions are unavoidable. As discussed in Chapter 13, we accept the "traditional view," in which reducing the tax burden on dividends generally increases dividend payouts and economic efficiency.¹⁸

PART V: ECONOMIC ANALYSIS OF INTEGRATION

CHAPTER 13: ECONOMIC EFFECTS OF INTEGRATION

13.A INTRODUCTION AND SUMMARY

This chapter presents quantitative estimates of the impact of the integration prototypes developed in the Report on the allocation of resources, corporate financial policy, portfolio allocation, and Federal tax revenues.

We examine the effects of each integration prototype using four alternative models of the economy and two assumptions about how integration would be financed. Results differ from model to model, as well as by financing assumption, but, in general, the integration prototypes reduce the tax penalty on corporate investment and encourage capital and other resources to flow into the corporate sector. Depending on the prototype, model, and financing assumption, this capital expansion ranges from a 2 to 8 percentage point increase in the capital stock used in the corporate sector. In dollar terms, this ranges approximately from \$125 billion to \$500 billion in additional corporate capital. CBIT generally produces the largest expansion of corporate capital, but in several of the calculations, the more traditional integration prototypes yield a similar expansion.

In addition, each of the integration prototypes generally encourages corporations to use less debt. Estimated debt to asset ratios decrease by 1 to 7 percentage points, depending upon the model, financing assumption, and prototype. CBIT is the best prototype for encouraging firms to reduce their relative use of debt.

The integration prototypes encourage corporations to increase the portion of earnings distributed as dividends. Both CBIT and the shareholder allocation prototype promote efficient corporate dividend policy by almost entirely eliminating taxes as a consideration. In contrast, the distribution-related prototypes encourage firms to pay out more of their earnings as dividends than may be

optimal. Depending on the model, financing assumption, and prototype, nominal dividend payout ratios would increase by 2 to 6 percentage points.

By shifting resources into the corporate sector, reducing corporate borrowing, and encouraging dividends, the integration prototypes generate changes in economic welfare. Overall, the prototypes improve economic welfare in all calculations, and the improvement ranges from an amount equivalent to 0.07 percent of annual consumption (total consumer spending on goods and services) to an amount equivalent to 0.73 percent of consumption, or from approximately \$2.5 billion to \$25 billion per year. CBIT or shareholder allocation prototypes generally contribute the greatest increases in welfare, but the distribution-related prototypes also produce significant economic welfare gains. Much of the variation in results reflects differences in the models used to analyze the prototypes or differences in financing assumptions, rather than differences among prototypes. Indeed, one striking feature of the calculations is that within each model, and for a given financing assumption, structurally different prototypes often have similar overall effects on economic well-being. These results accord with the general economic equivalence of basic integration prototypes in the absence of distortions induced by rate differentials demonstrated in Appendix C.

The results summarized above are generated from models of the economy that abstract from international capital flows. While internationally mobile capital can cause tax law changes to have different effects from those predicted by closed-economy models, there is no consensus among economists regarding the sensitivity of international flows of debt and equity capital to changes in net returns, especially for a country such as the United States with a very large domestic economy. Consequently, the Report does not

present a detailed quantitative analysis of integration in an international context, although the effects of the integration prototypes on international capital flows and portfolios are discussed in Section 13.F. The distribution-related and shareholder allocation prototypes are estimated to have only a small effect on the net capital flows into the United States; the effects of CBIT are more uncertain. Each integration prototype, however, may change substantially the composition of international portfolios, even if net flows of capital are not greatly affected.

Section 13.B analyzes the principal economic issues surrounding the debate over the benefits of corporate tax integration, building on the discussion in Chapter 1. Section 13.C describes important methodological issues in modeling effects of integration on economic efficiency. Section 13.E evaluates effects of integration on the cost of capital and corporate financial decisions. A more complete analysis of economic effects of integration using a set of computable general equilibrium models is provided in Section 13.F. Issues relating to distributional implications of integration are discussed in Section 13.G. Finally, estimates of integration prototype's effects on Federal tax revenue are presented in Section 13.H.

13.B CORPORATE TAX DISTORTIONS: ECONOMIC ISSUES

Bias Against Investment in Corporate Form

The waste of economic resources from the tax-induced misallocation of capital between the noncorporate and corporate sectors was the original focus of economists' criticism of the classical corporate income tax system. Beginning with Harberger (1962), economists have argued that a classical corporate tax system increases the share of capital allocated to the noncorporate sector, thereby raising pre-tax required rates of return in the corporate sector.

Harberger's model divides the economy into two sectors, a corporate sector and a noncorporate

sector. The Harberger model has four central assumptions. First, in both sectors, output is produced by combining capital and labor. Second, the total amounts of capital and labor supplied in the economy are fixed. Third, although the total amounts of capital and labor supplied are fixed, the amounts supplied to each sector can vary. Fourth, suppliers of capital and labor seek to maximize their incomes.

Taken together, the third and fourth assumptions above have an important implication: In the long run, the net return on the last dollar of capital in each sector must be the same, since suppliers of capital invest their capital where its net return is highest. As a result, capital will flow out of the sector with a low net return and into the sector with the high return. This flow continues until net rates of return are equalized between the two sectors.

Over the years, more sophisticated versions of Harberger's model have been developed to examine more carefully the costs of the economic distortions related to the corporate income tax. One important step was the development of more complex models with many sectors of the economy.¹ Most recently, researchers have noted that economic distortions from the corporate income tax are greater than earlier estimates to the extent that the tax distorts the relative importance of corporate and noncorporate producers within an industry.² Costs associated with this additional margin of distortion arise when corporate and noncorporate producers within an industry have different advantages, for example, greater ability to exploit scale economies by corporations or greater entrepreneurial skill in noncorporate organizations.³

Current U.S. tax law distorts the allocation of investment away from the economy's corporate sector and into the noncorporate sector whenever investors require equity to finance investment. The corporate cost of equity capital generally exceeds the noncorporate cost of capital because of the two-level tax on corporate equity income. Consequently, corporate investment projects require a higher pretax rate of return than projects

of noncorporate business enterprises. Therefore, some corporations fail to undertake investments that would be profitable if the tax burden on corporate and noncorporate investments were the same. Moreover, for some business enterprises, the added corporate taxes exceed the benefits of incorporation, and such businesses forego the advantages of incorporation and choose instead to operate as partnerships or sole proprietorships.⁴

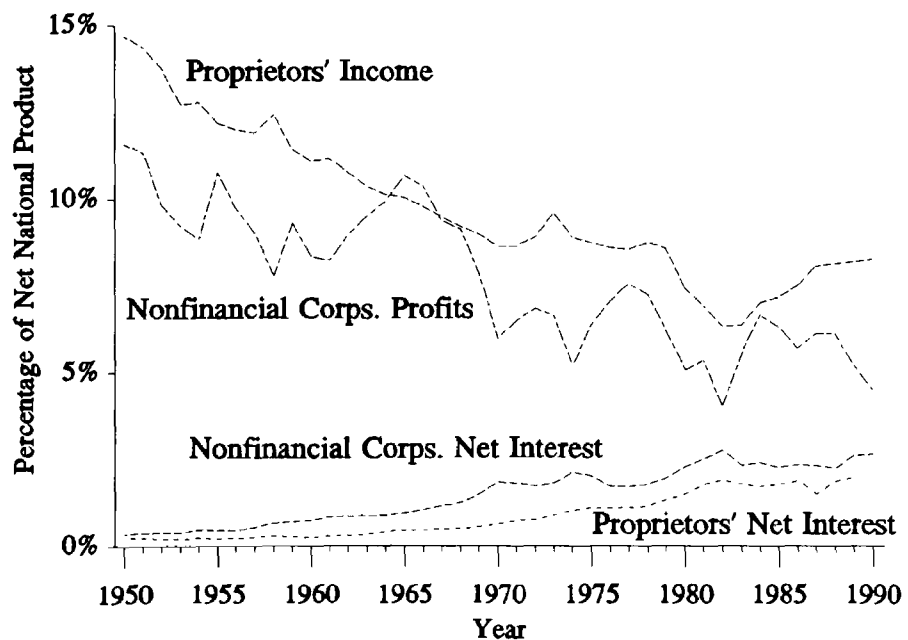
While the classical system may encourage corporations to operate in noncorporate form, aggregate data to date do not document a long-term trend of shifting economic activity away from the corporate sector. Figure 13.1 shows that incomes of owners of noncorporate businesses have fallen as consistently as a share of net national product as have corporate profits. By contrast, the total income (profits, interest, rents, and wages) generated in the corporate sector has increased slightly, from an average of 50 percent of net national product in the 1950s to an average of 53 percent in the 1980s (Figure 13.2). Other long-term comparisons of corporate activity to the general economy also fail to present any general pattern of disincorporation.⁵ However, data for the past few years (some of it preliminary) does suggest reduction in the size of the corporate sector relative to the overall economy and to the noncorporate sector.⁶

Subchapter S corporations have accounted for an increased share of corporate profits and have contributed to the declining role of the corporate income tax, particularly since 1986. The Subchapter S Revision Act of 1982 increased the attractiveness of S corporations and led to an expansion of S corporation activity. However, in the 4 years following the 1982 amendments, S corporation

net income accounted for only 3 percent of total corporate net income, up only slightly from 2.1 percent in the previous decade. Data for 1987 and 1988, in contrast, indicate a substantial increase in S corporation net income to 8.6 percent of all corporate income in 1987 and 9.5 percent in 1988.⁷ This increased S corporation activity seems to be a response to the 1986 Act's inversion of the top individual and corporate tax rates and repeal of the capital gains rate preference.⁸

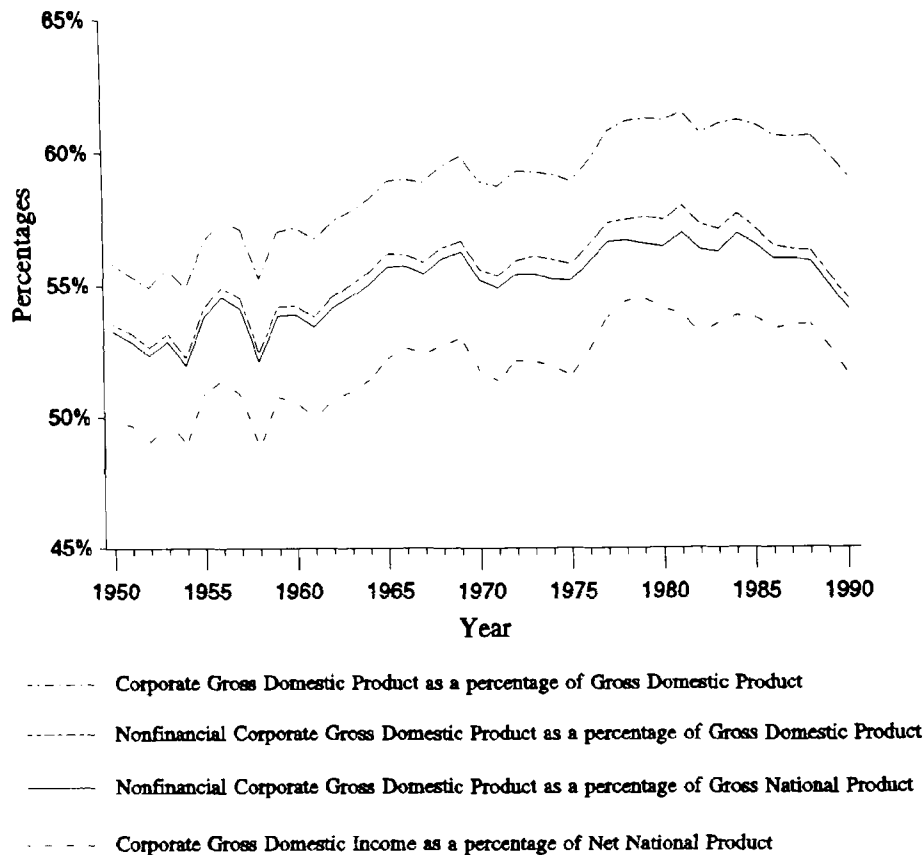
A measure of the bias against equity investment in a corporation that pays dividends is the extent to which the combination of the corporate tax rate on earnings and the individual tax rate on dividends exceeds the individual tax rate on business income. In the case of equity investments in a corporation, retained earnings are taxed ultimately at the shareholder level as capital gains. Accordingly, the measure of the bias against equity investment in the corporate sector in that case is the extent to which the combination of the corporate tax rate and the individual capital gains rate exceeds the effective individual tax rate on business income.

Figure 13.1
Profits of Nonfinancial Corporations,
Proprietors' Income, and Net Interest as a
Percentage of Net National Product, 1950-1990



Source: National Income and Product Accounts, Bureau of Economic Analysis, U.S. Department of Commerce.

Figure 13.2
Measures of Corporate Activity in the Economy
1950-1990



Source: National Income and Product Accounts, Bureau of Economic Analysis, U.S. Department of Commerce.

Assuming a positive effective corporate tax rate, the classical system always creates a bias against investing in equity in a corporation that distributes all current earnings relative to a non-corporate investment. If the corporate tax rate were zero, corporate earnings would be taxed only at the shareholder rate, and therefore the bias against corporate equity would be eliminated.⁹ That the corporate rate currently exceeds the individual rate does not create a new bias; it merely exacerbates a bias that is present whenever all current earnings are distributed and the corporate rate exceeds zero, regardless of its relationship to the individual rate.

For equity investments in a corporation that retains earnings, differences among tax rates may reduce, eliminate, or even reverse the bias against

corporate investments. The overall effect depends upon whether the combination of the corporate tax rate and the effective capital gains rate is greater than, equal to, or less than the individual tax rate on business income. Even when realized capital gains are taxed at the same rate as ordinary income, the effective capital gains rate is generally lower than the statutory rate, because the capital gains tax can be deferred until gain is realized through a sale or exchange.¹⁰ In an extreme case, if the combination of the corporate tax rate and capital gains rate is lower than the individual rate, the classical system may actually create a bias in favor of investing in corporate equity.¹¹ Currently, however, even a full exclusion from tax of capital gains on corporate shares would

generally not eliminate the tax system's bias against equity investment in the corporate sector because the corporate rate exceeds the top individual rate.

Two other features of the tax system currently reduce the tax bias in favor of noncorporate investments. First, the benefits of accelerated depreciation are somewhat greater for corporations, because corporate tax rates tend to exceed individual tax rates on shareholders and on non-corporate businesses. Second, to the extent that corporations finance investments through debt, the relative tax advantage afforded noncorporate firms is diminished. Considering only tax factors, corporate and noncorporate entities face the same cost of debt financed capital. Thus, to the extent corporations finance new investment with debt,

the difference in tax burden for total investment, both debt and equity financed, will be reduced.

Bias Against Equity Finance

The Tax Bias Against Equity

The source of the bias against equity financing is similar to the source of bias against corporate investment described in the preceding section.¹² An investment in corporate equity is subject to tax once at the corporate rate and again at either the individual rate or the effective rate on capital gains. In contrast, interest earned on debt, like income from an unincorporated business, is subject to tax only at the investor's rate. Consequently, equity funded projects generally require a higher pretax rate of return than projects financed with debt.¹³

Nontax Benefits and Costs of Debt Finance

Chapter 1 discussed important nontax and tax considerations in corporate borrowing decisions. Central to the argument that the tax bias against equity finance distorts corporate financing decisions is the existence of nontax costs and benefits associated with corporate debt financing. If nontax costs of debt are significant, losses in economic efficiency can accompany the greater debt levels resulting from the tax bias against equity finance.

As corporate borrowing remained high during the 1980s, many nontax arguments for high debt financing appeared. Analysts most sanguine about the rise in debt financing typically maintain that debt is desirable because it gives suppliers of capital an indirect means to monitor the activities of managers. Their reasoning is that the need for supervision results from the separation between ownership and management that is characteristic of the traditional corporate structure. A conflict between ownership and management can emerge if it is difficult for suppliers of capital to observe and evaluate the activities of entrenched managers. In this kind of environment, management's self interest may not always coincide with efficiently operating the business enterprise—with maximizing value.¹⁴

In practice, increased debt financing may be an ineffective way to improve managerial incentives. It works best when most of the variation in an enterprise's cash flow is specific to the firm. It works poorly when most of the variation is common across business enterprises (as with industry-wide or business cycle fluctuations).¹⁵ Thus, even when there are incentive benefits from debt, the most efficient financial arrangement will involve both debt and equity, with equity serving as a cushion against economywide fluctuations in profitability.

Many academic and business economists have stressed the nontax costs of a declining reliance on equity finance. One concern is that the costs of financial distress and bankruptcies could be greater than in the past, more businesses with high debt financing. Firm level data illustrate the reason for this concern. Warshawsky has calculated weighted average, median, and ninetieth percentile values of (market-value) debt to asset ratios for firms in the COMPUSTAT Industrial and Full Coverage samples, over the period from 1969 to 1988.¹⁶ As with the aggregate data discussed in Chapter 1, all statistics for the subsamples indicate a rising debt to asset ratio, though much of the increase occurred before 1980. This measure can, of course, be distorted by large swings in the value of equities (as, for example, in 1973 and 1974). The debt to asset ratio has, however, climbed since 1983 in spite of significant increases in the value of equity.¹⁷ Warshawsky also calculated the ratio of interest payments to cash flow for the individual business enterprises. Over the 1969-1988 period, the mean and median value of the ratio virtually doubled; the value for the ninetieth percentile firms more than tripled. Much of the change occurred during the 1980s. In addition, the average quality of publicly issued debt (as measured by bond ratings) declined steadily in the 1980s.

To put the macroeconomic concern in sharper perspective, Bernanke and Campbell considered the experiment of imposing a reduction in cash flows similar to those experienced during the 1974-1975 recession on a sample of firms with financial conditions corresponding to 1986 data.

The sample was drawn from Standard and Poor's COMPUSTAT file, and therefore consisted primarily of large firms. The simulations implied that a downturn like 1974-1975 would force more than 10 percent of the sampled firms into bankruptcy. Updates for later years in Bernanke, Campbell, and Whited and in Warshawsky yielded similar conclusions.¹⁸

What role have tax distortions played in tilting the balance between benefits and costs of different degrees of debt financing?¹⁹ Under a tax system that treats equity finance unfavorably, firms are induced to have less equity outstanding, thereby lowering their "equity cushion" against business cycle risk, and raising the chance of incurring costs of financial distress during a future downturn.²⁰ The tax distortion makes this decision rational for individual corporations but socially inefficient.

Bias Against Corporate Dividend Distributions

The current system of corporate income taxation also may distort a corporation's choice between distributing or retaining earnings and, if amounts are distributed, whether they are paid in the form of a nondividend distribution, such as a share repurchase. There are two alternative explanations in contemporary corporate finance—commonly known as the "new view" and the "traditional view"—of why corporations continue to pay dividends despite the high relative taxation of dividends compared with capital gains generated by reinvested earnings or share repurchases.²¹ The traditional view asserts that dividends offer special nontax benefits to shareholders that offset their tax disadvantage. For example, dividends may provide signals to investors about a corporation's relative financial strength or future prospects.²² Alternatively, high dividend payouts may reduce managerial discretion over internal funds (see the analogous discussion above of the incentive benefits of corporate debt financing). According to the traditional view, corporations set dividend payments so that, for the last dollar of dividends paid, the extra benefit of dividends equals their extra tax cost. Thus, the amount of

dividends paid out is expected to decrease as the tax burden on dividends relative to capital gains increases. Dividend taxes also raise the cost of capital (and thereby lower investment) to the extent that corporations pay out earnings as dividends. Thus, the traditional view argues that raising dividend taxes will lower the dividend payout ratio and incentives for real investment. Moreover, under the traditional view, the need to maintain dividend payments constrains the use of retained earnings as corporations' marginal source of equity financing for new investments; instead, corporations frequently must turn to new equity issues.

Under the new view, dividend payments offer no nontax benefits to shareholders relative to retentions.²³ The hypothesis further assumes that corporations have no alternative to dividends for distributing funds to shareholders. Given these assumptions, investor level taxes on dividends reduce the value of the firm, but do not affect the firm's dividend or investment policies. Since dividend taxes must eventually be paid, they are capitalized in share values, reducing share prices enough to compensate for the tax burden. In effect, a dividend tax acts as a lump-sum tax on equity existing when the tax is imposed, and on new equity contributions. Therefore, corporations prefer not to issue new shares to finance additional investment opportunities. Retained earnings and debt are preferred sources of funds. Dividends are determined as a residual after the firm undertakes all profitable investments. Consequently, a permanent change in the tax rate on dividends will not change a firm's investment policies or payout decisions.²⁴ Although the dividend tax does not affect investment incentives,²⁵ the capital gains tax affects investment incentives because retentions increase the value of a firm's shares and such appreciation is taxable as a capital gain.²⁶

The tax policy implications of the traditional and new views with respect to the taxation of corporate income are quite different. The new view assumes that the investor level taxes on distributions are capitalized into share values, with the consequence that (1) existing shares are

valued below the market value of corporate assets, so eliminating or reducing taxes on existing corporate assets would produce gains to current shareholders and (2) moving to a system that is more neutral in taxing retentions and distributions would not encourage corporations to pay more dividends.²⁷

In contrast, under the traditional view, where new funds rather than retained earnings provide the source of finance for additional investments by the corporation (1) shares should not sell at a price below corporate asset values despite the existence of the existing two level corporate tax system, so a major shift in the relative treatment of dividends and retentions should not create significant share price increases for current shareholders and (2) making the tax system more neutral between retentions and distributions would increase corporate dividend distributions and economic efficiency.²⁸

As discussed above, these different views have different theoretical implications about whether corporations will vary payout behavior in response to changes in the tax rate on dividends relative to the tax rate on capital gains. The traditional view regards differences in the tax rate on dividends relative to the tax rate on capital gains as a determinant of payout decisions; the new view does not. One way to resolve the controversy would be to determine how dividend payout ratios vary over time with the tax rate. Poterba has calculated that the average dividend payout ratio (the ratio of dividends to inflation-adjusted after-tax profits) for U.S. corporations was 0.46 in the 1950s, 0.40 in the 1960s, and 0.45 in the 1970s, but increased to 0.61 in the period from 1980 to 1986 during which the taxation of dividends was reduced relative to the taxation of capital gains.²⁹ Although this pattern tends to support the traditional view, it does not provide convincing evidence, because nontax factors also affect a corporation's dividend policy. Statistical analysis of the determinants of dividend payment policy is required to determine the independent effect of dividend taxes on corporate

payout behavior, and several studies have undertaken this task.³⁰ The studies use different data sources and methodologies, and estimates of the elasticity of the payout rate with respect to dividend taxation. Nevertheless, all of the studies conclude that dividend payout ratios do respond to changes in the tax rate on dividends.³¹ Thus, this type of empirical evidence is consistent with the traditional view.³²

Corporations also distribute significant amounts of earnings to shareholders by repurchasing shares. This is inconsistent with the assumption underlying corporate financial policy under the new view. The tax consequences of a nondividend distribution, such as through a share repurchase, are significant: The shareholder is able to recover at least a portion of the cost of the shares free of tax, and gain on the sale is taxed as capital gain, which may be taxed at a rate lower than the ordinary income tax rate on dividends.

Share repurchases have increased substantially in recent years. Shoven presents data suggesting that aggregate share repurchases increased from \$1.2 billion in 1970 to \$27.3 billion in 1985 (5.4 percent and 32.7 percent of dividends, respectively). Data presented by Poterba show a similar pattern. Share repurchases increased from \$1.8 billion in 1976 to \$43 billion in 1985 (5.0 percent of dividends and 50 percent of dividends, respectively).³³ Department of the Treasury calculations reveal that share repurchases rose from \$5.5 billion in 1980 (10 percent of dividends) to \$48.8 billion in 1985 (57 percent of dividends), peaking at \$65.8 billion in 1989 (47 percent of dividends). In 1990, corporate share repurchases totaled \$47.9 billion (34 percent of dividends).³⁴

To summarize, the principal distinction between the two views of corporate dividend policy for our purposes relates to their assumptions about nontax benefits of alternative corporate financial policies. The new view assumes that dividends offer no nontax value to shareholders relative to retained earnings. Underlying the traditional view is the idea that information and incentive

problems in financial markets make particular corporate financial policies valuable for nontax purposes.³⁵

The present U.S. tax system treats retained earnings more favorably than dividends. Alternatively, given the potential nontax benefits of dividend distributions, one might consider reversing this bias by imposing relatively higher taxes on retained earnings using, for example, an undistributed profits tax. However, this approach would disadvantage corporations facing high costs of external finance relative to internal finance for nontax reasons. Such financing cost differentials could arise from the transaction costs of issuing securities or from problems of asymmetric information between corporations and capital markets.³⁶

Effects on Savings and Investment

The corporate tax increases the tax burden on the returns from saving and investing. Taxes on capital income generally reduce capital formation. Because of the importance of international capital flows, which reflect the possibility of investing abroad if U.S. investment opportunities are not sufficiently attractive (or, conversely, the possibility of increased investment in the United States by foreign investors if opportunities are more attractive here), the corporate tax may have a larger effect on U.S. investment than on U.S. savings.

The magnitudes of tax-induced distortions of investment and savings decisions depend on (1) the size of the wedge between pre-tax and after-tax returns and (2) the responsiveness of savers and investors to changes in after-tax returns. The more responsive savers and investors are to changes in taxes, the larger the effect of a tax wedge of a given size.³⁷

In a closed economy, domestic saving equals domestic investment, and the average cost of capital summarizes tax incentives to save as well as to invest. International capital flows break the equivalence of domestic saving and investment, however. Consider the case of perfect international capital mobility. Domestic investment would be

governed by the pre-tax return needed to cover taxes and the worldwide opportunity cost of funds. At the same time, domestic saving depends on the after-tax return to investor, earned from investing at the world rate of return. Domestic investment would thus depend on domestic corporate level taxes, although domestic saving would depend only on domestic individual level taxes. More broadly, in the presence of international capital flows, the U.S. corporate income tax can reduce incentives to invest in the United States, even if it has a relatively small effect on saving by U.S. citizens.

13.C METHODOLOGICAL ISSUES IN ANALYZING THE ALLOCATION EFFECTS OF INTEGRATION

The Importance of Using a General Equilibrium Model

By distorting incentives, the classical corporate tax system produces an inefficient allocation of resources. The size of the inefficiency depends in part on how the households' and corporations' decisions respond to changes in the tax system. For example, the more responsive dividend distributions are to tax considerations, the greater the financial inefficiency induced by the double tax on dividends. The analysis of the economic effects of integration is complicated by behavioral effects in one market that can affect other markets. For example, if the corporate tax tends to drive capital out of the corporate sector, prices and rates of return in the noncorporate sector are affected.

Thus, to assess the economic consequences of integration, one must analyze how the various markets in the economy operate and interact with each other. Economists have responded to this challenge by constructing computer representations of the economy and using these representations to simulate how the economy would respond to various changes in the tax system. These representations of the economy are called computable general equilibrium (CGE) models.³⁸

The Advantage of Using Several Models

As with all economic models, the results generated by a CGE model depend on underlying assumptions about how the economy operates. Since there is no consensus regarding a single best set of assumptions, this Report analyzes integration proposals using four different CGE models. This procedure assures that the findings are not associated with a particular modeling strategy.³⁹

The general equilibrium models used to evaluate integration are detailed representations of the U.S. economy and its actual (and proposed) tax system. Nonetheless, all the models abstract from some important details of both the economy and the tax system. For example, none of the models captures effects from changes in the degree to which corporate preferences are passed through to shareholders. In addition, all the models focus on long-run results. Various transition issues, which might have important implications for economic behavior and for tax revenues, are not considered. This focus on the long run is correct, however, because the goal of achieving an improved long-term performance of the economy is the prime factor motivating a concern with integration. Nevertheless, short-run transition effects can be substantial.

The Importance of Replacement Taxes

Given current budgetary constraints, a complete analysis of the integration prototypes requires viewing integration as a revenue neutral tax reform, including both direct tax changes and secondary changes required to maintain the same total revenue yield for the government.

We do not recommend in this Report specific changes in the tax system to finance integration. Nonetheless, to avoid confusing the results of the simulation analysis by introducing changes in government spending on goods and services, some form of replacement taxes must be specified to hold government revenue constant after the introduction of the integration prototypes. In part because of the arbitrary nature of choosing

replacement taxes, we consider two types of replacement taxes: (1) lump-sum taxes and (2) adjustments to statutory tax rates on capital income. Both the size of each prototype's economic effects and the ranking of prototypes by their relative impact may depend on the form of replacement taxes chosen.

Lump-sum taxes are hypothetical, unavoidable taxes. That is, taxpayers cannot change their tax liability under such a tax by changing behavior. As a consequence, by definition lump-sum taxes do not distort economic decisions. Though they are commonly used in academic studies of economic efficiency, lump-sum replacement taxes have an important drawback for modeling integration prototypes. They can bias comparisons among prototypes in favor of the prototype that loses the most revenue, because the efficiency gain from replacing distorting taxes on capital income with nondistorting, lump-sum taxes increases with the amount of revenue that must be replaced. This effect is important in an analysis of integration because the prototypes have disparate revenue costs. Compared to the actual gains that might be realized from integration, the calculations based on lump-sum replacement taxes can both overstate the size of the gain realized from each revenue losing prototype and produce a misleading ranking of prototypes. However, because not all distortions are analyzed, e.g., the "lock in" of capital gains and distortions of intertemporal consumption decisions are ignored, the lump-sum calculations do not necessarily generate efficiency gains that exceed the true gains. In addition, since CBIT raises revenue, results from the lump-sum replacement may understate its true gain.

Because of the problems with lump-sum replacement taxes, calculations also are performed holding government revenue constant by proportionately increasing or reducing all tax rates on capital income. In these calculations, the tax rates applied to corporate income, noncorporate equity income, dividends, capital gains, interest, and home mortgages are increased or reduced by an amount sufficient to hold government revenue constant at its current law level. Calculations

using scaled tax rates offer an important advantage over those based on lump-sum replacement taxes: The scaled-tax-rate calculations raise replacement revenue (and distribute excess revenue) by raising (or lowering) taxes that distort economic decisions, and so reduce the bias in favor of revenue losing tax changes. Nonetheless, these calculations are not definitive. In particular, to the extent that the integration prototypes could be made revenue neutral by more efficient tax changes, the actual economic welfare gains may be larger than those obtained in our scaled tax rate calculations.

Because each of the CGE models provides only a limited picture of the economy, the ability of these models is to simulate the revenue consequences of each of the prototypes is somewhat restricted. In particular, none of the models provide an adequate treatment of the financial services industry, and indeed only the Portfolio Allocation model (described in Section 13.F) can account for shifts in the ownership of the various financial instruments issued by businesses and governments. Even this model, however, tends to adopt a mechanical approach to the arbitrage possibilities possible under the different integration prototypes; in contrast, the revenue estimating models recognize that non-tax factors limit actual shifts in asset holdings. Thus, requiring that any loss (or gain) in revenues be made up with a positive (or negative) replacement tax also reduces any disparities in the results of the different models that would otherwise arise from differences in anticipated revenues.

The analysis presented in this Report focuses on the scaled-tax-rate calculations, but results based on the lump-sum replacement mechanism also are presented.

13.D OVERVIEW OF THE INTEGRATION PROTOTYPES

The basic features of the integration prototypes that are incorporated in the CGE models are reviewed below. The actual prototypes are described in more detail in Chapters 2, 3, 4, and 11 of this Report. In particular, it should be noted

that the CGE models generally do not capture the investor level tax imposed when distributions are made from tax preference or foreign-taxed income.

Distribution-Related Integration

Under the distribution-related prototypes, corporate earnings are taxed at the corporate level, but dividends are excluded at the shareholder level (dividend exclusion system), or shareholders receive a credit for the corporate tax paid on distributed income (imputation credit system). Under these prototypes, the bias against corporate equity investment is reduced to the extent that returns are paid out as dividends; similarly, the relative bias against equity relative to debt finance is reduced to the extent earnings are distributed as dividends. Distribution-related integration, in principle, can create a tax bias for or against dividends, depending on the values of the corporate tax rate, shareholder tax rate, and accrual-equivalent capital gains tax rate. The prototypes assume that the current corporate and individual tax rates are maintained. Thus, it is likely that distribution-related integration would increase dividend distributions.

Dividend Exclusion. The dividend exclusion prototype applies the corporate tax rate of 34 percent to both distributed and retained income, but eliminates the second shareholder level tax on dividends paid from earnings taxed at the corporate level.

Imputation Credit. Relief from the corporate income tax is provided to the extent that corporate earnings are distributed as dividends. This relief takes the form of a tax credit available to shareholders. The nonrefundable tax credit is calculated at a 31 percent rate, so that it does not offset completely the corporate income tax paid on distributed earnings.

Shareholder Allocation Integration

The shareholder allocation prototype adopts a "modified conduit" approach. Under a pure conduit approach, corporations would be treated

like partnerships, so the corporate level tax would be eliminated and all income and expenses would be imputed to shareholders, who would then include the income and expenses in their own tax liability. Shareholders would adjust their basis in shares upward by the amount of net income imputed to them, and reduce their basis in shares downward by the amount of net losses imputed to them and by the amount distributed to them by the corporation.

The modified conduit approach taken in the shareholder allocation prototype differs from the pure conduit approach. For example, the prototype imputes net income to shareholders, but not net losses. In addition, the prototype retains the corporate tax at a rate of 34 percent, but credits the shareholder with the payment. This tax is creditable against shareholder tax liability at a rate of 31 percent, but it is not refundable. The shareholder allocation prototype reduces but does not eliminate the distortions of organizational form and corporate financial policy under current law.

CBIT

The CBIT prototype imposes a uniform tax rate of 31 percent on returns to both debt and equity generated by all business. Because the tax would be collected at the business entity level, interest and dividends would be untaxed to the recipient. Under CBIT, interest on U.S. Government debt would remain taxable. Home mortgage interest would remain deductible by the borrower and taxable to the lender.

Investments in corporate equity paying current dividends would not be penalized under CBIT because, as modeled, all business entities other than very small entities, regardless of form, would be subject to the same tax rate. Under CBIT, neither interest nor dividends would be deductible at the business level or taxable in the hands of the recipient. Thus, the CBIT prototype would equalize the tax burden on interest and dividends. The efficiency calculations do not take into account any compensatory tax (see Chapter 4) on distributions from preference income.⁴⁰ Hence, CBIT would replace the combined

corporate-individual tax rate on distributed earnings with a single tax levied at the CBIT rate. The same rate would apply to corporate retentions, and since, as modeled, capital gains on CBIT assets are exempt from taxation, CBIT would not distort corporate dividend policy.

13.E INTEGRATION, CORPORATE FINANCIAL POLICY, AND THE COST OF CAPITAL

Table 13.1 illustrates how successful each prototype is in reducing the three biases in current law that integration is meant to reduce: the bias against investment in corporate form, the bias against equity finance, and the bias against corporate dividend distributions. For individuals, all prototypes would reduce the tax rate on distributions of corporate equity nonpreference, U.S. source income. This reduction would address, at least in part, the current law biases against the corporate form and equity finance. The distribution-related and CBIT prototypes would result in a lower overall tax rate on distributed than on undistributed corporate equity income, reversing the current law bias against corporate dividend distributions. However, this bias could be removed from the CBIT and dividend exclusion prototypes by allowing shareholders to adjust basis of stock for retained earnings through a Dividend Reinvestment Plan (DRIP). Only the shareholder allocation prototype, as designed, would completely remove the bias against corporate dividend distributions.

Absent a special provision such as the investment income tax discussed in Chapter 6, the CBIT prototype alone reduces the current law differentials across business income sources for tax exempt entities and foreign investors. For both classes of income recipient, CBIT equalizes the tax rate on all forms of business income—corporate equity income (whether or not distributed), noncorporate equity income, and interest. The only exception is rent and royalty income, which would be taxed as under current law. Thus, CBIT would address all three of the current law biases.

Table 13.1
Total U.S. Tax Rate on a Dollar of NonPreference, U.S. Source Income from a U.S. Business Under Current Law and the Integration Prototypes

Type of Income	Current Law	Shareholder Allocation Integration	Distribution-Related Integration		
			Credit	Exclusion	CBIT
I. Individual Investor is Income Recipient					
Corporate Equity:					
Distributed	$t_c + (1-t_c)t_i$	t_i	$[(1-t_c)t_c + t_i - t_i^m]/(1-t_i^m)$	t_c	t_i^m
Undistributed	$t_c + (1-t_c)t_g$	t_i	$t_c + (1-t_c)t_g$	$t_c + (1-t_c)t_g$	$t_i^m + (1-t_i^m)t_g$
Noncorporate Equity	t_i	t_i	t_i	t_i	t_i^m
Interest	t_i	t_i	t_i	t_i	t_i^m
Rents and Royalties	t_i	t_i	t_i	t_i	t_i
II. Tax Exempt Entity is Income Recipient					
Corporate Equity:					
Distributed	t_c	t_c	t_c	t_c	t_i^m
Undistributed	t_c	t_c	t_c	t_c	t_i^m
Noncorporate Equity	t_c	t_c	t_c	t_c	t_i^m
Interest	0	0	0	0	t_i^m
Rents and Royalties	0	0	0	0	0
III. Foreign Investor is Income Recipient					
Corporate Equity:					
Distributed	$t_c + (1-t_c)t_{WD}$	$t_c + (1-t_c)t_{WD}$	$t_c + (1-t_c)t_{WD}$	$t_c + (1-t_c)t_{WD}$	t_i^m
Undistributed	t_c	t_c	t_c	t_c	t_i^m
Noncorporate Equity	t_{WN}	t_{WN}	t_{WN}	t_{WN}	t_i^m
Interest	t_{WI}	t_{WI}	t_{WI}	t_{WI}	t_i^m
Rents and Royalties	t_{WR}	t_{WR}	t_{WR}	t_{WR}	t_{WR}

Department of the Treasury
 Office of Tax Policy

t_c = U.S. corporate income tax rate.

t_i = U.S. individual income tax rate.

t_i^m = Maximum U.S. individual income tax rate.

t_g = U.S. effective individual tax rate on capital gains.

t_{WD} , t_{WN} , t_{WI} , t_{WR} = U.S. withholding rates on payments to foreigners of dividends, noncorporate equity income, business interest, and rents and royalties, respectively. Generally varies by recipient and may be zero.

Tax Distortions in Real and Financial Investment Decisions

Although the most succinct measure of the economic benefits possible under each of the integration prototypes is the estimated welfare gain resulting from reduction or elimination of the tax distortions affecting real and financial investments, this is not the most descriptive or intuitive characterization of the effects of integration. In this section, we thus focus more directly on the extent of these distortions, relying on a more commonly used measure of the impact of the tax system on investment decisions—the cost of capital. Although the specific results noted are based on a specific CGE model (the augmented

Harberger model described in Section 13.F), these results are less sensitive to the model used than the estimates of the welfare gains, which will be discussed in the following sections. We therefore also defer discussion of the various CGE models used to the following sections.

An important effect of integration is that it would change the tax cost of real investment in the corporate sector. We measure the effects of taxes on investment decisions using the cost of capital concept described in Chapter 1. Taxes on capital income generally raise the cost of capital above investors' required rate of return. All other things equal, a higher cost of capital reduces incentives to invest. The cost of capital includes

the effects of tax rates, depreciation allowances, tax credits and inflation. The cost of capital also can depend on the method of financing. Our calculations are designed to be representative, and therefore reflect a mix of debt and equity financing.

As Section 13.B discusses, the size of the distortions created by the classical corporate tax system depends in part on whether one believes that there are nontax benefits and costs to alternative corporate financial policies so that differential taxation of financial arrangements can distort financing decisions.

Under current law, corporations can reduce the tax costs of investment by financing with debt rather than with equity and by retaining rather than distributing profits. Altering financial behavior to reduce tax liability may itself cause distortions, and raise the cost of capital. For example, as a corporation becomes more highly leveraged, it increases the chances that it will experience costs associated with financial distress. Investors in the corporation would require compensation for the expected value of these costs, thereby raising the return the corporation must earn on its investments. To capture such costs, the model augments the traditional corporate sector cost of capital to reflect compensation to investors for the efficiency costs of tax-induced distortions in corporate debt and dividend policy. Tax distortions in corporate financial policy raise the cost of capital for corporate investment, and thereby act as a disincentive to investment in the corporate sector. Because economists differ on the appropriate way to model costs of financial distortion, the Report also presents effects of integration prototypes on the cost of capital that ignore the efficiency costs of tax distortions in corporate financial behavior.

Corporate Financial Behavior

Description of the Model

Corporate financial policy—which affects the debt to asset (leverage) ratio and the dividend payout ratio—is determined within the model rather than assuming leverage and distribution

patterns at the outset. More specifically, the corporation chooses its financial policy to minimize its cost of capital. Consider first debt policy. Under current law a corporation may deduct its interest expense from its taxable income, so interest is taxed only to the lender. In contrast, corporate profits are taxed twice, because they are (in general) subject to both the corporate income tax and the individual income tax when distributed as dividends or recognized as a capital gain on corporate shares. Consequently, equity financed corporate investment is tax disadvantaged relative to debt financed corporate investment. This difference induces corporations to increase their use of debt. Increased use of debt, however, also carries with it the increased possibility that the corporation will incur costs associated with financial distress. In determining their leverage ratio, corporations trade off the lower tax cost of financing with debt against the nontax costs of debt, e.g., costs of financial distress. In contrast to some earlier treatments, however, debt is assumed to offer nontax benefits relative to equity (see the discussion in Section 13.B). That is, if debt and equity were taxed equally, we assume that corporations would continue to finance part of their capital stock using debt.⁴¹

Consider now corporate dividend policy. Under current law, the shareholder level taxes on dividends and retained earnings differ. Dividends are taxed as ordinary income, while retained earnings raise share values and are taxed on a realization basis as a capital gain. Because retained earnings benefit from the deferral of the second level of tax, they enjoy a tax advantage over dividends. On the other hand, corporate distributions may be valued differently by shareholders than retentions. As a result, the determination of optimal dividend distributions reflects a tradeoff of tax costs and nontax benefits.⁴²

For modeling purposes, the corporate dividend payout ratio divides real corporate earnings into dividends and retentions; all purely inflationary earnings values are assumed to come in the form of asset appreciation and to be taxed as a capital gain upon the sale of corporate shares. Corporations choose the real dividend payout ratio (ratio

of real dividends to real earnings) that minimizes the cost of equity financed investment. Because the inflationary component of nominal income is excluded, real payout ratios are higher than conventional nominal payout ratios. Although real dividends are the choice variable in the formal models, nominal dividend payout ratios also are presented in the results. Taxes are assumed not to affect financial choices in the noncorporate business and the owner-occupied housing sectors of the augmented Harberger model used in obtaining the results presented in this section.⁴³

Corporate Financial Policy Under Current Law and the Integration Prototypes

Table 13.2 shows a measure of the size of the tax incentive for a corporation to finance with debt rather than with equity and to retain rather than distribute profits. Results are presented for a neutral tax system that does not distort these decisions, for current law, and for each of the integration prototypes. The table also shows estimates of the effects of these tax incentives on corporate borrowing and dividend distribution policy.

Consider first corporate borrowing policy. Under a neutral tax system, neither debt nor equity would be tax favored, so there would be no tax advantage to debt. The behavioral model predicts that under such a tax system, corporations on average would finance 30 percent of their investments using debt. In contrast to the neutral tax system, current law discriminates against equity finance. To cover its higher tax cost and still offer the ultimate investor a 4 percent real after-tax rate of return, an equity financed investment must earn a real pre-tax rate of return that is 3.7 percentage points higher than would be required were the same investment instead financed with debt. Given the assumptions used in the calculation, this is equivalent to a 90 percent higher real after-tax required rate of return. The extra 3.7 percentage point return reflects debt's tax advantage over equity and is the amount needed to pay the higher taxes on the double-taxed equity investment. Because of this tax advantage to debt, or penalty to equity,

corporations are induced to use more debt than under the neutral tax system and choose a 37 percent leverage ratio, 7 percentage points greater than its value under a neutral tax regime.⁴⁴

Compared to current law, all the integration prototypes would reduce debt's tax advantage over equity. Consequently, all of the prototypes would promote more efficient corporate borrowing decisions by moving the corporate leverage ratio closer to its undistorted value. As modeled, CBIT eliminates differences in the taxation of debt and equity by taxing all corporate income once at the entity level at a 31 percent statutory rate. Under CBIT, corporate borrowing decisions would be undistorted by taxes. The other prototypes reduce debt's current tax advantage over equity less significantly.

Consider now corporate dividend policy. Under a neutral tax system, neither dividends nor retained earnings are tax-favored, so there is no tax advantage to retentions, nor penalty on dividends. The behavioral model predicts that under such a tax system, corporations would distribute as dividends 80 percent of their real after-corporate tax profits, while retaining and reinvesting the remaining 20 percent of real after-tax profits.

In contrast to the neutral tax system, current law favors retained earnings over dividends. Given the assumptions underlying Table 13.2, this tax advantage is 1.1 percentage points. That is, under current law, to provide an equity investor with a real after-tax rate of return of 4 percent, a corporation distributing all of its earnings as dividends must earn a real pre-tax rate of return that is 1.1 percentage points greater than that required were the company instead to retain its earnings. As a result of this tax distortion, corporations pay out roughly 73 percent of their after-tax real profits as dividends instead of the fully efficient 80 percent. Including inflation in the measure of after-tax corporate profits yields a corresponding nominal dividend payout ratio under current law of about 43 percent.

All the integration prototypes reduce the tax on dividends relative to that on retained earnings.

Table 13.2
Effect of Integration on Corporate Financial Policy¹

	Undistorted	Law	Shareholder	Distribution-		CBIT
			Current Allocation	Related	Integration	
			Integration	Credit	Exclusion	
A. Scaled Tax Rate Replacement						
Corporate borrowing policy						
Tax incentive to borrow ²	.000	.037	.035	.036	.035	.000
Leverage ratio ³	30.0%	36.6%	36.5%	36.5%	36.5%	30.0%
Corporate dividend policy						
Tax penalty on dividends ⁴	.000	.011	.000	-.010	-.005	.000
Dividend payout ratio						
Real ⁵	80.0%	72.8%	80.0%	85.9%	82.9%	80.0%
Nominal ⁶	-	42.8%	42.8%	46.4%	45.9%	42.7%
B. Lump Sum Replacement						
Corporate borrowing policy						
Tax incentive to borrow ²	.000	.037	.022	.023	.026	.000
Leverage ratio ³	30.0%	36.6%	34.6%	34.7%	35.1%	30.0%
Corporate dividend policy						
Tax penalty on dividends ⁴	.000	.011	.000	-.006	-.003	.000
Dividend payout ratio						
Real ⁵	80.0%	72.8%	80.0%	84.4%	82.4%	80.0%
Nominal ⁶	-	42.8%	42.8%	45.5%	45.2%	42.7%

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¹Calculations are based on the augmented Hargerber Model described in section 13.F. All calculations assume a 3.5 percent inflation rate and a 4 percent real after-tax rate of return.

²Calculated as the difference between the cost of capital for an equity financed investment and that for a debt financed investment. The calculations assume that tax depreciation equals economic depreciation and that the corporate tax rate is the maximum statutory rate. Debtholder and shareholder tax rates are estimates of average effective marginal rates based on calculations from the Office of Tax Policy Individual Tax Model, adjusted for the taxation of banks, insurance companies and tax exempt institutions.

³The ratio of debt to total assets.

⁴Calculated as the difference between the cost of capital for an investment whose return is subject to the dividend tax and one whose return is subject to tax as a capital gain.

⁵The ratio of (cash) dividends to after-tax real profits.

⁶The ratio of (cash) dividends to after-tax nominal profits.

Therefore, all of the prototypes encourage corporations to raise their dividend payout ratio. Both the shareholder allocation prototype and CBIT achieve uniformity in the taxation of real dividends and real capital gains. Under either prototype there is no tax penalty (nor tax advantage) to dividends, so corporations would choose the efficient 80 percent real dividend payout ratio defined by the model. Even when the taxation of distributions out of tax preference or foreign-taxed income is considered (this feature is ignored in

the model results), both of these prototypes are found to come very close to eliminating tax distortions relating to payout decisions.

The distribution-related prototypes reverse the bias under current law. They tax retentions less favorably than dividends because they provide relief from the double tax on corporate equity only to the extent that earnings are distributed. This is illustrated in Table 13.2 by a negative tax penalty, i.e., a tax advantage to dividends relative to retentions for the distribution-related prototypes. Because of this favorable tax treatment, this prototype encourages corporations to pay about 83 percent of real after-tax profits (or about 46 percent of nominal after-tax profits) as dividends, as opposed to the 72 percent payout ratio (43 percent of nominal after-tax profits) under current law.⁴⁵

Table 13.2 also presents calculations based on lump-sum replacement taxes. In these calculations, all the

integration prototypes encourage (1) more efficient corporate borrowing decisions by reducing the tax advantage to debt and the leverage ratio and (2) higher, generally more efficient, dividend distributions.

Cost of Capital Under Integration Prototypes

Tables 13.3, 13.4, and 13.5 summarize the cost of capital calculations. Current law imposes

a tax penalty on investment in the corporate sector and financial distortions can raise this penalty. Thus, current law can create important distortions in the allocation of the U.S. capital stock. To assess effects of the integration prototypes on the current tax penalty on corporate investment, effects on the cost of capital must be calculated. Table 13.3 presents the effect of the current tax system on the cost of capital among sectors calculated both with and without the inclusion of the costs of the financial distortions. Table 13.4 reports calculations of the cost of capital which include the efficiency cost of tax distortions in corporate financial policy, while the calculations in Table 13.5 ignore such costs. The estimated reductions in the costs of capital suggest that the integration prototypes enhance economic efficiency relative to current law. All of the prototypes reduce the tax bias against investment in the corporate sector under current law, thereby improving the allocation of capital among sectors in the economy.

These calculations again assume that investors require a 4 percent real, financing distortion adjusted, after-tax rate of return on all investments, and that the expected inflation rate is 3.5 percent. The summary measures reported in the table are weighted averages of more detailed calculations of the cost of capital for each of 38 real assets, including 20 types of equipment, 14 types of nonresidential structures, residential structures, residential and nonresidential land, and inventories.

Cost of Capital Under Current Law

As noted above, there is no universally agreed upon model of effects of financial distortions on the cost of capital. The calculations in the first column of Table 13.3 therefore ignore such distortions. In these calculations, no premium is imposed to compensate investors for the deviation of the leverage and dividend payout ratios from their undistorted values.

To illustrate the effects of the corporate income tax on the cost of capital, Panel A shows both the corporate and noncorporate cost of

capital for three particular investments: engines and turbines, industrial buildings, and business (nonresidential) land. The cost of capital for each asset is higher if the investment is undertaken by a corporation, because of the extra tax, than if the investment is undertaken by a noncorporate business. An investment in an industrial building, for example, must earn a real return of 6.5 percent if the investment is made by a corporation, but only 5.1 percent if the investment is made by a noncorporate business. These estimates reflect a significant disincentive for corporate investment; to cover extra taxes, the corporate investment must earn 27.5 percent more than the comparable noncorporate investment.

The summary measures in Panel B of Table 13.3 also illustrate the current tax bias against investment in the corporate sector. On average, the cost of capital for corporate sector investment (5.9 percent) exceeds the cost of capital for investment in the noncorporate sector (4.9 percent). Some of this difference, however, results from a different mix of capital assets in the corporate and noncorporate sector, hence only part of the difference is due to intersectoral tax distortions.

Table 13.3
Cost of Capital Under Current Law

	No Financial Distortions	With Financial Distortions
A. Representative Assets		
Engines and turbines		
Corporate	.051	.052
Noncorporate	.044	.044
Industrial buildings		
Corporate	.065	.066
Noncorporate	.051	.051
Business land		
Corporate	.061	.063
Noncorporate	.049	.049
B. Summary Measures		
Average Cost of Capital		
Corporate	.059	.060
Noncorporate	.049	.049
Owner-occupied housing	.040	.040
Economy wide	.050	.051
Coefficient of Variation	.155	.165

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Owner-occupied housing has the lowest cost of capital (4.0 percent). The return on owner-occupied housing is virtually free of tax because (1) the imputed rental value of the housing is not taxed to the owner, and (2) interest on debt financing is includable by the lender and deductible by the owner. Unless the lender's tax bracket is higher than the borrower's, the tax system as a whole does not collect tax on the return on the investment. Thus, current law discourages investment in the corporate sector in favor of investment in noncorporate enterprises, and discourages investment in business enterprises in favor of investment in owner-occupied housing. Overall, capital income taxes increase the average cost of capital for the economy as a whole (5.03 percent) to a level greater than the investor's required after-tax real return (4 percent). Current law may reduce the level of resources devoted to investment and capital formation and distort the allocation of capital across sectors of the economy.

The last line in Panel B shows the coefficient of variation for the cost of capital. The coefficient of variation is a summary measure of the degree of dispersion in the cost of capital. If all investments were taxed equally, all would have the same cost of capital and the coefficient of variation would be zero. Taxes that distort investment decisions create dispersion in the cost of capital and raise the coefficient of variation. Under current law, the coefficient of variation is 0.155.

The second column of Table 13.3 includes in the corporate cost of capital a premium for tax distortions in corporate borrowing and dividend policies. Tax distortions in corporate financial policies raise the cost of capital for corporate sector investments by approximately 0.1 percentage point, compared to the prior calculations which ignore financial distortions, while leaving unchanged the cost of capital for investments in the noncorporate sector and in owner-occupied housing. Including financial distortions, therefore, increases the tax-induced disparity in the cost of capital between corporate and other investments. With financial distortions, current law's coefficient of variation in the cost of capital is

0.165, greater than the 0.155 coefficient of variation obtained when financial distortions are ignored. By raising the cost of investing in the corporate sector, financial distortions also raise slightly the overall cost of investing in the economy.

Cost of Capital Under the Integration Prototypes

Tables 13.4 and 13.5 present summary measures of the cost of capital under current law and each of the integration prototypes, with and without financial distortions, respectively. Table 13.4 presents calculations assuming scaled tax rates for replacement revenue (Panel A), and lump-sum replacement taxes (Panel B). All the calculations in Table 13.4 assume that corporations vary their borrowing and dividend distributions in response to changes in tax rates, and include a premium for tax-induced distortions in corporate borrowing policy.

Table 13.4 presents results from calculations that include the efficiency cost of tax distortions in corporate financial policy. In these calculations the integration prototypes change both the corporate leverage ratio and dividend payout ratio from their values under current law, but also change the magnitude of the associated financial distortions. In the scaled-tax-rate calculations, statutory tax rates on capital income are increased or decreased proportionately to hold the overall tax burden on investment at its current level. Each prototype reduces the corporate cost of capital toward the lower average for the rest of the economy, thereby reducing the coefficient of variation below its current law level. CBIT reduces the coefficient of variation in the cost of capital most significantly. Compared to current law, CBIT reduces the coefficient of variation in the cost of capital by more than one-third, from 0.165 to 0.104. The other prototypes produce a smaller reduction in the coefficient of variation, a reduction that is nearly the same for each prototype. Thus, in these calculations, CBIT provides the greatest incentive for an efficient allocation of physical capital.⁴⁶

Table 13.4
The Cost of Capital
Under Current Law and the Integration Prototypes:
With Financial Distortions

	Current Law	Shareholder Allocation Integration	Distribution-Related Integration		CBIT
			Credit	Exclusion	
A. Scaled tax rate replacement					
Average cost of capital					
Corporate sector	.060	.057	.057	.058	.053
Noncorporate sector	.049	.052	.052	.051	.054
Owner-occupied housing sector	.040	.040	.040	.040	.042
Economy wide	.051	.051	.051	.051	.050
Coefficient of variation	.165	.143	.144	.148	.104
B. Lump sum replacement					
Average cost of capital					
Corporate sector	.060	.052	.052	.054	.056
Noncorporate sector	.049	.049	.049	.049	.057
Owner-occupied housing sector	.040	.040	.040	.040	.043
Economy wide	.051	.048	.048	.049	.053
Coefficient of variation	.165	.107	.111	.120	.123

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The results based on lump-sum replacement taxes presented in Panel B are similar to those in Panel A. All prototypes reduce current tax distortions in the allocation of capital, particularly by reducing taxes on corporate investment relative to investment elsewhere in the economy. Thus, all prototypes lower the coefficient of variation in the cost of capital. The lump-sum replacement mechanism, however, allows all of the prototypes except CBIT to benefit from lower taxes on capital income. Consequently, the shareholder allocation prototype most significantly reduces the coefficient of variation, and provides the greatest incentive for an efficient allocation of physical capital.

Table 13.5 presents cost of capital calculations that abstract from the costs of tax distortions in corporate financial policy. In those calculations, financing is unaffected by tax policy changes, so corporations have a 73 percent real dividend payout ratio and a 37 percent leverage ratio under current law as well as under the integration prototypes.

In the scaled tax rate calculations, benefits from CBIT still exceed those of other prototypes, but because CBIT reduces financial distortions more than other prototypes, there is less difference between CBIT and the other prototypes in Table 13.5 than in Table 13.4. Nonetheless, the results in the two tables are similar. In both tables, each prototype reduces the extra tax cost of investing in the corporate sector, therefore encouraging a more efficient allocation of capital. Additionally, in both tables, shareholder allocation leads to the greatest reduction in the coefficient of variation in the calculations based on lump-sum replacement, while CBIT reduces the coefficient of variation most in the calculations based on the scaled tax rate replacement mechanism.

13.F INTEGRATION AND THE ALLOCATION OF RESOURCES

This section reviews the simulated effects of each integration prototype on the allocation of resources and economic efficiency. Results from three models are presented. The first is a Harberger-type CGE model modified to account for tax distortions in corporate financial policies. The two alternative CGE models respond to important limitations of the Harberger-type model. Overall, the cost of capital calculations provided in the preceding section are reinforced by the results from the more comprehensive CGE calculations.

Table 13.5
The Cost of Capital
Under Current Law and The Integration Prototypes:
No Financial Distortions

	Current Law	Shareholder Allocation Integration	Distribution-Related Integration		CBIT
			Credit	Exclusion	
A. Scaled tax rate replacement					
Average cost of capital					
Corporate sector	.059	.055	.056	.057	.053
Noncorporate sector	.049	.052	.052	.051	.054
Owner-occupied housing sector	.040	.040	.040	.040	.042
Economy wide	.050	.050	.050	.051	.050
Coefficient of variation	.155	.137	.138	.143	.103
B. Lump sum replacement					
Average cost of capital					
Corporate sector	.059	.051	.052	.053	.056
Noncorporate sector	.049	.049	.049	.049	.057
Owner-occupied housing sector	.040	.040	.040	.040	.043
Economy wide	.050	.047	.048	.048	.053
Coefficient of variation	.155	.103	.108	.115	.123

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The Augmented Harberger Model

Model Description

In Harberger's original model, the corporate tax induces capital to leave the corporate sector, a migration that continues until after-tax returns are equalized in the corporate and noncorporate sectors. Through this adjustment process the burden of the corporate tax is spread to owners of noncorporate capital and possibly to labor.⁴⁷ The corporate tax thus causes too much capital to be allocated to the noncorporate sector and not enough to the corporate sector, so that an inefficient allocation of resources results.

The first model used to study the integration prototypes is an augmented version of Harberger's original contribution.⁴⁸ While the original Harberger model had only two sectors, the augmented model embodies a richer depiction of the economy. It has 18 industries and 35 different types of assets, and includes both intermediate and

final goods. In the original model, the total supplies of capital and labor were fixed. In the augmented model, the supplies of labor and capital can vary depending on their rates of return, but in the simulations the supply of capital is held constant. Investment decisions are based on the cost of capital described in the preceding section.

Harberger's approach implicitly assumed that corporate financial policy was unaffected by the tax system. In contrast, the augmented model incorporates the model of financial behavior discussed above, and so allows the tax system to influence corporate borrowing and dividend policies. Allowing financial decisions to be influenced by the tax system is particularly important in the present context, because previous research has suggested that ignoring tax-induced distortions in financial behavior can lead to substantial underestimates of the efficiency costs of the classical income tax system.⁴⁹

As emphasized earlier, the simulation of each integration prototype holds constant real government spending. As in the discussion of the cost of capital, we emphasize calculations using scaled tax rates, though calculations based on lump-sum replacement taxes are presented for comparison.

The method of estimation proceeds by comparing a single equilibrium representing current law with a corresponding equilibrium under each integration prototype. The simulations are static, in the sense that they abstract from savings and growth issues by holding constant the economy's capital stock in the face of each prototype's tax changes. Thus, the model captures effects from

the prototype's shifts in the allocation of real resources across sectors and industries and from changes in corporate financial decisions, but abstracts from any tax-induced changes in saving and capital formation. Since integration generally is perceived as a way to improve the static allocation of real resources and to improve corporate financial policy, this is appropriate.⁵⁰

Simulation Results

Table 13.6 presents the results of simulations that include the costs of tax distortions in

corporate financial policy, and Table 13.7 presents results of calculations excluding such costs. The results in Table 13.6 that include the costs of financial distortions illustrate most broadly the costs of tax distortions under current law.

The first three rows of Panel A show each prototype's effect on the allocation of capital, based upon the scaled-tax-rate replacement mechanism. In these calculations, CBIT generates the largest changes in capital allocation. CBIT increases the corporate share of capital by almost 5 percentage points, and decreases the share of

Table 13.6
General Equilibrium Results, Augmented Harberger Model:
With Financial Distortions

	Shareholder Allocation Integration	Distribution-Related Integration		CBIT
		Credit	Exclusion	
A. Scaled tax rate replacement				
Percentage change in capital allocation ¹				
Corporate sector	2.6	2.3	1.7	4.6
Noncorporate sector	-2.7	-2.4	-1.8	-3.8
Owner-occupied housing	0.1	0.1	0.1	-0.8
Annual change in welfare ² , by source of change, as a percentage of consumption (and as a percentage of tax revenue from corporate capital)				
Consumption	0.10 (2.38)	0.10 (2.38)	0.08 (1.90)	0.20 (4.76)
Corporate debt policy	-0.00 (-0.00)	-0.00 (-0.00)	-0.00 (-0.00)	0.17 (4.05)
Corporate dividend policy	0.03 (0.71)	0.01 (0.24)	0.03 (0.71)	0.03 (0.71)
Total	0.13 (3.09)	0.11 (2.62)	0.11 (2.62)	0.40 (9.52)
B. Lump sum replacement				
Percentage change in capital allocation ¹				
Corporate sector	3.4	3.2	2.6	4.3
Noncorporate sector	-2.5	-2.4	-1.9	-4.2
Owner-occupied housing	-0.9	-0.8	-0.6	-0.1
Annual change in welfare ² , by source of gain, as a percentage of consumption (and as a percentage of tax revenue from corporate capital)				
Consumption ²	0.24 (5.71)	0.23 (5.47)	0.20 (4.76)	0.10 (2.38)
Corporate debt policy ³	0.08 (1.90)	0.07 (1.67)	0.06 (1.43)	0.16 (3.81)
Corporate dividend policy ³	0.03 (0.71)	0.02 (0.48)	0.03 (0.71)	0.03 (0.71)
Total	0.35 (8.33)	0.32 (7.62)	0.29 (6.90)	0.29 (6.90)

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¹These represent changes in each sector's share of total private capital.

²Welfare changes from improvements in real resource allocation are measured as changes in "expanded" national income, i.e., changes in national income plus changes in the value of leisure.

³Welfare changes from changes in financial policies are measured using an excess burden function derived from investors' preferences for debt and for equity.

Table 13.7
General Equilibrium Results, Augmented Harberger Model:
No Financial Distortions

	Shareholder Allocation Integration	Distribution-Related Integration		CBIT
		Credit	Exclusion	
A. Scaled tax rate replacement				
Percentage change in capital allocation ¹				
Corporate sector	2.5	2.1	1.6	4.1
Noncorporate sector	-2.6	-2.2	-1.7	-3.5
Owner-occupied housing	0.1	0.1	0.1	-0.6
Annual change in welfare ² as a percentage of consumption (and as a percentage of tax revenue from corporate capital)	0.08 (1.95)	0.08 (1.71)	0.07 (1.71)	0.17 (4.15)
B. Lump sum replacement				
Percentage change in capital allocation ¹				
Corporate sector	3.3	2.9	2.4	3.8
Noncorporate sector	-2.4	-2.2	-1.8	-3.9
Owner-occupied housing	-0.8	-0.7	-0.6	0.1
Annual change in welfare ² as a percentage of consumption (and as a percentage of tax revenue from corporate capital)	0.21 (5.12)	0.20 (4.88)	0.17 (4.15)	0.07 (1.71)

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¹These represent changes in each sector's share of total private capital.

²Welfare changes are measured as changes in "expanded" national income, i.e., changes in national income plus changes in the value of leisure.

capital allocated to other sectors by an equivalent amount. The other prototypes stimulate somewhat smaller changes in the allocation of capital across sectors.

The next set of calculations in Panel A represents effects on economic well-being resulting from adoption of each prototype. Economic welfare effects are shown separately for (1) the gain caused by the improved consumption choices made possible by integration's improvement in the allocation of real resources, and (2) the gain due to improved corporate financial policy. These welfare gains do not reflect gains (or losses) arising from changes in savings and economic growth attributable to the prototypes. Two welfare measures are presented. The first measure expresses the welfare gain as a percentage of consumption under current law, and can be interpreted as the percentage gain in annual consumption possible under each prototype once

the economy fully adjusts to the change in law and reaches its new equilibrium. The second measure (in parentheses) expresses the welfare gains as a percentage of the annual tax revenue from corporate capital income.

In this model, the annual economic welfare gains from the improved allocation of resources range from 0.08 to 0.20 percent of current consumption or 1.9 to 4.8 percent of tax revenue from corporate capital income (equivalent to a range of about \$2.3 to \$5.7 billion per year). CBIT produces welfare gains at least twice as large as that generated by the other prototypes.

The other integration prototypes generate a smaller improvement from a more efficient allocation of real resources, equivalent to about 0.10 percent of current consumption for each. Thus, although these prototypes appear structurally different, from an economic perspective they may

be quite similar. Indeed, this result can be anticipated from the above discussion of the cost of capital, which showed that these prototypes had nearly identical effects on the coefficient of variation in the cost of capital.

The next simulated economic welfare gain represents welfare effects of changes in corporate debt policy. All the integration prototypes lower the corporate leverage ratio. CBIT, however, completely eliminates the tax bias against equity, thereby producing the largest gain, equivalent to 0.17 percent of consumption, or more than 4 percent of tax revenue from corporate capital (about \$4.8 billion). The dividend exclusion and shareholder allocation integration prototypes produce only negligible gains from this source.

Table 13.6 also shows the simulated economic welfare effects of changes in corporate dividend policy. With the exception of the imputation credit prototype, the prototypes yield welfare gains in this respect that are equivalent to an annual increase in consumption of 0.03 percent (or 0.71 percent of tax revenue from corporate capital). Welfare gains accompanying the imputation credit prototype are smaller at this margin.

Combining the economic welfare effects from changes in debt policy and changes in dividend policy, shows that all three prototypes improve overall corporate financial policy. These gains are largest for CBIT. By eliminating distortions in corporate financial policy, CBIT produces a welfare gain equivalent to 0.20 percent of consumption, or 4.76 percent of tax revenue from corporate capital. The shareholder allocation prototype and the dividend exclusion prototype produce much smaller welfare gains from improvements in corporate financial policy, roughly equivalent to 0.03 percent of consumption, (0.71 percent of tax revenue from corporate capital). Perhaps the most striking feature of these results is that the CBIT prototype's welfare gains from improved corporate financial policy are as large as the welfare gains from improved real resource allocation.

The total improvement in economic welfare ranges from a high under CBIT of 0.40 percent of consumption to a low for the imputation credit and dividend exclusion prototypes of 0.11 percent of consumption. By contributing most significantly to the efficient allocation of real resources and to the promotion of efficient corporate financial choices, CBIT stimulates the largest gains in economic welfare.

Panel B presents results based on lump-sum replacement taxes. In some respects these calculations are similar to those in Panel A. For example, in both set of calculations, the integration prototypes expand modestly the size of the corporate sector relative to the rest of the economy. In addition, in both sets of calculations, all prototypes generate modest economic welfare gains. In the calculations based on lump-sum replacement taxes, however, all prototypes except CBIT show welfare gains from reducing taxes on capital income (and replacing them with more efficient lump-sum taxes). In contrast, as modeled, CBIT raises distorting taxes on corporate capital income and distributes the excess revenue to consumers through lump-sum rebates. Consequently, CBIT compares less favorably with the other prototypes in the lump-sum calculations than in the scaled tax rate calculations, although this result is largely an artifact of the revenue estimate for CBIT obtained from this model. In the lump-sum calculations, the shareholder allocation prototype produces the largest improvement in economic well being, roughly equivalent to an annual gain of 0.35 percent of consumption.

Table 13.7 presents results of calculations that do not include the cost of tax-induced distortions in corporate financial policy. In those calculations, the prototypes do not change financial variables from current law values, and financial distortions do not create welfare costs.

The calculations in Table 13.7 are similar in several respects to those reported in Table 13.6. All prototypes continue to shift capital into the corporate sector and produce overall gains in

welfare, measured relative to annual consumption or annual tax revenue from corporate capital. The shareholder allocation prototype increases economic welfare the most under the lump-sum replacement taxes, while CBIT increases economic welfare the most under the scaled-tax replacement approach.

The Mutual Production Model

Model Description

An important problem with models based on the original Harberger approach is the implicit assumption that if a commodity is produced in the corporate sector, it also cannot be produced in the noncorporate sector, and vice versa. This conflicts with empirical evidence of such coexistence. To address this issue, we use a Mutual Production Model (MPM), in which corporate and noncorporate businesses coexist in industries because each has certain advantages: corporate businesses, which are relatively large, have the advantage of economies of scale, and noncorporate businesses, which are smaller, have the advantage of more effective managerial skill.⁵¹

This approach has been incorporated in a large-scale model that contains twelve sectors and allows for the production of capital goods as well as intermediate goods (goods used in other businesses). Each industry produces with managerial input, labor input, and a fixed capital composite of 31 different assets. The model is a closed economy model characterized by a representative consumer, a fixed labor supply, and a fixed capital stock. Financial decisions about corporate debt to equity and dividend payout ratios are affected by the tax system.

In many ways, the analysis of resource allocation in the modified MPM is structurally similar to the augmented Harberger model discussed above.⁵² For example, both are disaggregated, competitive models, which base decisions about capital allocations on the user cost of capital. In addition, both are closed economy models that abstract from international capital flows. The models differ, however, in at least two key

respects. First, greater substitution exists between corporate and noncorporate activity in the MPM than in the augmented Harberger model. Second, the MPM assumes a fixed labor supply, while the augmented Harberger model allows labor supply decisions to vary depending upon the after-tax wage rate. Consequently, one would expect similar, but not necessarily identical, results from the two models. Results from the MPM are presented in Table 13.8.

Simulation Results

Panel A of Table 13.8 presents the results of calculations based on the scaled-tax-rate adjustment approach. The first rows of panel A show the percentage change in the share of total capital used in each of the corporate, noncorporate business, and owner-occupied housing sectors, respectively. All of the prototypes shift capital (and other resources) into the corporate sector. CBIT's 7.1 percentage point increase in the corporate sector's share of total capital would be the largest shift, while the dividend exclusion prototype's 2.9 percentage point increase would be the smallest. For all prototypes, the resource flow into the corporate sector come primarily from a contraction of the noncorporate business sector, but owner-occupied housing also would decline slightly in the CBIT and imputation credit prototypes.

The next two rows of panel A illustrate the change in corporate financial policy attributable to each prototype. As a point of reference, a 5 percentage point reduction in the corporate leverage ratio would eliminate current law's distortion in this model. In these calculations, CBIT eliminates the tax incentive to borrow, and thus reduces the corporate leverage ratio to its undistorted level. The shareholder allocation prototype achieves only a slight reduction. In contrast, the distribution-related prototypes do not improve corporate borrowing policy in this model.⁵³

Both the shareholder allocation and CBIT prototypes eliminate the tax penalty on dividends. Consequently, under both prototypes, corporations increase their real dividend payout ratio by 9

Table 13.8
General Equilibrium Results, Mutual Production Model:
With Financial Distortions

	Shareholder Allocation Integration	Distribution-Related Integration		CBIT
		Credit	Exclusion	
A. Scaled tax rate replacement				
Percentage change in capital allocation ¹				
Corporate sector	4.3	5.5	2.9	7.1
Noncorporate sector	-4.5	-5.3	-3.0	-6.7
Owner-occupied housing	0.2	-0.2	0.1	-0.4
Percentage change in financial policy relative to current law				
Corporate debt to asset ratio	-1.0	2.0	1.0	-5.0
Real dividend payout ratio	9.0	16.0	10.0	9.0
Annual change in welfare ² , by source of change, as a percentage of consumption (and as a percentage of tax revenue from corporate capital)				
Consumption	0.27 (3.57)	0.37 (4.90)	0.22 (2.91)	0.43 (5.69)
Corporate debt policy	0.06 (0.79)	-0.22 (-2.91)	-0.10 (-1.32)	0.23 (3.05)
Corporate dividend policy	0.07 (0.94)	0.01 (0.13)	0.07 (0.93)	0.07 (0.93)
Total	0.40 (5.30)	0.16 (2.12)	0.19 (2.52)	0.73 (9.67)
B. Lump sum replacement				
Percentage change in capital allocation ³				
Corporate sector	6.1	6.2	4.2	7.2
Noncorporate sector	-5.0	-5.0	-3.5	-6.7
Owner-occupied housing	-1.1	-1.2	-0.7	-0.5
Percentage change in financial policy relative to current law				
Corporate debt to asset ratio	-3.0	-1.0	-1.0	-5.0
Real dividend payout ratio	9.0	14.0	10.0	9.0
Annual change in welfare ² , by source of gain, as a percentage of consumption (and as a percentage of tax revenue from corporate capital)				
Consumption ²	0.54 (7.15)	0.50 (6.62)	0.39 (5.16)	0.44 (5.83)
Corporate debt policy ³	0.11 (1.46)	0.11 (1.46)	0.07 (0.93)	0.23 (3.04)
Corporate dividend policy ³	0.07 (0.93)	0.04 (0.53)	0.07 (0.93)	0.07 (0.93)
Total	0.72 (9.54)	0.65 (8.61)	0.53 (7.02)	0.74 (9.80)

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¹These represent changes in each sector's share of total private capital.

²The model measures the welfare change from an improved allocation of real resources as the compensating variation of the change from current law to integration. Compensating variation is a measure of the dollar value of the change in consumer's utility as a result of integration.

³Welfare changes from changes in financial policies are measured using an excess burden function derived from investor's preferences for debt and for equity.

percentage points to the undistorted value calibrated in the model. Corporations also increase their dividend payout ratio under the two distribution-related prototypes. Because distribution-related prototypes relieve the corporate level tax on corporate equity only to the extent profits are distributed, corporations actually pay an inefficiently large fraction of their earnings as dividends under these prototypes. Nonetheless, compared to current law, both prototypes encourage corporations to reduce the difference between their actual payout ratio and the undistorted payout ratio.

The final four rows of Panel A present each prototype's welfare changes in total, and a decomposition by the source of change. Annual welfare gains are expressed as a percentage of consumption under current law and as a percentage of current revenue from corporate capital income (in parentheses). By improving the allocation of resources, all of the prototypes generate improved consumption choices, but CBIT has the largest improvement, equivalent to 0.43 percent of consumption. The dividend exclusion prototype yields the smallest improvement, equivalent to 0.22 percent of consumption.

The shareholder allocation and CBIT prototypes improve corporate borrowing policy. CBIT generates an economic welfare gain equivalent to 0.23 percent of consumption. While the welfare gain accompanying the shareholder allocation prototype is smaller in this dimension, the distribution-related prototypes encourage corporations to increase borrowing slightly above levels under current law and thereby generate a small welfare loss.

The shareholder allocation and CBIT prototypes both eliminate the tax distortion in corporate dividend policy, and in so doing generate a small welfare gain equivalent to 0.07 percent of consumption. Although the distribution-related prototypes encourage firms to distribute an inefficiently large fraction of their profits as dividends, by inducing firms to move the payout ratio closer to its undistorted level, both generate welfare gains at this margin.

In total, in the scaled-tax-rate calculations the prototypes produce annual economic welfare gains ranging from a low of under 0.2 percent of consumption for distribution-related integration to a high of 0.73 percent of consumption for CBIT. In these calculations, CBIT generates as large or larger welfare gains than the other prototypes in every category.

Panel B shows calculations based on lump-sum replacement. In these calculations, all of the prototypes promote more efficient consumption, corporate borrowing, and corporate dividend policies. The other prototypes compare more favorably to CBIT than in panel A because, as modeled, CBIT would raise taxes on capital income, while the other prototypes would lower capital income taxes. Consequently, although in part an artifact of the modeling, the shareholder allocation prototype would generate an annual welfare gain equivalent to 0.72, almost as large as that under CBIT (0.74 percent of consumption). Annual welfare gains for the imputation credit and dividend exclusion prototypes would be 0.65 and 0.53 percent of consumption, respectively.

Portfolio Allocation Model

Model Description

Both the augmented Harberger model and the MPM capture tax distortions in the allocation of physical capital among the corporate, non-corporate, and owner-occupied housing sectors. Both also capture tax distortions in the supply of corporate debt and dividends. Neither model, however, is designed to capture tax distortions in the allocation of financial assets across households. The portfolio allocation (PA) model addresses this shortcoming by focusing on tax distortions in household portfolio decisions.⁵⁴ The PA model combines an allocation of capital across sectors reflecting production characteristics and consumer preferences with an allocation of capital across investors and forms of investment through a portfolio mechanism. In the PA model, real and financial variables are determined simultaneously, and taxes can distort both real and financial decisions.

The PA model explicitly links individual financial decisions with real variables in the economy. Households and pension funds acquire securities in a manner consistent with their risk-return preferences, while businesses and the government sector issue securities to meet their demands for capital. Individuals allocate their wealth among corporate equity, noncorporate equity, rental housing, owner-occupied housing equity, durable goods, tax-exempt bonds, and taxable debt according to the riskiness as well as the after-tax rate of return on these assets. Individual households are distinguished by income and wealth levels, tax filing status, and whether they rent or own their homes.

Simulation Results

Results from the PA model are displayed in Tables 13.9 and 13.10. As with the other models, two sets of calculations are performed. In the first set of calculations, presented in Table 13.9, statutory tax rates on capital income are increased or decreased proportionately to satisfy the constraint that revenues remain constant. In an alternative set of calculations, presented in Table 13.10, lump-sum taxes or rebates are used to satisfy the equal yield constraint.

Scaled Tax Replacement. Table 13.9 presents integration's aggregate effects on the allocation of real and financial capital and on corporate financial policy. The top panel shows changes in the allocation of real capital. In the portfolio allocation model, all of the prototypes shift capital into the corporate sector. The CBIT prototype produces the largest increase in corporate capital, equivalent to 2.5 percent of total U.S. real capital, followed by shareholder allocation integration (1.7 percent expansion) and then by distribution-related integration (1.6 percent expansion for the dividend exclusion prototype). In all prototypes, the flow of capital into the corporate sector comes from a contraction of other sectors. The prototypes improve the allocation of capital within the business sector as well as between the business and nonbusiness sectors.

The middle panel of Table 13.9 presents changes in holdings of financial assets, divided into changes in households' holdings and changes in pension funds' holdings.⁵⁵ In the PA model, households can make financial investments in corporate stock, noncorporate equity interests, and debt. All of the prototypes induce households to raise their holdings of corporate stock. CBIT produces the largest such shift, equivalent to 6.5 percent of total wealth, compared to about 3 to 4 percent for the other prototypes. In addition, all prototypes reduce households' holdings of taxable bonds. The shareholder allocation and distribution-related prototypes produce a reduction equivalent to between 2.0 percent and 2.5 percent of total wealth. CBIT generates a larger reduction, and the household sector becomes a net borrower in the taxable debt market. Traditional tax-exempt debt holdings are largely unaffected by integration (except under CBIT). CBIT debt, which is tax-exempt to the lender, accounts for 11.6 percent of total wealth. To a large extent, CBIT debt substitutes for taxable debt under current law. Thus, it is useful to compare the sum of taxable and CBIT debt holdings under CBIT and current law. Combining CBIT's 14.8 percent reduction in taxable debt with the 11.6 percent of total wealth that corresponds to CBIT debt shows that CBIT reduces households' direct holdings of formerly taxable debt by 3.2 percent of total wealth. The other prototypes reduce direct household holdings of currently taxable debt by an amount equivalent to 2.0 to 2.5 percent of private wealth. Combining all types of debt shows that CBIT generates a larger reduction in direct debt holdings by households, equivalent to 4.3 percent of total wealth while the other prototypes generate a smaller reduction, equivalent to between 2.0 and 2.6 percent of wealth. Finally, note that holdings of noncorporate capital decline under all the integration prototypes.⁵⁶

Pension funds' portfolio shifts are the reverse of household portfolio shifts. In the PA model, pension funds allocate assets between debt and corporate equity. By lowering the tax burden households face on corporate equity, but not extending the tax reduction to pension funds, all prototypes induce pension funds to reduce

Table 13.9
The Effect of Integration on the Allocation of
Physical Capital, Wealth, and Corporate Financial Policy
Results from the Portfolio Allocation Model
(Scaled Tax Rate Replacement)

Prototype	Shareholder Allocation Integration	Distribution-Related Integration		CBIT
		Credit	Exclusion	
A. Change in the Allocation of Physical Capital (as a percent of total physical capital)				
Corporate Business	1.7%	1.3%	1.6%	2.5%
Noncorporate Business	-0.1%	-0.1%	-0.1%	-0.1%
Noncorporate Rental Housing	-0.3%	-0.3%	-0.4%	-0.4%
Total Noncorporate Capital	-0.4%	-0.4%	-0.5%	-0.5%
State and Local Government	-0.1%	-0.1%	-0.1%	0.0%
Owner-occupied Housing	-0.7%	-0.4%	-0.5%	-0.8%
Consumer Durables	-0.5%	-0.5%	-0.5%	-1.2%
Total Household Capital	-1.3%	-0.9%	-1.0%	-2.0%
B. Change in The Allocation Of the Household Sector's Portfolio (as a percent of total wealth)				
Corporate Stock	3.9%	3.2%	4.0%	6.5%
Debt				
Taxable to Investors	-2.3%	-2.0%	-2.5%	-14.8% ¹
Not Taxable to Investors				
Traditional Tax-Exempt	-0.1%	-0.1%	-0.1%	-1.2%
CBIT	0.0%	0.0%	0.0%	11.6%
Total Tax-Exempt	-0.1%	-0.1%	-0.1%	10.5%
Total	-2.4%	-2.0%	-2.6%	-4.3%
Noncorporate Business	-0.1%	-0.1%	-0.1%	0.0%
Noncorporate Rental Housing	-0.2%	-0.2%	-0.4%	-0.4%
Noncorporate Total Capital	-0.3%	-0.3%	-0.5%	-0.4%
Owner-occupied Housing	-0.6%	-0.4%	-0.4%	-0.7%
Consumer Durables	-0.5%	-0.4%	-0.5%	-1.1%
Total Household Capital	-1.1%	-0.8%	-0.9%	-1.8%
Pensions				
Corporate stock	-2.0%	-1.7%	-2.5%	-0.3%
Debt	2.0%	1.7%	2.5%	0.3%
C. Change in Corporate Financial Policy (in percentage points)				
Leverage Ratio	-3.2%	-2.7%	-2.3%	-14.7%
(Nominal) Dividend Payout Ratio	3.2%	3.3%	3.8%	3.0%

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¹The household sector goes from a net lender in the market for taxable bonds under current law to a net borrower under CBIT.

corporate equity holdings and increase debt holdings. Consequently, for the economy as a whole, the shift out of debt and into equity is less pronounced than the change for the household sector alone. Overall, in their effects on households' direct holdings plus pension fund holdings,

the distribution-related and shareholder allocation prototypes stimulate a move into corporate equity equivalent to between 1.5 and 1.9 percent of total wealth. CBIT generates a much larger net increase in holdings of corporate shares, equivalent to 6.2 percent of total wealth. The total shift from debt is equivalent to -4.0 percent of total wealth under CBIT, and to between -0.1 and -0.4 percent of total wealth for the other prototypes.⁵⁷

The bottom panel of Table 13.9 presents each prototype's effect on corporate borrowing and dividend policy. All prototypes encourage corporations to use less debt, but CBIT generates a 14.7 percentage point reduction in the corporate leverage ratio, much larger than the reduction generated by the other integration prototypes. Dividend payout ratios increase in all cases (by between 3.0 and 3.8 percentage points); not surprisingly, the largest such increase accompanies the dividend exclusion prototype.

Lump-Sum Tax Replacement. Table 13.10 summarizes PA model results illustrating integration's aggregate effects on the allocation of real and financial capital and on corporate financial policy assuming lump-sum taxes are used to maintain revenue neutrality. The allocational impacts of integration are qualitatively similar to those based on scaled tax rate

Table 13.10
Summary of the Effects of Integration on
Real and Financial Decisions:
Results from the Portfolio Allocation Model
(Lump Sum Replacement)

Prototype	Shareholder Allocation Integration	Distribution-Related Integration		CBIT
		Credit	Exclusion	
A. Change in the Allocation of Physical Capital (as a percent of total physical capital)				
Corporate Business	2.8%	2.6%	2.6%	2.8%
Total Noncorporate Capital	-0.3%	-0.3%	-0.3%	-0.4%
State and Local Government	-0.1%	-0.1%	-0.1%	0.0%
Total Household Capital	-2.3%	-2.2%	-2.2%	-2.3%
B. Change in the Allocation of the Household Sector's Portfolio (as a percent of total wealth)				
Corporate Stock	6.2%	5.5%	5.3%	6.5%
Debt	-3.8%	-3.3%	-3.1%	-4.1%
Total Noncorporate Capital	-0.3%	-0.2%	-0.2%	-0.4%
Total Household Capital	-2.0%	-1.9%	-1.9%	-2.1%
Pensions				
Corporate Stock	-2.3%	-2.0%	-1.9%	-0.2%
Debt	2.3%	2.0%	1.9%	0.2%
C. Change in Corporate Financial Policy (in percentage points)				
Leverage Ratio	-8.3%	-7.3%	-6.9%	-16.6%
Nominal Dividend Payout Ratio	3.25	3.4%	3.8%	3.0%

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replacement: (1) the share of physical capital allocated to the corporate sector rises while that allocated to the noncorporate and household sectors declines, (2) households shift toward corporate equity and away from debt, while pension portfolios are reallocated in the opposite direction, (3) corporations reduce their leverage ratio and increase their dividend payout ratio, and (4) CBIT generates shifts in the allocation of physical capital and financial assets that are at least as large as those generated by the other prototypes.

Summary of Results

There is no universal agreement about the most appropriate way to model the effects of the corporate income tax (and the effects of reforms of that tax) on real and financial decisions. This Report examined three different models of the

domestic economy to assess the likely effects of integration. The models are in general agreement with respect to the major effects of integration on capital allocation, corporate financial policy, portfolio allocation, and the overall effect on economic welfare.

The results of all the models indicate that integration will encourage capital to shift into the corporate sector. Most of this shift comes from the noncorporate business sector,⁵⁸ but in some cases owner-occupied housing also is reduced.

With only one exception, the models that allow for tax-induced distortions in corporate borrowing behavior agree that the integration proto-

types will improve efficiency by reducing corporate borrowing. In general, the models suggest that because shareholder allocation and CBIT reduce most significantly the tax penalty on corporate equity, they similarly reduce most significantly tax-motivated corporate borrowing.

The models also agree that the integration prototypes will increase corporate dividend payments relative to current law. Shareholder allocation integration and CBIT promote fully efficient corporate dividend policy, while the distribution-related prototypes can encourage corporations to make inefficiently large dividend payouts. Nonetheless, in some calculations even the distribution-related prototypes improve corporate dividend policy relative to current law.

All the models show that the integration proposals stimulate improvements in overall

economic well-being. The exact magnitude of the improvements can vary from model to model and from prototype to prototype, so integration's improvement in welfare ranges between 0.07 percent and 0.73 percent of current consumption. Importantly, these gains take into account that, for some of the prototypes, taxes would have to be raised to finance integration. Shareholder allocation integration and CBIT tend to produce the largest welfare gains. In addition to the traditional welfare improvement from the reallocation of physical capital (and other real resources) from the rest of the economy into the corporate sector, the models also show that, under reasonable assumptions, integration may stimulate important welfare gains from improvements in corporate financial policy.

Comparison of Welfare Gain Among Models

The welfare gains from integration are generally larger in the MPM than in the augmented Harberger model. This is especially true for the gain from improved resource allocation, and in some cases for the gain from changes in corporate financial policy as well. An important explanation for this difference is the MPM's greater substitutability between corporate and noncorporate businesses within an industry. Thus, in the MPM, current law reduces economic efficiency more than in the augmented Harberger model. Both models predict a similar range of welfare changes from changes in corporate debt, ranging from roughly zero to about 0.20 percent of consumption. Additional reasons for this variation include (1) slight differences in the underlying behavioral models in the measurement of the tax advantage of equity and (2) differences in the tax rates required for the scaled-tax-rate calculations.⁵⁹

The size of the simulated gains are comparable to, or can be reconciled with, results from simulations of similar tax law changes published in economic literature.⁶⁰ Consider first the gains from an improved allocation of real resources. Using a simple two sector model, Harberger originally estimated that the corporate income tax's distortion in the allocation of real resources

produced a welfare gain roughly equivalent to between 0.5 percent and 1.0 percent of GNP, corresponding to between 0.75 percent and 1.5 percent of consumption. Shoven corrected two errors in Harberger's original analysis, dramatically reducing the size of the corporate tax's welfare cost. He then expanded the model from two to twelve industries, increasing the welfare cost of the tax. On balance, Shoven's estimates of the welfare costs of the corporate tax ranged between 0.75 percent and 1.5 percent of consumption. Fullerton, et al. obtained a similar estimate of the welfare cost of the distortion in the allocation of real resources under the corporate tax.⁶¹

These studies differ in several respects, but share a common feature. They all use average effective tax rates to measure the distortions of the corporate income tax. Average effective tax rates are measured for existing assets by taking the ratio of the observed tax payments from the existing stock of capital to the income generated by that stock. While such rates may be useful for many purposes, they can be crude representations of the effect of taxes on investment incentives. For example, they can include tax revenue from lump-sum features of the tax system, from investments made under tax systems no longer in existence, from unexpectedly profitable investments, or from pure monopoly profits. In addition, as an empirical matter, they bear little resemblance to the theoretically preferable concept of marginal effective tax rates.⁶²

A better measure of the effect of taxes on investment incentives is the marginal effective tax rate (or, equivalently, the cost of capital), which relates to incentives for incremental uses of capital. The marginal effective tax rate is calculated using information on expected financing sources, economic depreciation rates, inflation rates, required rates of return, statutory tax rates, depreciation allowances, and credits. It represents taxes that business enterprises would expect to pay on an additional unit of new investment that is just profitable at the margin. Thus, in contrast to the average effective tax rate, it relates closely to the forward-looking nature of a business

enterprise's investment decisions. Although such calculation cannot include every detail of the tax code, marginal effective tax rates dominate average effective tax rates as a measure of the incentive to invest.

Studies using marginal effective tax rates have found smaller welfare costs for tax distortions in the allocation of real capital than those using average effective tax rates. For example, Fullerton and Henderson adopt this approach and find that eliminating all differences in the taxation of corporate and noncorporate investments would produce a very small annual economic welfare gain, equivalent to about 0.007 percent of expanded national income (national income plus labor), or roughly 0.014 percent of consumption.⁶³ They find that eliminating all intersectoral tax distortions, including those between corporate and noncorporate capital and between business and housing capital, would produce larger gains. Depending on the assumed ease with which capital can migrate across sectors, these annual gains range from 0.039 percent of consumption when such migration is relatively difficult to 0.35 percent of consumption when such migration is relatively easy. For a unitary elasticity of substitution between corporate and noncorporate capital (as assumed in the augmented Harberger calculations above), the annual gain is roughly equivalent to 0.11 percent of consumption.

Fullerton and Henderson obtain these relatively small gains in part because, at the margin, debt finance and favorable individual level taxation of capital gains on corporate stock eliminate much of the tax disadvantage to investment in the corporate sector.⁶⁴ In addition, Fullerton and Henderson's calculations are based on the new view of dividend taxes, which magnifies the benefit of the favorable taxation of capital gains on corporate share appreciation, thereby reducing the welfare cost of the current tax system. Even under the traditional view adopted in this Report, the Fullerton-Henderson estimates of the welfare costs of the corporate tax based on marginal effective tax rates are likely to remain small compared to earlier estimates. Finally, in all calculations, Fullerton and Henderson hold

constant the overall average effective tax rate for the economy as a whole. Since the tax changes they consider would otherwise reduce revenue, their estimated welfare gains are smaller than those resulting from lump-sum replacement taxes.

In both the augmented Harberger model and the MPM used in this Report, we have adopted a marginal approach to measuring investment incentives, and so obtain results that are more comparable to those of Fullerton and Henderson than to the early results of Harberger and Shoven. For a variety of reasons, however, one would not expect identical results in the two models. For one thing, in several key respects, the modeling assumptions used in the augmented Harberger model differ from those in Fullerton and Henderson.⁶⁵ In addition, Fullerton and Henderson analyze tax policy changes starting from 1985 law, while this Report analyzes tax policy changes starting from current law. Fullerton and Henderson also hold constant the revenue from capital income taxes by directly adjusting the cost of capital, while we maintain revenue neutrality by using lump-sum taxes or by adjusting statutory tax rates. Finally, this Report studies integration prototypes that differ substantially from the hypothetical effective tax rate equalization policies considered by Fullerton and Henderson. Thus, one might expect that the results presented in this Report should be similar, though not equivalent, to those presented in Fullerton and Henderson, if financing distortions are ignored.

That is indeed the case, especially for the calculations based on the scaled tax replacement mechanism. For the integration prototypes studied in this Report, the augmented Harberger model simulates annual welfare gains from improved consumption choices ranging from 0.07 to 0.17 percent of consumption when financial distortions are ignored, and from 0.08 to 0.20 percent of consumption when financial distortions are captured. The most similar calculation in Fullerton and Henderson yields a 0.11 percent gain for complete elimination of intersectoral tax distortions, the same order of magnitude as results presented in this Report. In part because they

adopt the new view of dividends, however, they estimate smaller welfare gains from eliminating the corporate-noncorporate tax differential.

The allocational gains in the MPM used in this Report are substantially larger than most of those obtained by Fullerton and Henderson; in the scaled-tax-rate calculations, the annual gains range from 0.22 percent to 0.43 percent of consumption. Despite the use of marginal effective tax rates, these gains are almost as large as those obtained by Harberger and Shoven. The primary reason for the MPM's relatively large welfare gain is the greater substitutability of capital and other resources between the corporate and noncorporate sector of each industry. As a result, even small tax differences can reduce economic efficiency. Thus, the MPM calculations can be compared most fruitfully to the upper range of the Fullerton-Henderson calculations. Both sets of calculations assume significant substitutability of resources across sectors, thereby yielding large welfare gains associated with reforms at this margin.

Consider now the size of the gains from improved corporate debt policy. In the scaled-tax-rate calculations, the augmented Harberger model used in this Report produces annual gains ranging from negligible improvements under some prototypes to 0.17 percent of consumption for CBIT, while the modified MPM yields annual gains ranging from -0.22 percent of consumption for the distribution-related prototypes to 0.23 percent of consumption for CBIT. These gains from improved corporate borrowing decisions appear smaller than those estimated by others.⁶⁶ Several factors account for this Report's somewhat smaller gain. One is that not all the integration prototypes eliminate debt's tax advantage over equity, while earlier studies considered complete elimination of debt's tax advantage. Second, our scaled-tax-rate calculations significantly reduce gains from improved financial choices by raising the difference between the statutory corporate tax rate and the tax rate on interest income for nonCBIT prototypes. No such effect would be found in earlier studies that implicitly used lump-sum replacement taxes or that assumed that integration

would eliminate debt's tax advantage. Third, earlier studies assumed that corporate debt would decline to zero, absent a tax advantage, while this Report recognizes potential nontax benefits of debt so even without a tax advantage corporations would continue to finance a substantial portion (30 percent) of their capital investments with debt. Thus, there is a much larger scope for improvement from eliminating or reducing the tax advantage of debt in the earlier studies than in the models used in this Report.

Finally, increases in economic well-being accompanying integration are similar to those estimated using CGE models for the Tax Reform Act of 1986. For example, using lump-sum replacement taxes, Gravelle (1989) estimated that the 1986 Act would generate annual welfare gains ranging from 0.08 to 2.00 percent of consumption. Also using lump-sum replacement taxes, Fullerton, Henderson, and Mackie (1987) estimated that annual welfare changes attributed to the 1986 Act would range from -0.30 to 0.89 percent of consumption. In their calculations most similar to those in this Report, they estimated an annual welfare gain equivalent to 0.37 percent of consumption. The annual welfare gains presented in this Report are therefore on the same order of magnitude as estimates for the 1986 Act.⁶⁷

Integration in an International Context

Although the models described in the preceding sections differ in many respects, they all ignore international trade and capital flows and treat the United States as if it were a closed economy. Closed economy effects of tax policies may be modified in important ways in an open economy. For example, in a closed economy, a successful saving incentive might be expected to lower the cost of capital and increase domestic investment. In contrast, in a small, open economy much of the incremental saving might flow abroad, leaving the domestic capital stock largely unaffected. It is desirable in principle, therefore, to analyze the integration prototypes using a model incorporating international capital mobility. Such a model, which is presented in the next section, permits analysis of effects of tax changes

on holdings of debt and equity by U.S. and non-U.S. investors.

Economists have analyzed the degree to which capital is internationally mobile, but there is no consensus.⁶⁸ Also important in the study of integration is the relative mobility of debt and equity capital, since the integration prototypes examined in this Report affect returns from debt and equity investments differently.⁶⁹ While there is controversy over the extent of mobility of debt and equity capital, this Report analyzes some possible consequences of the integration prototypes on capital flows. The effects of integration proposals on foreign investment in the United States, U.S. investment abroad, the components of the balance of payments, and the U.S. domestic capital stock are examined using an open economy model. While the Report offers some tentative conclusions based on the model results regarding possible net effects of integration-related changes in incentives in an open economy setting, more research is needed before reaching firm conclusions.

A Model of Taxation and International Capital Mobility

Introducing trade and capital flows complicates significantly the analysis of corporate taxation. As a consequence, economic models of international corporate flows typically embody a much simpler representation of the domestic economy than the closed economy models described above. This Report uses a model of trade and capital flows between the United States and an aggregate of all other countries, viewed as a single foreign country.⁷⁰ While such a representation is stylized, it offers an indication of the likely importance of internationally mobile debt and equity capital for assessing economic effects of integration.

In the model, each country has four production sectors: import-competing goods (from the U.S. perspective), equipment (producers' durables, such as machines and airplanes), non-equipment export goods, and nontraded goods and services. Consumers in each country can choose

between the consumption of domestic and imported traded goods depending on relative prices.

Residents of each country allocate wealth among four assets: domestic debt, foreign debt, domestic equity, and foreign equity. The allocation depends on real after-tax rates of return. Foreign and domestic debt are assumed to be closer substitutes than foreign and domestic equity, and, thus, international holdings of debt are much more responsive to changes in relative returns. Business enterprises in each country choose the mix of debt and equity to supply depending on market interest rates and equity returns, and on the tax treatment of these payments at the corporate level. The international model thus has features in common with the portfolio allocation model presented above.

The model takes into account the relationship among the three major components of the U.S. balance of payments: the balance of merchandise and services trade, the balance of capital inflows and outflows, and the balance of receipts and payments of investment income on cross-border holdings. One possibility is an increase in imports relative to exports in the long run, and a resulting fall in the output of the import-competing sector.

The different tax treatment of resident and nonresident investors also plays an important role in the model. For example, under current law, foreign investors in U.S. equity are subject to the U.S. corporate level tax but not to the investor level taxes imposed on a U.S. resident. They pay only withholding taxes on dividends and these are very low on average because of treaty relief. Similarly, portfolio interest paid to foreigners is exempt from U.S. tax under current law. To the extent that integration prototypes alter the relative tax treatment of foreign and resident investors, they can lead to a reallocation of internationally mobile capital among countries.

Three integration prototypes are modeled explicitly: the shareholder allocation prototype and the two distribution-related prototypes. While potential effects of CBIT are discussed, there is no explicit modeling of the prototype due to the

significant uncertainty surrounding the relative substitutability of U.S. exempt and taxable debt in the portfolios of U.S. and non-U.S. investors. As before, two means of financing revenue costs of integration are presented: lump-sum taxes and scaled-rate replacement taxes on capital income. Table 13.11 presents the percentage change in the U.S. and foreign capital stock, cross-border holdings of debt and equity, and after-tax returns. In addition, the three rows at the bottom of the table present the absolute (constant) dollar changes (constrained to sum to zero) in trade, capital flows, and net international investment income. As with the closed economy models, simulation results refer to effects of integration prototypes on economic variables in the long run.

Foreign Holdings of U.S. Capital

The shareholder allocation prototype encourages foreign investors to reduce holdings of U.S. equity and increase holdings of U.S. debt. Pre-tax returns for foreign investors in U.S. equity, who concentrate their holdings in the U.S. corporate sector, decline as a result of the shift of capital into the corporate sector by U.S. residents. Because they would be denied the credit for the corporate level withholding tax, their after-tax returns decline as well. Accordingly, there is a decline in foreign investment in U.S. equity. The magnitude of the decline, of course, depends more generally on how responsive foreigners are to such price changes. With respect to debt, the shareholder allocation prototype raises slightly the U.S. interest rate because of the competition from newly desirable equity. Foreign holdings of U.S. debt increase as a result. The overall effect on foreign holdings of U.S. capital depends on the relative mobility of debt and equity capital. In the simulations reported here, equity holdings fall, while debt holdings increase. Nonetheless, since debt is assumed to be more internationally mobile than equity,⁷¹ total foreign investment in the U.S. increases.

The distribution-related prototypes have a similar effect on incentives for foreign investment in the United States. Foreign holdings of U.S. equity decline, while holdings of U.S. debt

increase. Because the separate corporate tax is maintained, however, corporations deduct interest at a higher rate than under the shareholder allocation prototype. Thus, the U.S. interest rate is higher and incentives for foreigners to shift into U.S. debt are larger. The calculations presented in Table 13.11 suggest that distribution-related prototypes increase (slightly) foreign investment in the United States. As with the shareholder allocation prototype, the change in the composition of foreign investment is more significant than the change in its total amount.

We do not model CBIT's effect on foreign investment in the United States. CBIT would shift the tax on business interest from the lender to the borrower. As a consequence, the market interest rate on business debt would fall below its current level. Since non-U.S. investors receive no credit for the tax that the borrower has paid on interest, their net return from U.S. lending would fall, giving them an incentive to shift out of business debt. To the extent that domestic investors shift capital into the corporate sector and, thereby, lower the pre-tax rate of return in that sector, foreign investors would have an incentive to reduce their holdings of U.S. equity. However, under CBIT, substantial amounts of government and home mortgage debt are taxed identically as under current law, offering pre-tax interest rates. Foreign investors may shift out of corporate bonds (and equity) and into these nonCBIT debt instruments, thereby mitigating any outflow of capital that might otherwise occur.

U.S. Holdings of Foreign Capital

The shareholder allocation prototype reduces incentives for U.S. taxpayers to hold foreign debt, and increases the incentive to hold foreign equity. For U.S. taxpayers, the shareholder allocation prototype raises the after-tax return to domestic investment. The after-tax return on domestic equity rises because of relief from the corporate tax, and the after-tax return on domestic debt rises because of the likely increase in U.S. interest rates. Consequently, foreign debt is less attractive relative to both domestic debt and domestic equity. Foreign equity is more attractive for U.S.

Table 13.11
General Equilibrium Results: International Model
Projected Long-Run Effects of Tax Integration Alternatives

	Shareholder Allocation		Dividend Credit		Dividend Exclusion	
	Financed by		Financed by		Financed by	
	Lump Tax	Sum Tax on All Capital	Lump Sum Tax	Tax on All Capital	Lump Sum Tax	Tax on All Capital
	Percentage Changes					
U.S. Capital Stock	.6	1.9	1.2	2.7	.9	1.5
Rest of the World Capital Stock	-.3	-1.2	-.6	-1.3	-.4	-.9
U.S. Holdings of Foreign Debt	-10.9	-26.0	-11.9	-24.6	-9.2	-17.6
U.S. Holdings of Foreign Equity	10.6	43.7	10.7	30.2	8.6	24.8
Foreign Holdings of U.S. Debt	7.5	31.8	10.4	28.4	7.7	17.9
Foreign Holdings of U.S. Equity	-24.1	-46.3	-17.1	-30.3	-12.9	-24.6
After-tax Return to U.S. Equity (U.S. Residents)	20.1	1.8	13.7	7.7	10.1	2.6
After-tax Return to U.S. Equity (Rest of the World Residents)	-13.8	-28.3	-8.2	-15.2	-6.1	-12.4
U.S. Interest Rate	.8	3.3	1.6	3.8	1.2	2.5
After-tax Real U.S. Interest Rate (U.S. Residents)	2.0	-18.0	3.8	-6.9	2.8	-6.5
Return to Foreign Equity (Rest of the World Residents)	.3	.1	.3	.4	.2	.2
Return to Foreign Debt (Rest of the World Residents)	.4	1.1	.6	1.2	.4	.8
	Absolute Changes (in \$ billions, 1988 base)					
Change in Annual Net Capital Flows	-1.5	-.8	1.4	4.5	1.0	1.4
Change in Net Trade Balance	-20.7	-48.8	-12.8	-25.6	-9.6	-21.7
Change in Net Receipts of Investment Income	22.2	49.6	11.4	21.1	81.6	20.3

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Note: Simulations assume all U.S. debt is exempt under CBIT. See discussion in text.

investors because foreign tax credits are passed through to U.S. shareholders.

Distribution-related integration also reduces incentives for U.S. investors to hold foreign debt. In contrast to the shareholder allocation prototype, however, distribution-related integration has an uncertain effect on incentives for U.S. investors to hold foreign equity. Under an imputation credit system, the dividends earned from equity investments overseas are not entitled to a credit to offset corporate level taxes, while dividends from domestic equity investments do receive such a credit. To the extent that this constraint limits the typical U.S. multinational's ability to attach credits to dividends from foreign source income, there is a tax incentive for U.S. investors to

switch out of foreign equity and into U.S. equity (and possibly debt). On the other hand, in practice, the typical U.S. multinational is likely to have a pool of available credits sufficiently large to attach a credit to dividends ultimately attributable to marginal investment income from abroad. As a result, U.S. investors might enjoy the benefits of integration on their foreign equity holdings, so an increase in these investments might occur. An imputation credit system, thus, would have an ambiguous effect on total U.S. holdings of foreign assets. Debt holdings decline and equity holdings rise. Because of the greater international mobility of debt assumed in the simulations and the greater weight of debt in holdings of foreign assets, however, total U.S. investment overseas declines slightly.

The projected effects of the dividend exclusion prototypes are similar in character to the imputation credit, but somewhat smaller in magnitude because dividend exclusion provides a smaller benefit to U.S. equity investors. Under the dividend exclusion prototype, dividends originating from overseas investments are not eligible for exemption at the shareholder level. As in the case of the imputation credit system, the simulations in Table 13.11 assume that this limitation does not seriously restrict the typical U.S. multinational company's ability to pay excludable dividends. As a result, U.S. holdings of foreign equity are projected to increase. U.S. investment in foreign debt declines because of the rise in U.S. interest rates.

CBIT would be unlikely to change substantially the incentives for U.S. investors to hold foreign equity, but might reduce substantially incentives for them to hold foreign debt. In part because foreigners might shift out of U.S. debt, an increase in the after-tax return available to U.S. investors on U.S. debt could accompany CBIT. The higher return available domestically would offer an incentive for U.S. investors to shift out of foreign debt and into U.S. debt. The extent of the rise in the after-tax interest rate available to U.S. residents, however, is uncertain because the extent to which foreign investors would switch out of U.S. debt is uncertain.

Components of the Balance of Payments

This section discusses each prototype's effects on the three major components of the balance of payments: net capital flows, net trade balance, and net receipt of investment income. These three components must balance (sum to zero) so a tax law change cannot affect just one; the other components must show an offsetting adjustment.

Shareholder allocation and distribution-related prototypes have similar effects on the balance of payments in the model. Both would leave net capital flows largely unchanged. As the discussion above suggests, there is uncertainty about the size of the portfolio shifts that the prototypes would

cause. Nonetheless, our results suggest that offsetting changes in incentives produce a small net effect on capital flows. The calculations indicate that on balance these prototypes lead to a very small change in the flow of capital into the United States. Both prototypes reduce net payments of investment income to foreigners. This effect arises primarily because of the decline in the pre-tax return on U.S. equity. Both prototypes reduce the net trade balance. With capital flows largely unchanged and reduced net investment income paid to foreigners, the trade balance must fall, so the overall balance sums to zero.

Ascertaining effects of CBIT are again difficult. By reducing incentives for foreigners to hold CBIT debt, CBIT could encourage some flow of capital out of CBIT debt. Foreigners would likely shift their U.S. investment out of corporate bonds into nonCBIT government and home mortgage debt, however. The combination of a possible capital outflow under CBIT and the lower pre-tax returns available to foreigners on some of their U.S. investments implies that net payments of investment income to foreigners would fall, or U.S. net receipts rise. To the extent that CBIT shifts capital out of the United States, but raises U.S. net receipts of investment income, CBIT would have an ambiguous effect on the trade balance.

Domestic U.S. Capital Stock

Each prototype's effect on the domestic capital stock depends on its effect on net capital flows, combined with its effect on saving out of changes in real income. Both shareholder allocation and distribution-related integration have a small, positive effect on the flow of capital into the United States in the model. These prototypes also increase U.S. real income as a result of efficiency gains from reduced net payments of investment income to foreigners. Consequently, these prototypes increase very modestly the U.S. capital stock. We have not attempted to model formally effects of CBIT on the size of the U.S. domestic capital stock.

13.G DISTRIBUTIONAL EFFECTS OF INTEGRATION

Incidence of the Corporate Tax: Theoretical Predictions

Like most taxes, the corporate income tax alters the distribution of real income of individuals. This section discusses the evidence relating to who bears the burden of the corporate tax and issues to be resolved in analyzing distributional effects of integration.

Issues

A basic principle underlying proposals for integration is that because corporations are owned by shareholders, corporations have no taxpaying ability independent of their shareholders. Corporations pay taxes out of the incomes of their shareholders.⁷² The economic burden of a tax, however, frequently does not rest with the person or business who has the statutory liability for paying the tax to the government. This burden, or incidence, of a tax refers to the change in real incomes that results from the imposition of a change in a tax. Importantly, the burden of the corporate tax may not fall on shareholders. A corporate tax change could induce responses that would alter other forms of income as well. For example, some of the burden may be shifted to workers through lower wages, to consumers of corporate products through higher prices, to owners of noncorporate capital through lower rates of return on their investments, or to landowners through lower rents. This shifting might not happen quickly, so the short-run incidence could well differ from the long-run incidence.

Tax policy analysts have long been concerned with the incidence of the corporate tax.⁷³ Although there is no unanimous view, the most frequent finding is that, while shareholders are likely to bear the burden of the tax in the short run, much of the tax is probably shifted to owners of all capital in the long run. Some further shifting onto labor or consumers also may be possible, however, under certain circumstances.

The Basic Harberger Model

An early incidence analysis was offered by Harberger.⁷⁴

Suppose that investors always allocate capital so as to equalize its net return at the margin across sectors. Consider the imposition of an extra tax on corporate capital, starting from an equilibrium in which net rates of return are equalized. The immediate effect is to lower the net rate of return in the corporate sector by the amount of the tax. In the short run, therefore, the tax is borne by corporate shareholders. Over time, however, capital begins to shift out of the corporate sector as investors seek the higher (after-tax) rates of return available in the noncorporate sector. As capital moves into the noncorporate sector, its pre-tax rate of return in that sector falls, while the pre-tax return in the corporate sector rises. The migration of capital stops only when the pre-tax returns change enough that the after-tax rate of return in the corporate sector equals the rate of return in the noncorporate sector. Although the tax is levied only on corporate capital, noncorporate capital also suffers from the tax in the long run; owners of noncorporate capital receive a lower net rate of return. Indeed, Harberger found that under reasonable assumptions, the burden of the corporate income tax is borne equally by owners of all capital.

As in any model, the outcome depends on initial assumptions. Much attention in the academic literature has been given to the consequences of changing various assumptions.⁷⁵ For example, if the marginal investment is financed by debt, the burden of the tax may fall on corporate shareholders.⁷⁶

Incidence in a Dynamic Economy

In principle, the incidence of the corporate tax in a dynamic economy can be quite different from the Harberger approach, in which the supply of capital is fixed. Intuitively, to the extent that the corporate tax (and taxes on capital income generally) reduces saving, the capital stock can

diminish, thereby decreasing wage rates and shifting the burden to labor.

Analyzing this point is difficult, however. In addition to addressing the controversy over the size of the sensitivity of saving to changes in the net return, one must specify an increase in some other tax to compensate for eliminating the corporate tax. For example, in a life-cycle context, financing the elimination of the corporate tax by increasing taxes on individual income could increase or decrease the capital stock and income. (There are offsetting effects here, since the redistribution of income from younger high-savers to older low-savers would reduce the incentive effects of the tax.)

While the response of savings to the elimination of the corporate tax (holding total income taxes constant) is likely to be relatively small, there are important distributional effects across individuals within a generation with different mixes of labor and capital income and across generations.

Incidence in an Open Economy

Many authors have suggested that the incidence of the corporate tax can be dramatically different from Harberger's early closed economy analysis.⁷⁷ With frictionless international capital markets for securities and real investment, a small, open economy is a price-taker in international capital markets. Imposing a corporate tax in such an economy would cause capital to flow abroad until net rates of return are once again equalized internationally. To the extent that labor cannot emigrate, the incidence of the tax falls on domestic labor.

While correct, this argument is likely to have limited applicability to an analysis of the incidence of the corporate tax in the United States. First, the United States is not a small, open economy; it owns approximately 30 percent of the worldwide capital stock. Second, world capital-market integration, in practice, is substantially less than complete, particularly for equity capital.⁷⁸ As a result, even if capital is mobile

internationally, owners of domestic capital could be expected to bear a significant portion of the long-run burden of the tax.⁷⁹

Summary

While there is no firm agreement on the incidence of the corporate income tax, the literature suggests the following assumptions on which distributional analyses are conventionally based: (1) the short-run incidence falls on owners of corporate stock in proportion to their corporate income or (2) the long-run burden falls either completely on owners of all capital, or partly on owners of capital and partly on workers.⁸⁰

Assessing Distributional Impacts of Integration Prototypes

Distribution of Effective Tax Rates

The preceding discussion highlights the importance of assumptions about incidence for analyzing long-run distributional effects of corporate tax integration. Effects of integration on the distribution of the tax burden also depend on how integration would be financed (discussed below). Tables 13.12 and 13.13 summarize the distributional consequences of the dividend exclusion, imputation credit, shareholder allocation, and CBIT integration prototypes, consistent with our revenue estimates (see Section 13.H) and the incidence assumptions discussed above. The tables describe the long-run distribution of tax burdens as measured by effective tax rates relative to current law, after taxpayers have adjusted their behavior in response to the new regimes. The calculations represent the combined effects of changes in individual and corporate taxes, as well as changes in fiduciary, employment, and excise taxes.⁸¹

For each prototype, the estimated effective tax rates in Table 13.12 reflect our preferred assumption about the long-run incidence of the corporate tax, that the tax burden is borne by the owners of all capital. Table 13.13 shows for each prototype the estimated effective tax rates under the alternative assumption that the corporate income tax is

Table 13.12
Effective Tax Rates on Individuals:
Current Law and Integration Prototypes
Standard Incidence Assumption¹

Family Economic Income (\$1000s)	Current Law: (1991)		Dividend Exclusion		Imputation Credit		Shareholder Allocation		CBIT: No Tax on CBIT Capital Gains		CBIT: with Tax on CBIT Capital Gains	
	Share of Total Taxes Paid	Effective Tax Rate	With Prototype Capital Alone		With Prototype Capital Tax ²		With Prototype Capital Alone		With Prototype Capital Tax ²		With Prototype Capital Tax ²	
			Alone	Tax ²	Alone	Tax ²	Alone	Tax ²	Alone	Tax ²	Alone	Tax ²
(Taxes as Percentages of Income)												
0- 10	0.009	10.1	10.0	10.2	10.0	10.2	10.0	10.4	10.5	10.4	10.6	10.1
10- 20	0.037	13.0	12.9	13.1	12.8	13.0	12.8	13.3	13.5	13.5	13.8	13.1
20- 30	0.061	16.3	16.2	16.3	16.0	16.2	16.0	16.5	16.8	16.7	17.1	16.4
30- 50	0.155	19.1	18.9	19.1	18.8	19.0	18.7	19.2	19.5	19.4	19.8	19.2
50- 75	0.202	20.8	20.6	20.7	20.6	20.8	20.4	20.9	21.3	21.2	21.6	21.1
75-100	0.162	22.3	22.0	22.1	22.0	22.2	21.8	22.2	22.8	22.8	23.1	22.6
100-200	0.191	23.8	23.2	23.5	23.4	23.7	22.6	23.3	23.9	23.8	24.6	23.8
over 200	0.183	24.1	23.9	24.4	23.8	24.3	22.1	23.5	22.9	22.8	26.0	24.5
Total Individual	1.000	20.9	20.6	20.8	20.5	20.8	20.1	20.7	20.9	20.9	21.8	21.0

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¹Corporate income tax assumed to be borne 100% by capital income.

²Capital tax change imposed to offset change in revenue from prototype. Capital tax assumed to be distributed uniformly across all capital income.

Table 13.13
Effective Tax Rates on Individuals:
Current Law and Integration Prototypes
Alternative Incidence Assumption¹

Family Economic Income (\$1000s)	Current Law: (1991)		Dividend Exclusion		Imputation Credit		Shareholder Allocation		CBIT: No Tax on CBIT Capital Gains		CBIT: with Tax on CBIT Capital Gains	
	Share of Total Taxes Paid	Effective Tax Rate	With Prototype Capital Alone		With Prototype Capital Tax ²		With Prototype Capital Alone		With Prototype Capital Tax ²		With Prototype Capital Tax ²	
			Alone	Tax ²	Alone	Tax ²	Alone	Tax ²	Alone	Tax ²	Alone	Tax ²
(Taxes as Percentages of Income)												
0- 10	0.009	10.6	10.6	10.8	10.6	10.9	10.6	11.2	11.3	11.2	11.5	10.8
10- 20	0.038	13.3	13.3	13.5	13.2	13.4	13.2	13.9	14.0	14.0	14.3	13.5
20- 30	0.062	16.6	16.5	16.7	16.3	16.6	16.3	17.0	17.3	17.2	17.6	16.8
30- 50	0.156	19.5	19.3	19.5	19.1	19.4	19.1	19.7	20.0	20.0	20.3	19.6
50- 75	0.205	21.3	21.1	21.3	21.1	21.3	20.9	21.5	22.0	21.9	22.3	21.6
75-100	0.164	22.7	22.4	22.6	22.4	22.7	22.2	22.8	23.4	23.4	23.8	23.1
100-200	0.190	23.8	23.3	23.6	23.5	23.8	22.7	23.5	23.9	23.9	24.7	23.9
over 200	0.176	23.4	23.1	23.4	23.0	23.4	21.3	22.4	21.5	21.4	24.5	23.3
Total Individual	1.000	21.0	20.7	21.0	20.7	21.0	20.2	21.0	21.1	21.0	22.0	21.1

Department of the Treasury
Office of Tax Policy

¹Corporate income taxes assumed to be borne 50% by labor, 50% by capital income.

²Capital tax change imposed to offset change in revenue from prototype. Capital tax assumed to be distributed uniformly across all capital income.

borne half by capital income and half by labor income.

The tables classify individuals according to their Family Economic Income (FEI). FEI is a broad concept of income that attempts to capture family income from all sources, taxed and untaxed, in the current year. The concept is designed to place families into income classes with others about equally well off, with those in higher income groups considered consistently better off than those in lower income groups.⁸²

When we presented estimates of integration on economic efficiency earlier in the chapter, we incorporated explicitly the requirement that revenues lost as a result of integration be compensated by offsetting tax increases. These we considered as replacement taxes lump-sum taxes and uniform increases in taxes on capital income. Since lump-sum taxes are not available to policymakers, we present distributional information in Tables 13.12 and 13.13 assuming that tax rates on capital income are increased to finance integration.

Dividend Exclusion

The dividend exclusion prototype would reduce total revenues when fully phased in (see Section 13.H). All FEI groups would receive a slight reduction in effective tax rates. With the capital tax replacement, there would be very small differences in the effective tax rates under current law and the dividend exclusion prototype (including a slight increase in the effective tax rate for the highest income group). Hence, the efficiency gains made possible by this integration prototype (see Section 13.F) could be obtained with no loss in revenue and with only slight changes in the distribution of tax burdens across income groups. This conclusion holds irrespective of underlying assumptions regarding the long-run incidence of the corporate tax (compare Tables 13.12 and 13.13).

Imputation Credit

The distributional consequences of the imputation credit prototype are qualitatively similar to

those for dividend exclusion under both incidence assumptions. The imputation credit prototype, described in Chapter 11, would lose revenue when fully phased in. The revenue neutral version of the prototype decreases the reduction in effective tax rates for upper income groups, with a tax increase for the highest FEI group (with FEI exceeding \$200,000 per year).

Shareholder Allocation

The third column of calculations in Tables 13.12 and 13.13 presents the distribution of effective tax rates under the shareholder allocation prototype. There would be a significant annual revenue loss under shareholder allocation when fully phased in (see Section 13.H), leading to reductions in effective tax rates larger than under the distribution-related integration proposals, particularly for the top two income groups (with FEI of at least \$100,000 per year). With an offsetting uniform increase in tax rates on capital income to finance the revenue loss, tax reductions for upper-income taxpayers are attenuated, with slight overall increases in tax burdens for middle-income groups.

CBIT

Unlike the other integration prototypes considered in this Report, CBIT would not lose revenue. When fully phased in, the CBIT prototype would raise a small amount of revenue with no taxation of capital gains from the sale of CBIT assets, and a substantial amount of revenue with current law treatment of capital gains (see Section 13.H). In the former case, the revenue neutral version amounts to a very small tax increase for lower- and middle-income groups and a reduction in the effective tax rate for the highest income group. The reduction for the highest FEI group more reflects the distributional implications of the elimination of the capital gains tax on the sale of CBIT assets than the characteristics of CBIT as an integration prototype. To see this, note that the revenue neutral version of CBIT with current law treatment of capital gains has only very small impacts on effective tax rates relative to current law. These patterns of effective tax rates are

qualitatively similar under the two incidence assumptions we considered.

13.H REVENUE ESTIMATES FOR INTEGRATION PROTOTYPES

This section presents revenue estimates for integration prototypes. Below we discuss: the revenue estimating procedures and the assumptions behind the revenue estimates, long-run revenue estimates for each prototype, and revenue estimates for a 5 year budget period under the assumption that the proposals would be adopted effective January 1, 1992, and phased in over a 5 year period. While the prototypes are not legislative proposals and we do not contemplate that any would be proposed with so early an effective date, 5 year estimates based on the economic assumptions used to estimate other items in the Fiscal Year 1992 Federal budget are useful to permit comparison with other proposals.

Procedures and Assumptions

We prepared revenue estimates for the integration prototypes using the Individual Income Tax Model and the Corporate Income Tax Model of the Office of Tax Policy. These models are based on large samples of individual and corporate tax returns. Detailed computer programs are used to calculate tax liabilities and simulate changes in tax law provisions.

Earlier in this chapter, we examined economic effects of the adoption of the prototype integration proposals. The revenue estimates presented in this section are dynamic. That is, the revenue estimates use the changes in economic variables predicted by a computable general equilibrium model to adjust the levels of various components of income and deductions on the tax models. Among the important economic changes incorporated in the estimates for corporations are changes in dividend payout rates, debt to equity ratios, the share of capital in the corporate sector, and rates of return to capital in the corporate sector. Among the important changes in individual taxpayer behavior taken into account are those in

levels of interest and dividend income, income from non-corporate businesses (sole proprietorships, partnerships, farms, and small business corporations), capital gains realizations, and interest deductions. Changes in interest rates affect the income and deductions of both corporations and individuals. The effects of the proposals on the incentives of foreigners and tax-exempt institutions to hold different types of assets in their portfolios are taken into account.

Following the standard convention of revenue estimates produced by the Office of Tax Policy, Gross National Product (GNP) and the overall inflation rate are assumed to be unchanged as a result of the adoption of the prototypes.⁸³ Interest rates, relative prices, and the allocation of resources among sectors of the economy do change depending on the expected economic effects of the prototype. The allowance for changes in interest rates is not strictly in accord with conventional revenue estimating procedures because of the nature of the proposals estimated. The integration proposals are more likely to affect relative interest rates paid on different types of assets than tax changes commonly estimated. In particular, the significant changes introduced by some of the prototypes make it important to consider changes in interest rates.

An important additional assumption for the revenue estimates is that tax provisions other than those included in the proposal remain the same as under current law. An actual legislative proposal would include other changes which could affect the estimates presented here.

Effects of Integration on Federal Tax Revenue

We estimated fully phased-in revenue effects for each of the prototypes (at the 1991 level of real GNP) incorporating behavioral changes that would occur in the long run. These behavioral changes are those which would be expected to occur after the economy has fully adjusted to the new tax regime. While these estimates are not necessarily correct for the short run or the 5 year

budget period, they are important for understanding the long-run effects of the integration prototypes.

Dividend Exclusion

The dividend exclusion prototype taxes corporate income (defined as under current law) at a rate of 34 percent. Dividends paid out of taxed corporate income, i.e., those qualified by an Excludable Distributions Account (EDA) as described in Section 2.B, are not taxed at the individual level.⁸⁴ The amount added to the EDA is based on U.S. corporate taxes paid.⁸⁵ This excludes foreign taxes paid to the extent that they offset domestic taxes through the foreign tax credit.⁸⁶ Capital gains from the sale of corporate shares are treated the same as under current law. Outbound foreign investment is basically treated the same as under current law. For inbound investment, the withholding tax on dividends paid to foreigners is maintained.

The basic principle of the dividend exclusion prototype is to reduce the double tax on distributed corporate income. We estimate that when fully phased in, integration through dividend exclusion loses \$13.1 billion annually at 1991 levels of income.

Dynamic changes in the economy would increase corporate income tax receipts under the dividend exclusion prototype. Increases in corporate tax receipts would result from the incentive to shift corporate financing from debt to equity. The reduction in corporate borrowing would decrease corporate interest deductions. Induced changes in interest rates also would affect corporate interest deductions and therefore affect corporate tax revenues. The increases in corporate tax revenues would be slightly more than offset by the decrease in individual income tax receipts from the dividend exclusion. The dividend exclusion, thus, provides incentives for corporations to increase excluded dividends. In closely-held corporations, the incentive under current law to pay out profits as managerial wages or interest would be largely

eliminated, and there would therefore be some substitution of dividends for wages and interest payments to owners.

CBIT

The CBIT prototype for integration extends the logic of the dividend exclusion prototype to debt. Neither interest nor dividend payments would be deductible at the corporate level, but both interest and dividend payments from CBIT entities generally would be excludable at the investor level. The entity level CBIT tax rate of 31 percent would apply to both corporate and noncorporate businesses (except for small businesses, which would be taxed as under current law). Unlike interest on CBIT debt, home mortgage interest would continue to be deductible by the borrower and taxable to the lender, as under current law. Interest on U.S. Government debt would be taxable to the recipient. Interest tax-exempt under current law would remain tax-exempt to recipients under CBIT. We considered two alternative assumptions for the taxation of capital gains on CBIT assets: (1) no taxation of capital gains on CBIT assets and (2) current law treatment of capital gains on CBIT assets.

In contrast to the other integration prototypes, the CBIT prototype would increase tax receipts relative to those under current law. Once the behavioral changes are fully accounted for, the annual increase in revenues would be \$3.2 billion with no taxation of capital gains on CBIT assets and \$41.5 billion with current law treatment of capital gains. While overall tax receipts would be increased under the CBIT prototype, individual tax payments would be substantially reduced because dividends, noncorporate business income, most interest and some capital gains would no longer be taxable to individual recipients. The reduction in individual income tax receipts reflects the taxation of capital income at the entity level. Noncorporate entities subject to CBIT would now be taxed at the 31 percent CBIT rate. Much of this income is currently taxed under the individual income tax.

Shareholder Allocation

The shareholder allocation prototype approximates passthrough integration more closely than the dividend exclusion or CBIT prototypes. The prototype would retain a corporate tax rate of 34 percent. Taxable shareholders would receive a 31 percent credit for corporate level taxes paid, while tax-exempt and foreign shareholders would receive no credit. The credit would accompany the allocation of corporate income to the shareholder. Intercorporate dividends would be granted a full dividends-received deduction in lieu of a credit. Under this prototype, corporate income tax is taxed at the individual level as part of corporate income rather than as a separate income item. Capital gains on corporate stock due to retained earnings would not be taxed, since undistributed corporate income would increase shareholders' basis. Increases in corporate stock values from other sources would be taxed as under current law. For outbound investment, the foreign tax credit would be passed through at the taxable investor's rate. For inbound investment, the withholding tax on dividends paid to foreign investors would be retained.

Because shareholder allocation integration would extend distribution-related integration to retained earnings and shareholders would not be taxed on untaxed corporate preference income, it would lose significantly more revenue than would the dividend exclusion prototype. We estimate that when fully phased in, shareholder allocation integration would lose \$36.8 billion annually at 1991 levels of income.

Most of the revenue loss would be in the individual income tax. While taxable income of individuals would be increased substantially by including all corporate income (rather than just dividends received), this would be more than offset by the revenue loss from the credit for corporate taxes paid. For taxpayers in the 31 percent tax bracket, the tax on the additional income and the credit for corporate taxes paid

would offset each other and leave taxes approximately unchanged. For taxpayers in lower tax brackets, however, the additional corporate income subject to tax would be taxed at a lower rate than the credit. For example, taxpayers in the 15 percent bracket would be taxed at 15 percent on the additional income but receive a credit at a 31 percent rate. For lower tax bracket taxpayers, the corporate credit can be used to offset taxes against wages and other income.

The other major factor in the large revenue loss from the shareholder allocation prototype is the basis adjustment for corporate stock. Shareholders' basis would rise to reflect income already taxed at the corporate level, and so revenues from the taxation of capital gains on sales of stock would be reduced.

Corporate tax receipts would increase, since dynamic behavioral changes (including the expansion of the corporate sector) are taken into account. As with distribution-related integration, the increase in corporate tax receipts results primarily from the reduction in corporate debt and therefore in interest deductions.

Imputation Credit System

The final prototype we considered is distribution-related integration through an imputation credit system. Under this prototype, corporate taxes paid are credited to a shareholder credit account (SCA). Individual shareholders report dividends grossed-up (by one divided by one minus 0.31) to reflect corporate taxes paid and receive a credit for corporate taxes paid. The prototype calculates the credit and gross-up factor at the top individual 31 percent tax rate rather than the top 34 percent corporate tax rate to limit the credit to no more than the individual income tax paid by individuals in the highest tax bracket. We estimate that accomplishing distribution-related integration through an imputation credit system would generate a fully phased-in revenue loss of \$14.6 billion per year.

APPENDICES

APPENDIX A: THE CORPORATE INCOME TAX IN THE UNITED STATES

A.1 BRIEF DESCRIPTION OF THE CORPORATE INCOME TAX

The corporate income tax originally was enacted in 1909 as an excise tax on the privilege of doing business in the corporate form. An individual income tax on dividend income was enacted in 1916.

The Corporate Income Tax Base

Corporations are generally taxed at a 34 percent marginal rate on their taxable income. To compute taxable income, a corporation deducts from gross income business expenses paid or incurred during the taxable year. These expenses include employee compensation, state and local taxes, depreciation, and interest expense, but not dividends paid. When deductions exceed income, a corporation has a net operating loss (NOL). Corporations generally can carry back net operating losses to offset taxable income for the 3 preceding years and can carry forward any remaining net operating loss to offset taxable income for 15 years.

Like individuals, corporations generally include gains on appreciated assets in income (and deduct losses on depreciated assets from income) only when the assets are sold or otherwise disposed of (when the gains or losses are realized). Corporations may deduct capital losses only against capital gains, and unused capital losses may be carried back for 3 years and forward for 5 years.

Because the double tax on corporate earnings distributed to shareholders might become a triple or quadruple tax if corporations were taxed in full on dividends received from other corporations, a

corporate shareholder is entitled to a full or partial dividends received deduction (DRD), depending on its percentage ownership of the distributing corporation.

U.S. corporations are subject to tax on foreign as well as domestic income. Although a U.S. corporation is required to pay U.S. tax currently on foreign income earned through a foreign branch, U.S. tax is generally not imposed on earnings of a foreign subsidiary until the subsidiary distributes its income to the parent corporation as a dividend. In computing U.S. tax liability, U.S. taxpayers (including corporations) are allowed a credit for foreign taxes paid, subject to certain restrictions. See Chapter 7.

In addition to these general rules, special rules apply to specific types of businesses that conduct activity in corporate form, such as financial institutions and insurance companies. Other special rules apply to specific types of activities, such as the exploration, development, and production of natural resources. Certain types of corporations are granted full or partial relief from corporate level tax.

Tax Rates

Corporations are subject to tax at a rate of 15 percent on the first \$50,000 of taxable income, 25 percent on the next \$25,000 of taxable income, and 34 percent on taxable income above \$75,000. The marginal rate on a corporation's taxable income between \$100,000 and \$335,000 is increased by 5 percent to phase out the benefit of the graduated rate structure. Thus, corporations with incomes in the phaseout range pay tax at a marginal rate of 39 percent. Corporations with taxable incomes in excess of \$335,000 pay tax at

a flat 34 percent rate. In 1989, over 90 percent of corporate taxable income was taxed at the 34 percent rate.

Corporations also are subject to an alternative minimum tax (AMT). Corporations pay AMT only if their minimum tax liability exceeds their regular tax liability. A corporation's AMT base is its taxable income, adjusted to eliminate the benefit of certain deferrals of income, accelerations of deductions, and permanent exclusions. The resulting amount, alternative minimum taxable income (AMTI), is reduced by an exemption amount and is taxed at a 20 percent rate. The basic exemption amount is \$40,000, which is reduced by 25 percent of the amount by which AMTI exceeds \$150,000. A corporation's minimum tax liability can generally be credited against future regular tax liability.

Entities Subject to the Corporate Tax

A business entity is taxable as a corporation if it is organized as a corporation under state law. In addition, Treasury Regulations treat an unincorporated entity as a corporation if it has more corporate characteristics than noncorporate characteristics. The four relevant corporate characteristics are: (1) continuity of life, (2) centralization of management, (3) limitation of liability for debts to property of the entity, and (4) free transferability of interests.¹ Certain partnerships also are treated as corporations if their interests are traded on an established securities market or are readily tradable on a secondary market (or its equivalent) and the partnership is not engaged in a qualifying passive activity.²

Subchapter C refers to the provisions of the Code that apply to most corporations. In 1958, Congress enacted Subchapter S of the Code to enable certain corporations to elect exemption from the corporate level tax. S corporations, like partnerships, are generally treated like conduits for tax purposes. The income of S corporations is taxed directly to their shareholders. To qualify for this passthrough treatment, a corporation must have no more than 35 shareholders and only one class of stock, and all of its shareholders must be

individuals who are U.S. citizens or residents or certain trusts and estates. There also are restrictions on an S corporation's affiliations with other corporations.

In addition to S corporations, other entities that meet certain restrictions on assets, type of business, and distributions to shareholders qualify as conduits for all or a portion of their income. A regulated investment company (RIC), a mutual fund that makes diversified investments for its shareholders, pays no tax on amounts distributed to its shareholders if it distributes currently at least 90 percent of its dividend and interest income and meets certain other conditions.³ A real estate investment trust (REIT), a corporation or association that specializes in investments in real estate and real estate mortgages, also may receive passthrough treatment if it meets certain conditions designed to ensure that its assets and income are primarily related to real estate.⁴ A real estate mortgage investment conduit (REMIC), an entity that holds a fixed pool of mortgages and issues multiple classes of interests to investors, also qualifies for passthrough treatment.⁵ Qualified distributions to members of cooperative organizations also are taxed directly to the members and are not taxed at the entity level.

Treatment of Debt and Equity

Under present law, the tax treatment of the returns to an investor in a corporation depends upon whether an investment is considered debt or equity. A corporation generally can deduct interest on corporate debt.⁶ Consequently, corporate earnings paid to debtholders as interest bear no tax at the corporate level. In contrast, because dividends are not deductible, corporate tax must be paid on the earnings attributable to equity investments, regardless of whether the earnings are retained or distributed.

Individual debtholders are taxed on interest income when received or accrued, in accordance with their method of accounting. Individuals are taxed on corporate income when the income is distributed to them as dividends.⁷ Increases in the value of corporate stock held by individuals,

whether due to retained earnings, appreciation of the corporation's assets, or other factors, are generally not taxed until the stock is sold.⁸ Such gains are generally capital gains. Individuals also may not deduct losses on corporate stock until the stock is sold. Such losses are generally capital losses and may be deducted without limitation against capital gains. However, capital losses in excess of capital gains also may be used to offset only \$3,000 of an individual's ordinary income per year, with any excess carried forward indefinitely.

Corporate debtholders also pay tax on interest income when received or accrued, in accordance with their method of accounting. A corporate shareholder must include all dividends in income but can deduct a portion of dividends received from other domestic corporations. The deduction for dividends received is 70 percent if the recipient corporation owns less than 20 percent of the stock of the payor, and 80 percent if the recipient corporation owns between 20 percent and 80 percent of the stock of the payor.⁹ Intercorporate dividends among members of affiliated groups (each 80 percent or more owned, directly or indirectly, by a common parent) are generally fully deductible by the recipient. Thus, the maximum rate of tax on dividends received by corporate shareholders is generally 10.2 percent (30 percent of dividends received multiplied by the 34 percent corporate tax rate). Corporate capital gains are currently taxed at the same rate as ordinary income, and capital losses may offset capital gains, but not ordinary income, with a 3 year carryback and 5 year carryforward.

Although debt and equity are treated very differently by the tax system, distinguishing debt from equity is not straightforward. In 1969, Congress authorized the Department of the Treasury to issue regulations to determine whether an interest in a corporation should be treated as stock or debt for tax purposes. Congress suggested that Treasury consider the following factors in making this determination: (1) the existence of a written unconditional promise to pay on demand or on a specified date a sum certain in money at a fixed

rate of interest, (2) whether the instrument is subordinated to or has preference over any debt of the corporation, (3) the issuer's debt to equity ratio, (4) whether the instrument is convertible into stock, and (5) the relationship between holdings of the issuer's stock and holdings of the instrument in question.¹⁰

Although Treasury issued three drafts of regulations attempting to distinguish debt from equity, the task of devising simple, workable rules for distinguishing between debt and equity proved elusive. Ultimately, Treasury withdrew all of these regulations.

In the absence of regulations, taxpayers and the IRS look to judicial opinions and IRS rulings to determine whether an instrument will be treated as debt or equity for tax purposes. In addition to the factors listed in the 1969 statute, the following factors have been considered relevant: (1) the holder's rights upon default, (2) the equity features of the instrument, such as voting rights or participation in earnings, (3) whether the corporation has sufficient projected cash flow to service the debt, (4) whether the holder has management rights, and (5) whether the holder acts like a reasonable creditor in protecting its rights.

To summarize, it has not proved possible to develop simple and acceptable guidelines for distinguishing between debt and equity. As financial markets become more flexible and innovative, that task becomes more difficult. The administrative complexity and compliance costs associated with making the debt-equity distinction are serious problems in the current system of corporate taxation.

Cross-Border Investment

The tax treatment of cross-border investment is discussed in Chapter 7.

Tax-Exempt Organizations

The treatment of tax-exempt organizations is discussed in Chapter 6.

A.2 OVERVIEW OF U.S. CORPORATE TAX RECEIPTS

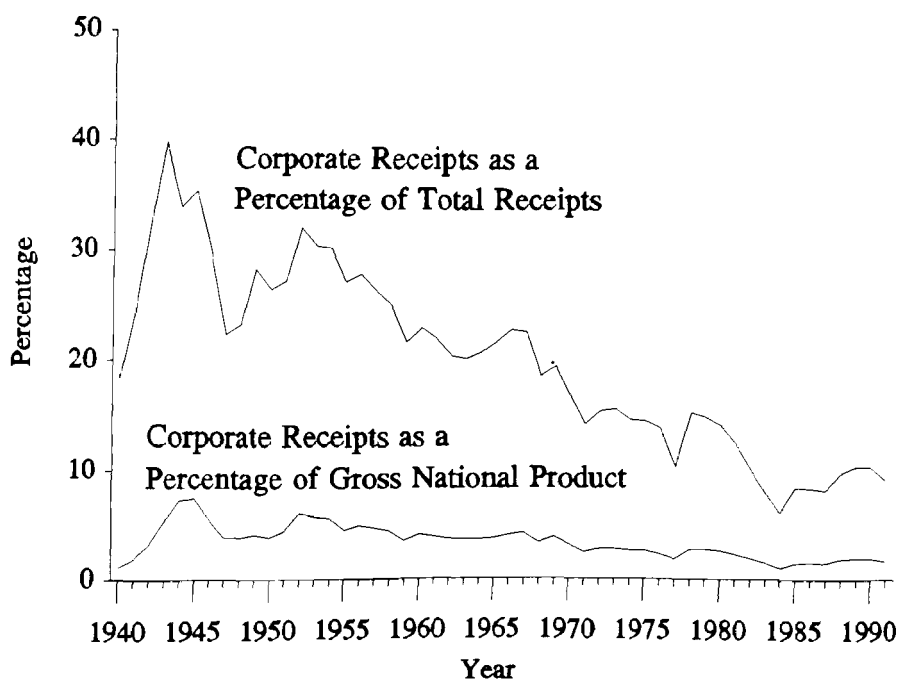
In 1990, the corporate tax generated Federal revenues of \$93.5 billion. Federal corporate tax receipts have generally increased over the past 40 years, but when adjusted for inflation, they have fallen since the late 1960s. In constant 1982 dollars, corporate tax receipts averaged \$85 billion per year in the 1950s, \$86 billion per year in the 1960s, \$77 billion per year in the 1970s, and \$56 billion per year from 1980 to 1986. Since 1986, real corporate tax receipts have averaged \$76 billion per year in 1982 dollars. From the 1950s to 1986, corporate receipts also fell as a percentage of Federal budget receipts and of gross national product (GNP). See Figure A.1. Since 1986, however, the decline in the relative importance of the corporate tax has stopped and may have reversed. From 1987 through 1990, corporate receipts averaged 9.9 percent of total Federal budget receipts, above the average of 8.9 percent for the rest of the 1980s, but less than the 1970s average of 15.0 percent. From 1987 to 1990, estimated tax liabilities for nonfinancial corporations, relative to GNP or gross domestic product, also slightly exceeded the average for the early 1980s.

The Tax Reform Act of 1986 (the 1986 Act) adopted base-broadening measures designed to increase the overall level of corporate taxes, although it reduced the maximum marginal corporate tax rate from 46 percent to 34 percent. The base broadening was accomplished primarily by repealing the investment tax credit, limiting depreciation deductions, restricting the use of net operating losses, strengthening the corporate alternative minimum tax, repealing the *General Utilities* doctrine, and adopting significant changes in accounting rules,

for example, rules requiring uniform capitalization of certain expenditures. As anticipated, the 1986 Act increased corporate income tax receipts (and lowered individual income tax receipts) as a percentage of total income tax receipts. The percentage of income tax receipts accounted for by corporate taxes increased from 15 percent in 1986 to 19 percent in 1989 and dropped back to 17 percent in 1990. The percentage of income tax receipts accounted for by individual income taxes fell from 85 percent to 81 percent, rising to 83 percent in 1990. Current estimates indicate that the 1986 Act increased corporate income tax receipts by approximately \$130 billion from 1987 to 1991.

The level of corporate tax receipts depends heavily on economic conditions. When the U.S. economy is growing, corporate profits are strong, and corporate tax receipts increase, but when the economy is in recession, corporate profits tend to fall, and corporate taxes decrease. During the recession of the early 1980s, for example, corporate taxes as a percentage of total budget receipts fell from 10.2 percent in 1981 to 6.2 percent in 1983. This decline was mostly

Figure A.1
Corporate Receipts as a Percentage of Total Receipts and Gross National Product 1940-1991



attributable to the a decline in pre-tax corporate profits, from \$202 billion in 1981 to an average of \$178 billion in 1982 and 1983.

Foreign countries have a wide variety of tax systems, which make it difficult to compare directly corporate tax burdens across countries, but some general observations can be made. In 1988, corporate income taxes accounted for an average of 8 percent of total income tax receipts for the 22 countries in the OECD. The average in 1988 was the same as in 1980. Although U.S.

corporate income taxes were 8 percent of total tax receipts in 1988, the same as the average for the 22 OECD countries, the U.S. percentage is expected to be higher in subsequent years if current trends continue. Countries with percentages higher than the OECD average in 1988 include Japan at 24 percent, the United Kingdom at 11 percent, and Italy at 9 percent; countries with percentages below the OECD average include Germany at 5 percent, France at 5 percent, and Switzerland at 7 percent.¹¹

APPENDIX B: EXPERIENCE OF OTHER COUNTRIES WITH DISTRIBUTION-RELATED INTEGRATION SYSTEMS

This appendix briefly describes the distribution-related integrated systems of six of the United States' major trading partners.¹ The Australian and New Zealand imputation credit systems most closely resemble the prototype discussed in Chapter 11. The United Kingdom system is a prominent example of a compensatory tax system. This appendix also discusses the Canadian, French and German distribution-related systems. This appendix does not describe the Japanese corporate tax system, because in 1989 Japan replaced its split rate tax system with a classical system.

B.1 AUSTRALIA

Introduction

Australia's imputation credit system became effective July 1, 1987. Major changes to related tax laws have subsequently taken effect, most notably:

- a reduction in the top corporate rate from 49 percent to 39 percent,
- the imposition of a 15 percent tax on the investment income of pension plans, and the extension to them of the imputation credit (at the full rate of 39 percent), and
- the exemption of most foreign income from the corporate tax base.

Description of Mechanics

Imputation Credits

Australia's imputation credit system makes imputation credits available to taxable shareholders (including pension plans) for distributions from the corporation's franking account. Imputation credits provide full relief from the corporate level tax paid with respect to distributed income. Distributions not paid from the franking account are considered to be paid from preference income and are taxed to the shareholder without gross-up and without credit.

The shareholder receives an imputation credit equal to the amount of distributions from the franking account (franked distributions), grossed-up at the corporate rate (currently, 39 percent), and then multiplied by that rate.² The shareholder includes this amount in his income and receives a credit in the same amount against his personal tax liability. Imputation credits generally are not refundable.

The balance in the franking account represents the portion of the corporation's after-tax income that, in effect, has been taxed fully (taxed at the corporate rate). In general, the franking account balance derives from the amount of tax the corporation pays. At the current tax rate of 39 percent, for every AU\$39 the corporation pays in tax, it adds AU\$61 to the balance of the account. The calculation converts after-tax corporate income that is taxed at various rates into an equivalent combination of fully-taxed and fully exempt amounts.³ Thus, Australia's system accords shareholders relief only from corporate level tax actually paid with respect to distributed income, and distributed preference income is subject to tax at the shareholder level.

An Australian corporation must make entries in its franking account throughout the year upon the occurrence of specified events in the assessment, payment, and adjustment of tax. The franking account is credited when the corporation: carries forward a franking surplus from the previous year, pays tax, receives franked dividends from another company, is served with a determination reducing the amount of a "franking deficit tax offset," or has an "estimated debit determination" (see "Allocating Credits to Dividends," below) that lapses or substitutes a new estimated debit determination.

The franking account is debited when the corporation: pays franked dividends, has tax refunded, is served with a determination (or increase) of a franking deficit tax offset, receives

(or is deemed to receive) notice of an estimated debit determination, e.g., appeals a tax assessment, makes on-market share buybacks; or underfranks a dividend (franks it by less than the required franking amount, if the required franking amount is 10 percent or more of the dividend).

Compensatory or Withholding Tax

The Australian system does not have a compensatory or withholding tax on distributions.

Dividends Defined, Bonus Shares, Share Repurchases

In general, dividends include all non-liquidating distributions of money or other property to shareholders out of profits (under corporate law, the corporation cannot pay dividends as a return of capital without a court order). Liquidating distributions generally are deemed to be dividends to the extent they represent profits.

A corporation can issue bonus shares as a mechanism for extending the imputation system to retained earnings. An issue of bonus shares distributed to a shareholder is treated as a dividend unless it is paid out of the corporation's share premium account (which represents amounts paid on issuance of shares in excess of par value). Thus, if the corporation has a sufficient balance in its share premium account, it can choose the tax treatment of the bonus issue by choosing whether or not to debit the account, subject to certain rules for dividend-streaming arrangements. See "Streaming" below.

The tax treatment of a share repurchase (or "buyback") differs depending upon whether the transaction is an "on-market" or an "off-market" purchase. An on-market buyback occurs in the ordinary course of business on an official exchange; an off-market buyback (a buyback by an unlisted company or by a listed company not in the ordinary course) occurs otherwise.

An off-market buyback is treated as a dividend to the extent it exceeds paid-up capital for the shares (share capital plus the amount, if any,

allocated to the buyback from the share premium account). With respect to the dividend portion, the corporation debits its franking account as required under the general rules and the shareholder receives the imputation credit. The shareholder's basis in his stock is irrelevant for dividend purposes but is relevant for the portion treated as return of paid-up capital, so the shareholder could have a dividend and a capital gain or loss on the same transaction.

An on-market buyback is treated as a capital transaction to the shareholder (because he does not know that his buyer is the corporation). The corporation has no gain, loss, or deductions. However, the corporation must treat the buyback as a dividend to the extent it would be a dividend if it were off-market and, with respect to such amount, must debit its franking account under the allocation rules. See "Allocating Credits to Dividends," below. (This notional dividend also might affect any provisional required franking amount for any actual frankable dividend.) No imputation credit is available to the shareholder to offset his capital gain.⁴

Allocating Credits to Dividends

Australia has adopted allocation rules generally designed to assure that a corporation pays dividends first out of the franking account, and to prevent corporations from streaming franked dividends to resident shareholders, who can use imputation credits, and unfranked dividends to foreign shareholders (and tax-exempt shareholders), who cannot. The allocation rules impose a minimum "required franking amount" for a dividend and provide for adjustments and sometimes penalties if a dividend is overfranked or underfranked by more than a de minimis amount.

The required franking amount ideally franks all dividends paid during the year to the extent of the corporation's after-tax income. To ensure that the corporation does not underfrank a dividend, the rules require the company: (1) to take into account all dividends to be paid on the same day, that have been declared but not yet paid, or that the corporation is committed to pay later in the

same year (a committed future dividend), such as dividends on preferred stock, in allocating franking credits to a given dividend, (2) to frank a dividend that was a committed future dividend at least to the same extent as the earlier dividend, and (3) to frank a dividend at least to the same extent as any other dividend on the same day.⁵ These rules do not, however, prevent a corporation from franking an earlier dividend on one class of stock at one rate and franking a later dividend on another class of stock at a lower rate where the corporation was not committed to pay the later dividend or where the later dividend is paid in the succeeding year. An upper limit on franking is set by reference to the corporate tax rate; at current rates, a dividend of AU\$61 can carry no more than AU\$39 of imputation credits.

The required franking amount could range from zero, for a corporation with no taxable income, to 39 percent of the dividend, for a corporation with sufficient after-tax income. However, the required franking amount might not be readily determinable when a dividend is distributed during the year, where it is not clear whether the corporation will have sufficient taxable income for that year. The situation also could be complicated by later events, such as a refund of previously paid tax. If, for such a reason, a year-end deficit were to result, the corporation would be subject to a franking deficit tax and possibly a penalty tax. An estimated debit determination is a procedure for resolving this problem; if the corporation expects such a later debit, so the dividends paid would turn out to have been overfranked, the corporation may notify the tax authorities and make an anticipatory debit to its franking account.

If a corporation underfranks a dividend (and if the required franking amount is 10 percent or more of the dividend), the corporation must debit its franking account to the extent of the underfranking. Thus, the corporation is treated as having franked the dividends to the required amount, but the shareholders forfeit the imputation credit attributable to the underfranking.

Where overfranked dividends (or other adjustments) result in a deficit in the franking account at the end of the year, the corporation must pay a franking deficit tax. The franking deficit tax is the amount of tax sufficient to restore the franking account to zero.⁶ This tax does not result in a positive credit to the franking account, because it functions as a prepayment of corporate tax prematurely imputed to shareholders by the payment of overfranked dividends. The franking deficit tax is not a penalty, and therefore a corporation may offset a payment of franking deficit tax against its future tax liability. However, to discourage more than de minimis overfranking, a penalty equal to 30 percent of the franking deficit tax is payable where the franking deficit exceeds 10 percent of the total of the franking credits arising during the year and any dividend paid during the year was overfranked.

Tax Rates

The corporate tax rate currently is 39 percent. Marginal tax rates for individuals range from 0 percent to 47 percent. The 47 percent rate applies to taxpayers with taxable income exceeding AU\$50,000. Capital gains on assets acquired after September 19, 1985 are taxed at ordinary income rates. However, to determine the amount of gain recognized on disposition of a capital asset, basis in the asset is indexed for inflation if the asset was held for more than 1 year.

Treatment of Preference Income

Dividends paid out of preference income (when the franking account balance is zero) are taxable when received by shareholders and thus corporate preferences are not extended to shareholders.

The Australian system currently provides corporations few preferences. In 1988 Australia reformed its depreciation system and other tax concessions. For example, depreciation rates for "plant" were based on 5 or 3 year lives; now they are based on effective lives (using a 150 percent

declining balance or "prime cost") plus a 20 percent "loading." The 150 percent deduction for research and development expenditures is scheduled to be scaled back to 125 percent in the mid-1990s.

Treatment of Domestic Intercorporate Dividends

Dividends received by an Australian corporation from another Australian corporation generally are free of tax because tax is rebated. In addition, credits attached to intercorporate dividends are credited to the recipient corporation's franking account. However, unfranked dividends to private corporations (generally, unlisted corporations) are taxed without refund. This exception is designed to prevent the use of private corporations to defer tax on distributed preference income. Australia does not permit consolidation of affiliated corporations for purposes of its imputation system (or for its corporate tax generally, although there is loss transfer for 100 percent related corporations).

Treatment of Foreign Source Income

Beginning July 1, 1990, foreign source income derived from comparable tax countries through a branch is generally excludable from corporate income. An exemption from corporate tax also applies to dividends received from a corporation resident in a comparable tax country if the Australian corporation owns at least a 10 percent interest in that corporation. Dividends received from portfolio investments (i.e., less than 10 percent) in corporations resident in comparable tax countries are taxable with a credit allowed for foreign withholding taxes. However, because foreign taxes paid with respect to foreign source income derived from comparable tax countries do not generate credits to the franking account, dividends paid by an Australian corporation out of such income do not carry credits in respect of such foreign taxes and are exposed to shareholder level tax. Thus, this foreign source corporate income is still double-taxed, once when earned in the foreign country and once when the after-foreign-tax amount is distributed to domestic individual shareholders.

Income derived from low-tax countries through a branch or a nonresident corporation generally is subject to full taxation at the corporate level with a credit for foreign taxes paid on such income. Where an Australian corporation owns a 10 percent or more interest in a corporation residing in, or deriving substantial income from, a low-tax country, the Australian corporation is taxed currently on its share of the nonresident corporation's income and may credit its share of foreign taxes paid by the nonresident corporation on an "accruals" basis, provided that the foreign corporation is a controlled foreign company (that is, 5 or fewer Australian residents control 50 percent or more of the company). Such a 10 percent shareholder maintains an "Attribution Tax Account" (ATA) for every entity in the chain, in which income is attributed to that entity; when a dividend is paid between entities, a debit is made to the ATA of the paying corporation and a credit is recorded in the ATA of the receiving corporation.⁷ Where the Australian corporation owns a lesser percentage, the accruals tax does not apply, but dividends received are subject to Australian tax (with a tax credit for foreign withholding taxes paid on the dividend). Because foreign taxes paid do not generate credits to the franking account, dividends paid out of such income to the shareholders of the Australian corporation are exposed to shareholder level tax. The net effect of this system is the equivalent of allowing a deduction for foreign taxes on distributed foreign source income earned through an Australian corporation.

Treatment of Tax-Exempt Shareholders

Excess imputation credits are not refundable to any shareholder, including tax-exempt shareholders. Accordingly, income taxed at the corporate level is subject to one level of tax even where it is distributed to tax-exempt shareholders.

Until 1988, pension funds were tax-exempt, although distributions were taxable to beneficiaries. The new statute imposes a tax at a 15 percent rate on the investment income of pension funds, but allows pension funds an imputation

credit for franked dividends at the full 39 percent rate. Thus, a pension fund can use the excess imputation credits (a 24 percent credit) to shelter the tax on a large amount of other investment income (such as interest, rents, royalties, foreign income, capital gains, and unfranked dividends). Pension funds also may utilize imputation credits to reduce tax imposed on contributions. These changes are designed in part to encourage pension funds to invest in domestic corporations having Australian tax liability, thus reducing the tax arbitrage gains to pension funds from investing in bonds or in corporations paying unfranked dividends.

Treatment of Foreign Shareholders

Australia generally imposes a withholding tax on dividends from Australian corporations to nonresident shareholders. No distinction is made between portfolio and nonportfolio investment. The normal withholding rate is 30 percent, but treaties may reduce this rate to 15 percent. The gross-up and imputation credit procedure does not apply to nonresident shareholders. However, the franked portion of a dividend is exempt from the withholding tax. Thus, the franked portion of a dividend bears Australian tax at the 39 percent corporate rate. Unfranked dividends are subject to withholding tax and, thus, bear Australian tax at the applicable withholding rate.

Treatment of Low-Bracket Shareholders

Although a shareholder may use excess credits to offset any other tax liability he may have, excess credits are not refundable. Unused credits may not be carried forward or back. The imputation credit (aggregated with other nonrefundable credits) is stacked so refunds from other sources cannot impair use of the credit.

Streaming

In addition to the allocation rules described above, Australia has adopted several anti-streaming provisions. First, where a dividend is paid to a corporate shareholder as part of a dividend

stripping operation, imputation credits attached to the dividend and the tax rebate for intercorporate dividends may be denied. One effect of the dividend stripping rule is to discourage sales of shares by tax-exempt or nonresident shareholders in anticipation of the payment of a franked dividend. Second, to inhibit streaming through partnerships and trusts, imputation credits received by a partnership or trust are generally allocated in accordance with a partner's or beneficiary's share of partnership or trust income. Third, a special debit to the franking account is required when a corporation distributes an unfranked dividend or tax-exempt bonus share to a shareholder in substitution for a franked dividend as part of a dividend streaming arrangement. Generally, the franking debit is calculated as if the franked dividend had been franked to the same extent as the dividend for which it substituted, thus ensuring equal franking for all dividends paid on a particular class of stock as part of the same distribution.

Treatment of Interest

Interest paid by an Australian corporation generally is deductible. Interest paid to a resident lender is includable in the lender's income. Interest paid to a foreign lender (whether or not resident in a treaty country) is subject to a 10 percent withholding tax. Australia has a thin capitalization rule that denies a resident corporation a deduction for interest paid to foreign shareholders where the foreign shareholders own at least 15 percent of the resident corporation and the resident corporation's debt to equity ratio with respect to the nonresident shareholders' investment is in greater than 3 to 1 (6 to 1 for financial institutions). Beginning July 1, 1990, this rule applies even if the foreign controlling shareholder is in turn controlled by Australian residents.

B.2 CANADA

Introduction

Canada introduced distribution-related integration in 1971 with the adoption of a straight credit system that grants a credit to resident individual Canadian shareholders with respect to dividends

received from Canadian corporations. The credit is not required to be funded at the corporate level. That is, the amount of the shareholder credit does not depend on the payment of tax by the corporation. Excess credits are not refundable.

Description of Mechanics

Credits

Where a Canadian resident individual shareholder receives a taxable dividend (described below) from a Canadian corporation, the shareholder grosses up the dividend by 25 percent (i.e., includes 125 percent of the dividend in income) and takes a credit against his Federal individual income tax for 66.7 percent of the amount of the gross-up. Provincial individual taxes are calculated as approximately 50 percent of the shareholder's Federal tax liability (after the reduction for the shareholder tax credit). Thus, the provincial tax is reduced by approximately 33.3 percent of the amount of the gross-up, and the total value of the shareholder credit against the combined Federal and provincial liability of the shareholder is approximately equal to the amount of the gross-up.⁸

The gross-up and credit are not dependent on the payment of Canadian tax at the corporate level. Thus, the shareholder credit may provide full or partial relief from corporate level tax, depending upon the tax rate applicable to the corporation paying the dividend. If no tax is paid at the corporate level, the shareholder credit completely or partially offsets the shareholder level tax, which is the only level of tax that would otherwise apply to the distributed income. For example, a dividend that is paid exclusively out of preference income would carry the full credit, the same as a dividend paid out of Canadian source sales income. In the former case, the corporation pays no Canadian corporate tax and, in the latter case, it pays a net Federal tax of more than 28 percent.

The degree to which the Canadian system integrates corporate and shareholder tax depends

on the rate at which distributed income has been taxed at the corporate level under the Federal and provincial tax systems. See "Tax Rates," below. Combining Federal and Ontario provincial tax, the system integrates 32 percent of a regular corporation's tax, 41 percent of a manufacturing corporation's tax, and 86 percent of a small business corporation's tax.⁹

Compensatory or Withholding Tax

Canada does not impose a compensatory or withholding tax on dividends to resident shareholders.

Dividends Defined, Bonus Shares, Share Repurchases

In general, a taxable dividend includes any nonliquidating distribution with respect to shares out of surplus funds. Accordingly, a return of contributed surplus that has not been converted into paid-up capital is a taxable dividend. A liquidating distribution constitutes a taxable dividend to the extent it exceeds paid-up capital (defined to exclude contributed surplus).

A stock dividend is generally treated as a taxable dividend. However, subject to certain exceptions, the amount of the dividend is limited to the increase in paid-up capital in respect of the stock dividend.

A share repurchase generally is treated as a taxable dividend to the extent that the amount paid exceeds the paid-up capital on the shares repurchased. The amount so treated is excluded in determining the shareholder's capital gain or loss. These rules, however, do not apply to a corporation's open market purchases of its shares.

Allocating Credits to Dividends

Because the shareholder credit is not dependent on the actual payment of corporate tax, the Canadian system does not require rules allocating credits to dividends.

Tax Rates

The Federal basic corporate rate is 38 percent. Provincial basic corporate rates generally range from 14 percent to 17 percent. However, an abatement of Federal corporate tax is allowed in respect of provincial tax equal to 10 percent of taxable income earned in a province. In addition, a surtax currently is imposed on corporations equal to 3 percent of a corporation's Federal tax liability. Thus, effective combined Federal and provincial corporate tax rates vary from 42.8 percent to 45.8 percent.

For individuals, Federal tax rates are 17 percent for taxable income up to \$28,784, 26 percent for taxable income of \$28,784 to \$57,578, and 29 percent for taxable income in excess of \$57,578.¹⁰ A Federal surtax of 5 percent is currently in place. Provincial tax is imposed as a percentage of Federal tax, varying from 46.5 percent to 62 percent. Some provinces impose a surtax on high-income individuals.

Corporate and individual taxpayers are taxed at ordinary income rates on 75 percent of their net capital gain in a taxable year. For individuals, a lifetime exemption of \$100,000 of gain applies. The lifetime exemption is \$500,000 for small business shares and farm property. For individuals, in addition to actual realized gain, gain is deemed to be realized with respect to many kinds of assets at death, at the time of transfer by gift or at the time the owner gives up Canadian residence.

Treatment of Preference Income

Because the shareholder credit is not dependent on the payment of tax at the corporate level, the Canadian system can be described as extending preferences to shareholders. However, because the Canadian system may provide less than 100 percent integration of the corporate and shareholder taxes on distributed income, the extension of preferences may be more than offset by the remaining double tax on taxable income. For example, for regular corporations the credit generally equals half of Federal corporate tax.

Thus, preferences are not extended to shareholders until preference income exceeds half of total corporate income.¹¹

A 5 percentage point reduction in the basic rate of corporate tax (from 38 percent to 33 percent) applies to manufacturing and processing income of a resident corporation. For Canadian small business corporations, a deduction applies that effectively reduces the basic rate by 16 percentage points (from 38 percent to 22 percent). Except for a 35 percent research and development credit, investment tax credits apply only in selected geographic areas. A more generalized investment tax credit was phased out in 1988 as part of tax reform. As discussed above, only 75 percent of net realized capital gains are included in income. Certain assets are eligible for accelerated depreciation.

Treatment of Domestic Intercorporate Dividends

The gross-up and shareholder credit mechanism does not apply to dividends paid by a Canadian corporation to a Canadian corporate shareholder. In general, however, domestic intercorporate dividends are deductible in computing the income of the Canadian shareholder corporation.¹² Thus, preferences generally are not recaptured when preference income is distributed to corporate shareholders. However, for Canadian portfolio dividends received by a private or privately-controlled Canadian corporation, a tax of 25 percent is payable by the recipient corporation and is refunded to the corporation when the dividends are redistributed to shareholders.

Treatment of Foreign Source Income

Resident corporations are taxed on their worldwide income. This includes current taxation on an accrual basis of passive income earned through a controlled foreign affiliate. However, Canada provides exemptions for certain types of foreign source income and a foreign tax credit with respect to certain other types of foreign source income. For example, dividends received from a foreign affiliate resident in a prescribed

country out of its active business income in that country or another prescribed country generally are exempt from Canadian corporate tax. Tax credits are allowed with respect to portfolio dividends received from a nonresident corporation, but not for underlying foreign taxes paid by that corporation on the income distributed. The effect of these exemptions and credits is to relieve, in whole or in part, corporate level Canadian tax on foreign source income. Because the shareholder credit does not depend on the extent to which the underlying corporate income has been taxed, the Canadian system extends the benefits of integration to foreign source income to the extent of the shareholder credit.

Treatment of Tax-Exempt Shareholders

Certain persons are excluded from Canadian tax, including charities and pension funds. However, because the shareholder credit is nonrefundable, tax-exempt shareholders do not receive the benefit of Canadian integration.

Treatment of Foreign Shareholders

The Canadian integration system generally is not extended to nonresident shareholders because the gross-up and shareholder credit mechanism does not apply to dividends paid to nonresident shareholders. Dividends paid to foreign shareholders are subject to a withholding tax at a statutory rate of 25 percent. By treaty, Canada typically reduces the rate to 10 percent for direct investment dividends and to 15 percent for portfolio dividends. The 1980 U.S. treaty, reflecting this policy, was the first in which Canada reduced its dividend withholding rate below 15 percent. This concession for direct investment dividends in the U.S. treaty was seen as extending to U.S. direct investors in Canadian corporations some of the benefit of Canadian integration.

Low-Bracket Shareholders

Excess shareholder credits are available to offset income tax liability with respect to other

income. Credits not used in the year received may not be refunded or carried forward.

Streaming

The Canadian system includes stop-loss rules that inhibit dividend stripping by requiring that, in certain circumstances, the amount of a loss recognized on a sale of shares be reduced by dividends received on the shares.

In addition, the gross-up and credit mechanism does not apply where a "dividend rental arrangement" exists. A dividend rental arrangement essentially is a transfer of shares where the transferee receives the dividend but the transferor retains the risk of loss and opportunity for gain with respect to the shares. Finally, under a general anti-abuse rule, Canadian tax authorities may deny a tax benefit where there is an avoidance transaction and a misuse of provisions of tax laws. An avoidance transaction is a transaction resulting in a tax benefit unless the transaction reasonably could be considered to have been undertaken primarily for non-tax reasons.

Treatment of Interest

Interest paid by a Canadian corporation is deductible if the interest relates to borrowed money used for the purpose of earning income from a business or property or for acquiring property for gain upon resale. A thin capitalization rule prohibits the deduction of interest paid by a thinly capitalized corporation to nonresident shareholders owning 25 percent or more of any class of the corporation's stock.

Interest income generally is taxable to resident lenders. A withholding tax generally is imposed on interest paid by Canadian corporations to nonresident lenders at the statutory rate of 25 percent. No withholding tax is imposed with respect to interest paid on corporate bonds or debentures to an arm's-length lender if no more than 25 percent of the principal amount is repayable within 5 years of issuance. In addition, the withholding rate may be reduced by treaty to 10 or 15 percent.

B.3 FRANCE

Introduction

The French distribution-related integration system combines three elements: (1) an imputation credit (avoir fiscal), (2) a compensatory tax (precompte mobilier), and (3) for 1989 through 1991, a "split" tax rate on corporate profits.

The avoir fiscal credit was enacted in 1965 and, simultaneously, a 24 percent withholding tax on dividends was repealed. The new system became fully effective in 1967.

In 1989, the French introduced a split rate system, which applies a higher tax rate to distributed profits. The split rate system was designed to provide an incentive for corporate financing through retained earnings and balance the incentive, created by the avoir fiscal, to distribute earnings and to finance through new equity capital. This system has been eliminated, however, beginning in 1992.

Description of Mechanics

Imputation Credits

Upon receipt of an eligible dividend (described below), a French resident individual or corporate shareholder is allowed a tax credit (the avoir fiscal) equal to 50 percent of the amount of the dividend, or 33.3 percent of the amount of the dividend plus the avoir fiscal. A shareholder must include in income both the amount of a dividend payment and the amount of the avoir fiscal.

The gross-up and avoir fiscal partially integrate corporate tax paid on distributed income. For 1991, distributed income is subject to a tax rate of 42 percent at the corporate level. The avoir fiscal, thus, equals 69 percent of the tax paid by the corporation on distributed income and 29 percent of the pre-tax amount of such income. For example, profits of F100 are subject to corporate tax of F42 prior to distribution, leaving a net amount for distribution of F58. A shareholder would include a total of F87 (F58 + F29) in

income. The avoir fiscal associated with this F87 dividend is F29. For 1992, distributed income will be subject to corporate level tax at the rate of 34 percent. The avoir fiscal will thus equal 97 percent of the tax paid by the corporation on distributed income and 33 percent of the pre-tax amount of such income.¹³

In order to encourage corporate distributions, the avoir fiscal is not allowed to shareholders in respect of dividends paid out of profits realized more than 5 years prior to distribution. In addition, the avoir fiscal is not available to foreign shareholders, unless specific provision is made in an income tax treaty: If the amount of the avoir fiscal exceeds the tax liability of an individual shareholder, the excess is refunded. The same is true for some tax-exempt shareholders. No refund is available to a corporate shareholder.

Split Rate Tax and Compensatory Tax (Precompte Mobilier)

The French split rate tax system, in effect for 1989 through 1991, is unusual in that it applies a higher tax rate to distributed profits than to retained profits. For fiscal years beginning on or after January 1, 1991 and before January 1, 1992, retained corporate profits are taxed at a rate of 34 percent, and distributed corporate profits are taxed at a higher rate of 42 percent. The additional 8 percent is imposed as a surtax in the year of distribution. The application of a higher tax rate to distributed profits was instituted for 1989 through 1991 to encourage corporate saving and investment. Taking into account the avoir fiscal credit allowed to shareholders, the effective corporate level tax rate on distributed taxable income is 13 percent for 1991. Consistent with recent corporate tax rate reductions in the United States and other EC countries, however, the French government recently eliminated the 8 percent surtax on distributed income.

The precompte mobilier is imposed on a distributing corporation in respect of dividends distributed (1) out of profits that have not borne regular corporate income tax at the 34 percent rate, e.g., foreign source income, preference

income, and dividends received by a parent company from a 10 percent owned subsidiary or (2) from fully-taxed profits earned more than 5 years before the distribution.¹⁴ The precompte mobilier is imposed at a rate of 50 percent of the amount of the dividend, or 33.3 percent of the dividend plus the precompte mobilier. Thus, the amount of the precompte mobilier is equal to the amount of the avoir fiscal associated with the dividend. No distinction is made in calculating precompte mobilier liability between income that is not taxed and income that is taxed at a rate lower than 34 percent.¹⁵

French corporations are required to segregate fully-taxed income from income potentially subject to the precompte mobilier for tax accounting purposes. In general, dividends eligible for avoir fiscal are deemed to be distributed first out of current fully-taxed income, and then out of fully-taxed retained income of each of the immediately preceding 5 years. Once fully-taxed income for this 5 year period has been exhausted, a corporation may choose to allocate a dividend distribution to (1) dividends received from foreign subsidiaries, (2) the long-term capital gains reserve, or (3) other miscellaneous preference income in any order. France thus allows stacking of dividends last against preference income.

A French corporation may elect, alternatively, to allocate part or all of a distribution eligible for the avoir fiscal first against dividends received from a French subsidiary within the last 5 years (rather than to current taxable income). Dividends received from French subsidiaries are subject, in principle, to the precompte mobilier. On redistribution, however, the avoir fiscal associated with such dividends may be credited against the precompte mobilier liability.

Dividends Defined, Bonus Shares, Share Repurchases

Distributions are eligible for the avoir fiscal if they are made from corporate income, are made pro rata to shareholders, and are based on a regular decision of the corporation. Repayments of share capital are not taxable, but payments to

shareholders are considered to be repayments of share capital only if all of the corporation's earnings and reserves previously have been distributed.

Distributions in liquidation are taxed as ordinary dividends to the extent the distribution exceeds the greater of contributed capital or share basis, and are eligible for the avoir fiscal. To the extent that liquidating distributions are deemed made from preference income, they are subject to the precompte mobilier.

Stock dividends generally are not subject to tax in the hands of a recipient. However, if the distribution of new shares is the result of a reinvestment of cash dividends at the election of the shareholder, the distribution is taxed as an ordinary dividend distribution.

Proceeds from share repurchases are treated as distributions, although only the difference between the value of consideration received and the shareholder's basis in the shares is subject to tax at the shareholder level. The amount distributed does not qualify for the avoir fiscal or trigger the precompte mobilier unless it is paid on a pro rata basis to all shareholders in accordance with a regular decision made by the corporation.

Allocation of Credits to Dividends

The avoir fiscal applies regardless of the rate of corporate level tax actually borne by distributed income.

Tax Rates

For the 1991 tax year, individual marginal income tax rates range from 5 percent to 56.8 percent. France also imposes a net wealth tax at rates, for 1991, ranging from 0.5 percent to 1.5 percent.

For fiscal years beginning on or after January 1, 1991 but before January 1, 1992, undistributed profits are taxed at a flat rate of 34 percent and distributed profits at a flat rate of 42 percent. The higher rate applicable to distributed profits

does not apply to profits distributed in the form of a stock dividend. For fiscal years beginning on or after January 1, 1992, all corporate profits (distributed and undistributed) will be taxed at a flat rate of 34 percent.

Net short-term capital gains (generally, gains on the sale of assets held less than 2 years) are included in taxable income and taxed at regular rates in the year realized (subject to certain exceptions that allow gains arising from mergers or similar reorganizations to be spread over periods from 5 to 15 years). Net short-term capital losses are either deductible from operating profits in the year realized or, for a loss corporation, added to the net operating loss (and thereby made available for 5 year carryforward or an elective 3 year carryback).

For dispositions occurring prior to July 1, 1991, net long-term capital gains generally are taxed at a rate of 25 percent. Long-term capital gains on property other than buildings, land and financial instruments are taxed at 19 percent and long-term capital gains on industrial property (e.g., patents) are taxed at 15 percent. Net long-term capital losses may not be used to offset operating profits, but may be carried forward for 10 years to offset future long-term capital gains. The after-tax amount of net long-term capital gain is credited to a special capital gain reserve. When a dividend is deemed distributed out of the capital gain reserve, a compensatory tax is imposed at a rate of 17 percent, equal to the difference between the long-term capital gains tax rate (25 percent) and the tax rate applicable to distributed profits (42 percent). For dispositions occurring on or after July 1, 1991, the French government has replaced the multiple rates on capital gains with a single 18 percent rate. Compensatory tax will thus be imposed at a rate of 16 percent for 1992, equal to the difference between 18 percent and the 34 percent rate applicable to distributed profits.

Treatment of Preference Income

Tax preferences available at the corporate level include special accelerated depreciation for new construction in depressed areas, shares in

certain building companies, software acquired from third parties, research installations, and air and water purification installations. Corporations also may be entitled to a tax credit for research and development expenditures, a tax holiday for start-up businesses, and a reduced rate of tax on French headquarters of multinational corporations.

Preferences are not passed through to shareholders, since the *precompte mobilier* is imposed on distributions of preference income. However, as described above, French law allows preference income to be stacked last.

Treatment of Domestic Intercorporate Dividends

Nonparent Companies

"Nonparent companies" are defined as companies that own less than 10 percent of the issued share capital of the distributing corporation. Nonparent companies are eligible for the *avoir fiscal*. Like an individual shareholder, a nonparent company must include in income the entire amount of a dividend received from another French company and may use the *avoir fiscal* associated with the dividend as a credit against its income tax liability. If, however, the nonparent company's income tax liability for the year in which a dividend is received is less than the amount of the *avoir fiscal*, no refund or carry-forward is allowed.

Parent Companies

"Parent companies" are defined as companies that own 10 percent or more of the shares of the distributing corporation. Parent companies are eligible for a "participation exemption" as well as the *avoir fiscal*. Under the participation exemption, 95 percent of the amount of a dividend received from a 10 percent-owned subsidiary (including the amount of the *avoir fiscal*) is excludable from taxable income.¹⁶

The *avoir fiscal* associated with dividends received by a parent company from its subsidiaries is passed on to the parent's shareholders when

the dividends are redistributed. In principle, the precompte mobilier applies to such redistribution, because the subsidiary dividends are almost entirely exempt from tax. The parent company is permitted a deduction, however, for the avoir fiscal associated with the subsidiary dividends and this deduction exactly offsets the parent's precompte mobilier liability. Any available credit for foreign withholding tax paid on the subsidiary dividends also may be used to offset the precompte mobilier. As a result, the shareholders of the parent company are placed in the same position as if they had owned shares in the subsidiaries directly.

Consolidated Groups

A French parent company may consolidate for tax purposes with its direct and indirect 95 percent-owned French subsidiaries. Dividends paid within the consolidated group are subject neither to precompte mobilier nor to corporate income tax.

Treatment of Foreign Source Income

In general, the French integration system does not extend the benefits of integration with respect to foreign income taxes imposed on foreign source income.

Profits earned by a French company through a foreign branch or other permanent establishment generally are excluded from taxable income until they are repatriated to France and distributed to shareholders. Upon distribution of these profits, the precompte mobilier is imposed. However, if a branch profits tax is imposed on the branch income in addition to foreign income tax, and provided the branch is located in a treaty country, the French corporation may credit the branch profits tax against the precompte mobilier.¹⁷

A French nonparent company is taxed on the net amount of a dividend received from a foreign corporation (after deduction of foreign withholding tax) resident in a nontreaty country and may not credit any foreign withholding tax against its corporate tax liability. Where the foreign

corporation is resident in a treaty country, the dividend is grossed up for any foreign withholding tax, which is then allowed as a credit against French corporate tax. Dividends paid by the nonparent company out of foreign source dividend income are subject to the precompte mobilier and qualify for the avoir fiscal.

Under the participation exemption, 95 percent of the amount of a dividend received by a French parent company from a 10 percent-owned foreign subsidiary (including the amount of the avoir fiscal) is excludable from taxable income. Foreign withholding tax is not allowed as a credit against French corporate tax on the foreign source dividend. The precompte mobilier is imposed on, and the avoir fiscal applies to, dividends paid by the French parent company out of foreign source dividends. However, where the foreign subsidiary is resident in a treaty country, the amount of the dividend received by the French parent company is grossed up by the amount of any foreign withholding tax, which may then be credited against the precompte mobilier due upon the redistribution of the foreign source dividend (provided the redistribution occurs within 5 years of the receipt of the foreign source dividend).

As of January 1, 1990, special rules apply to French holding companies. A French holding company is exempt from the precompte mobilier upon redistribution of dividend income received from foreign subsidiaries to its shareholders, if the holding company satisfies three requirements: (1) the exclusive purpose of the holding company is to hold shares in other companies, (2) at least two-thirds of the capital assets of the holding company consist of interests in foreign subsidiaries, and (3) the holding company derives at least two-thirds of its accounting profit (excluding capital gains) from such foreign interests. Generally, the French holding company must hold at least a 10 percent interest in a foreign subsidiary.

Dividends distributed by a qualifying French holding company out of dividends received from foreign subsidiaries are not eligible for the avoir fiscal, but give rise to a tax credit equal to any foreign withholding tax imposed on the foreign

subsidiary dividends. If such dividends are redistributed to a holding company shareholder residing in a nontreaty jurisdiction, the standard 25 percent withholding tax imposed on dividends is increased to 50 percent.¹⁸

Treatment of Tax-Exempt Shareholders

Pension funds, charities, and other tax-exempt organizations are not taxed on dividends received from French corporations, but are subject to tax at a reduced rate of 24 percent with respect to certain types of investment income, including dividends received from foreign corporations.

Tax-exempt organizations generally are not eligible for the *avoir fiscal*. However, retirement and disability benefit funds, as well as certain foundations and associations of "public utility," are granted a refundable *avoir fiscal* with respect to dividends received from French corporations.

Treatment of Foreign Shareholders

Dividends paid by a French company to a foreign shareholder are subject to French withholding tax at a rate of 25 percent, subject to reduction by treaty. The *avoir fiscal* is not generally available to foreign shareholders (whether individuals or corporations). This is the case even if a French corporation distributes income subject to, and pays, the *precompte mobilier*.

France has extended the *avoir fiscal* (by means of a cash refund) to shareholders of a French corporation who are resident in some treaty countries and who (1) are subject to income tax in their residence country on dividends received from the French corporation and (2) do not qualify for exemption or foreign tax credit relief in respect of deemed-paid foreign corporate taxes, i.e., individuals and corporate portfolio investors.

The *avoir fiscal* refund is subject to French withholding tax at a rate of 25 percent, subject to reduction by treaty. Under some treaties, 10 percent corporate shareholders (nonportfolio shareholders) and other nonresident shareholders

not entitled to the *avoir fiscal* refund are allowed a refund (subject to withholding tax) of any *precompte mobilier* imposed in respect of dividends received.

Under the United States treaty, for example, the *avoir fiscal* is refunded to shareholders who are either (1) United States resident individuals or (2) United States corporations that own less than 10 percent of the issued share capital of the distributing corporation and that do not qualify for the indirect foreign tax credit under IRC § 902 (corporate portfolio shareholders). The *avoir fiscal* is treated as an additional dividend amount and is subject to a 15 percent withholding tax. United States corporations that are 10 percent shareholders of the distributing corporation (non-portfolio shareholders) are not eligible for an *avoir fiscal* refund, but are entitled to a reduced 5 percent withholding rate on dividends and to a refund of the *precompte mobilier*.

Treatment of Low-Bracket Shareholders

The *avoir fiscal* is refundable to low-bracket shareholders.

Streaming

France does not have specific rules to prevent streaming, although the *avoir fiscal* is available only with respect to a distribution made *pro rata* to all shareholders.

Treatment of Interest

Interest paid to third parties who are not shareholders and who do not have legal or effective control over the payor is deductible at the corporate level.

Interest from corporate indebtedness is generally included in the taxable income of a resident lender (collected in part by withholding). Resident individuals holding certain fixed income securities may elect to have interest taxed at a flat rate collected by withholding. For 1991, the flat rate is 27 percent for income from bonds.

Interest from corporate indebtedness generally is subject to a withholding tax imposed at statutory rates from 25 percent to 51 percent. However, interest on bonds paid abroad is exempt. Reduced treaty rates also may apply.

B.4 GERMANY

Introduction

The German integration system has both a split rate tax and an imputation credit system with a compensatory tax. The split rate tax applies a "statutory" rate (currently 50 percent) to retained income and a lower "distribution" rate (currently 36 percent) to distributed income. The imputation credit mechanism imputes to shareholders the corporate level income tax paid on distributed income. In general, the shareholder receives a credit based on the distribution rate regardless of the corporation's actual tax liability. However, as discussed more fully below, the corporation may become liable for compensatory tax if it has not paid tax on distributed income at the full distribution rate.

Description of Mechanics

Imputation Credits

Imputation credits are available to any shareholder subject to German tax on his worldwide income. This generally excludes nonresident aliens, foreign corporations, and domestic entities not subject to German tax (although imputation credits are available to a foreign corporation or nonresident that holds the shares as part of a permanent establishment in Germany).

In general, dividends are subject at the corporate level to a creditable 36 percent distribution tax (described below) and to a 25 percent withholding tax at the corporate level. The withholding tax is imposed on the amount of the declared distribution. Thus, a distribution of DM64 is reduced by DM16 of withholding tax, leaving a cash distribution of DM48. The withholding tax applies without regard to whether the stock of the

distributing corporation is held publicly or privately, or by domestic or foreign shareholders. (The effect of tax treaties on withholding is discussed below.) In some circumstances the government will grant an exemption certificate to the shareholder which, when provided to the withholding agent, will exempt the shareholder from withholding.

The shareholder must gross up the amount of the dividend by the amount of the withholding tax plus the imputation credit (equal to 36/64 of the declared distribution). Thus, a cash dividend of DM48 (net of withholding tax) is grossed up to DM64 (for the withholding tax), and the resulting DM64 is then grossed up to DM100. The shareholder reports the grossed-up distribution as income and claims a credit equal to the amount of the total gross-up. If the credit exceeds the shareholder's tax liability, the shareholder receives a full refund of the excess; if the shareholder's tax liability exceeds the credit, the shareholder must pay the excess.

Compensatory Tax

The German system uses an "available net equity" account to track taxable and preference income with both the split rate tax and the imputation credit mechanisms. Available net equity represents after-tax corporate income and certain other balance sheet items available for distribution. Available net equity is divided into baskets representing the rate at which the income was taxed. These "Eigenkapital" (equity capital) baskets, abbreviated "EK," are:

- EK 56, containing available net equity from income taxed at the pre-1990 statutory rate of 56 percent. (As of January 1, 1995, the balance in this basket will be "emptied" into the EK 50 basket at a rate equal to 56/44 of the amount in the EK 56 basket.)
- EK 50, containing available net equity from income taxed at the post-1989 statutory rate of 50 percent.
- EK 36, containing available net equity from lesser taxed income that has been converted into an equivalent amount of income taxed at 36 percent, and thus matches the distribution rate of 36 percent (see discussion below).

EK 0, containing available net equity from income subject to no corporate tax. EK 0 is further divided into four categories: EK 01, containing foreign source income realized after 1976 (the imputation credit became effective in 1977), EK 02, containing items not included in EK 01, 03 or 04, for example net operating losses (discussed below) and distributions made when there is no available net equity in any category (in the latter case, the corporation pays the 36 percent compensatory tax and includes the distribution in EK 02 as a negative item, permitting the corporation to later distribute an offsetting amount of EK 0 without a compensatory tax), EK 03, containing available net equity from years before 1977, and EK 04, containing shareholder contributions to capital in years after 1976.

Fully-taxed income (EK 56 or 50 income) is considered distributed first, followed next by EK 36 income, and last by EK 0 income.

Germany implements its split rate tax by refunding to corporations the excess tax paid on distributions out of EK 50 and EK 56.¹⁹ Distributions out of EK 36 generate neither a refund nor extra corporate tax. Distributions out of EK 0 (other than EK 04) are subject to a compensatory tax of 36 percent. If the corporation has DM100 in its EK 01 account, for example, it may pay the shareholder only DM64—the original DM100 in the account net of a 36 percent distribution tax. The additional tax is added to the corporation's total tax liability for the year to which the distribution is assigned. Distributions out of EK 04 (contributions to capital) generate no tax to the corporation and are excluded from the shareholder's income (as a return of capital).²⁰

There are generally no time limits on relief. Thus, a distribution from EK 56 earned in 1977 produces the same credit for corporate tax paid as a distribution from EK 56 earned in 1989. This means that the available net equity accounts need not be segregated into vintage accounts, and instead may be kept as "pools." Income earned prior to 1977, however, is placed in the EK 03 category, and thus there is no imputation relief at the shareholder level for German corporate taxes paid on such income.

A corporation might actually pay tax on certain income at rates other than those for which corresponding EK categories exist. (A substantial portion of such income is foreign source income, discussed below.) The German imputation system converts income subject to some other effective tax rate into appropriate amounts of EK 50, EK 36, and EK 0 income. The conversion formula maximizes the amount of pre-tax income converted into income taxed at the 36 percent distribution rate, since distributions from EK 36 neither entitle the corporation to a refund nor require the payment of compensatory tax. If the corporation's effective tax rate exceeds 36 percent, the remainder of its income is converted to EK 50 income; but if the corporation's effective tax rate falls short of 36 percent, the remainder of its income is converted to EK 0 income.²¹ For example, if the corporation has pre-tax income of DM100 on which it pays German tax of DM40, then the effective tax rate is greater than .36 ($40/100 = .40$), and so a portion of the income will be converted into income taxed at the 50 percent statutory rate.²² By contrast, if the corporation has pre-tax income of DM100 on which it pays German tax of DM25, then the effective tax rate is less than .36 ($25/100 = .25$), and so a portion of the income will be converted into income taxed at a zero rate.²³

The EK accounts are determined at the end of the taxable year.²⁴ A distribution is classified according to the accounts for the year preceding the year of the dividend declaration.

Dividends Defined, Bonus Shares, Share Repurchases

Any distribution of cash or property (whether liquidating or nonliquidating) is a taxable dividend for German tax purposes unless it is a distribution out of EK 04 or otherwise is a repayment of share capital.

Stock dividends are not subject to the distributions tax and are not taxable to shareholders. However, in certain circumstances, distributions

in reduction of share capital within 5 years of the stock dividend (to the extent not in excess of the increase in share capital resulting from the stock dividend) are taxable as dividends and are subject to a penalty tax.

Stock corporations generally are prohibited from making share repurchases under German corporate law. A GmbH is permitted to make share repurchases but is effectively required to finance them out of retained earnings (as opposed, for example, to borrowing against unrealized appreciation in its assets). Share repurchases are not subject to distribution tax at the corporate level and are capital gains transactions at the shareholder level.

Allocation of Credits to Dividends

As discussed above, Germany applies a uniform rate for purposes of determining the shareholder credit regardless of the rate of corporate tax that the distributed income has actually borne.

Tax Rates

Before 1990, individual marginal rates ranged from approximately 22 percent to 56 percent (effective for income exceeding DM130,000). Beginning in 1990, marginal rates range from approximately 19 percent to 53 percent (effective for income exceeding DM120,000).

There is a flat rate of 50 percent for retained profits (before 1990, the rate was 56 percent). This rate is reduced to 36 percent for distributed profits. Certain German "public banks" (banks generally owned by municipal or other public bodies) and German branches of foreign corporations are subject to a flat rate of 46 percent (pre-1990, 50 percent). (See below for a discussion of German branches.) Income sourced in the former western sector of Berlin is subject to a special tax rate of 38.75 percent (pre-1990, 43.4 percent). West Berlin branches of foreign corporations are subject to a special tax rate of 35.65 percent (pre-1990, 38.75 percent). The special tax rate for such income, however, is being phased out over a number of years as a result of unification.²⁵

Gains from sales of stock by individuals are exempt unless (1) the sale is connected with a business, (2) the stock is held 6 months or less, or (3) the shareholder owned more than 25 percent of the company's stock at some time during the preceding 5 years. Business and short-term gains are taxable to individuals at normal rates, except that short-term gains are exempt up to DM1,000 each year. Short-term losses may be netted against short-term gains. Gains by substantial individual shareholders are taxed at one-half the normal rate up to the first DM30 million of net gain and at the normal rate thereafter. Gains from exchanges of stock in a liquidation or redemption are treated as sales (except for any portion that is taxed as a dividend distribution).

Gains from sales of stock by corporations are taxable as ordinary income.

Effective for the period July 1, 1991, through June 30, 1992, Germany has imposed a tax on each taxpayer equal to 7.5 percent of the tax that such person would otherwise pay. The surtax applies to all individual and corporate taxpayers, foreign shareholders subject to dividend withholding tax, and German branches of nonresident corporations. For taxpayers using a calendar taxable year, the surtax has the effect of a 3.75 percent surtax in each of the 1991 and 1992 taxable years.

Treatment of Preference Income

Investment incentives in Germany generally take the form of accelerated depreciation for certain industries or regions of the country; there is no investment tax credit. There are special low corporate rates for income derived from the former western sector of Berlin (these rates, described above, are being phased out). Government "incentive grants" (in the form of cash awards) are awarded in certain cases (usually related to research and development and energy production).

The benefit of preferences that take the form of accelerated depreciation is not extended to shareholders. The benefit is eliminated through

the 36 percent compensatory tax applied to distributions out of EK 0. Preferences are stacked according to the EK accounts, as indicated. Thus, fully-taxed income (EK 56 or 50) is distributed first, and EK 0 is distributed last.

The benefit of the current reduced tax rate for West Berlin income is extended to shareholders. Such income is deemed to have borne the full imputation burden (EK 50 or EK 56).

Treatment of Domestic Intercorporate Dividends

Dividends paid to domestic corporations are treated exactly the same as dividends paid to resident individuals. The dividends are subject to the 36 percent distributions tax. The recipient corporation must include the grossed-up distribution in income and is entitled to claim the imputation credit. Therefore, preferences are recaptured at the corporate level on intercorporate dividends. No exemption from these rules is provided even where the distributing corporation is a subsidiary of the recipient corporation.

Treatment of Foreign Source Income

German corporations are subject to German corporate tax on their worldwide income. However, Germany has two methods for relieving double taxation with respect to foreign profits: by statute, it gives a foreign tax credit and, by treaty, it exempts foreign business profits earned by a domestic corporation (and gives no credit).

The foreign tax credit is not treated as tax paid for purposes of the imputation credit. In effect, foreign taxes are treated as deductible expenses for purposes of applying the imputation system. If the profits are covered by a treaty exemption, then the profits (net of foreign tax) are simply placed in EK 01 and are subject to the 36 percent distribution tax when paid to shareholders. If the profits are not covered by a treaty exemption, they are subject to a residual German corporate tax, as in the United States. In applying the imputation system to this latter class of profits, it is assumed that the profits (net of foreign tax)

were subject to a rate of German tax equal to the residual tax divided by the net profits.

Treatment of Tax-Exempt Shareholders

In Germany, the tax-exempt sector is divided into two separate groups for tax purposes: (1) public law corporations or bodies, e.g., the government and certain central banks, and (2) charitable organizations, including religious groups. Charitable organizations are exempt at the shareholder level, but public corporations are subject to one-half of the normal withholding tax of 25 percent.

In general, neither group is entitled to the imputation credit. However, the imputation credits are refunded where the dividend is paid out of EK 01 (foreign source income that has not borne German tax) or EK 03 (pre-1977 profits). In addition, all shareholders (except shareholders of foreign corporations with German branches) benefit from the 36 percent distribution rate on distributed profits.

Treatment of Foreign Shareholders

Income distributed to foreign shareholders, like all other income, is taxed at the corporate level at the distribution rate rather than at the statutory rate. No distinction is made, for this purpose, between portfolio and direct shareholders.

Dividends to direct and portfolio foreign shareholders are subject to the statutory withholding tax of 25 percent, except where reduced by treaty. Treaties frequently reduce the rate from 25 percent to 15 percent for direct corporate shareholders that are residents of the treaty partner. In some cases, the reduction applies to all residents of the treaty partner. (This was, for example, the treatment provided in the 1954 U.S.-Germany treaty).²⁶ Foreign shareholders also will be subject to the 7.5 percent surtax previously described. The surtax will be refunded to shareholders entitled to limited withholding under a tax treaty.

In general, foreign shareholders are not entitled to the imputation credit, and the withholding tax applies to the dividend without gross-up. Although Germany has not extended the imputation credit to foreign shareholders, it has been willing to reduce withholding rates by treaty, in part in recognition of the benefits of its imputation system to resident shareholders. In the new U.S.-Germany treaty that entered into force on August 21, 1991 (generally effective retroactive to January 1, 1990), Germany grants a 5 percent withholding rate for direct corporate shareholders (10 percent prior to 1992) and a 10 percent withholding rate for U.S. portfolio shareholders. Under the treaty, the United States agreed to treat the additional relief for portfolio investors as a dividend resulting from a refund of German corporate tax equal to 5.88 percent of the declared dividend; the entire amount (declared dividend plus refund) is considered to have been subject to a 15 percent German withholding tax. Thus, for U.S. tax purposes, if a German corporation declares a dividend of DM100 payable to a U.S. individual shareholder, the dividend will, in effect, be grossed up to DM105.88. After application of a 15 percent withholding rate, the shareholder will receive a net amount of DM90 and be eligible for a foreign tax credit of DM15.88.

Foreign shareholders are entitled to a refund (subject to withholding tax) of the 36 percent distribution tax imposed on two types of distributions: (1) distributions out of foreign source income and (2) distributions out of domestic source income earned prior to the adoption of integration in 1977. The refund is only for the 36 percent distribution tax, not for the foreign or pre-1977 taxes. Refunds paid to foreign shareholders with respect to such distributions are subject to 25 percent withholding unless a treaty provides for a reduced rate. In the latter case, the reduction is granted directly by the government, eliminating the need to apply for a refund of excess withholding.

German branches of foreign corporations are subject to a corporate tax rate of 46 percent (pre-1990, 50 percent). There is no reduction in the

corporate rate when the profits are remitted to the home office or distributed to the foreign corporation's shareholders (nor is there imposed a branch tax, as under IRC § 884); the distribution of the profits to the shareholders is not subject to German withholding; and the shareholders are not entitled to any imputation credit with respect to the German corporate tax.²⁷

Treatment of Low-Bracket Shareholders

As discussed above, excess credits are fully refundable to low-bracket shareholders.

Streaming

An anti-streaming rule applies where (1) a shareholder sells a substantial interest in a German corporation (i.e., shares with a value of more than DM100,000), (2) the shareholder is not entitled to the shareholder credit (i.e., a tax-exempt or foreign shareholder), (3) the shareholder sells the shares to a person entitled to the credit (i.e., a German resident), and (4) the gain realized on the sale is not subject to German tax. In such case, the acquiror is not allowed to recognize loss on disposition of shares within 10 years to the extent the loss is attributable to dividends paid by the German corporation.

Treatment of Interest

Interest paid by German corporations on indebtedness incurred for business purposes generally is deductible. However, interest paid by an undercapitalized subsidiary to a related party may be recharacterized as a hidden dividend.

Interest paid by German corporations to resident lenders is includable in income. Interest paid by German corporations to nonresident lenders generally is not subject to any German withholding tax. Interest paid on participatory or convertible bonds, however, is subject to withholding at a statutory rate of 25 percent rate. Lower treaty rates or treaty exemptions may apply.

B.5 NEW ZEALAND

Introduction

New Zealand adopted an imputation credit system beginning with the tax year starting April 1, 1988.

Description of General Mechanics

Imputation Credits

For purposes of shareholder level taxation, the amount of a dividend includes the amount of imputation credits that the corporation allocates to the dividend (see "Allocating Credits to Dividends," below) from its "imputation credit account" (ICA). The imputation credits are then creditable against shareholder tax liability. Excess credits are not refundable but do convert into an equivalent loss carryforward.

The New Zealand system requires every taxable domestic corporation to maintain an ICA. The ICA is a memorandum account that runs from April 1 to March 31, regardless of the corporation's fiscal year. The first imputation year ran from April 1, 1988, to March 31, 1989. Unlike Australia's year-to-year franking account, the ICA is a continuing account, and so a negative year-end balance in the ICA results in a tax levy.

The ICA is credited when the corporation pays New Zealand income tax or receives imputation credits attached to dividends paid by another corporation. Where a refund of tax becomes due because of a revised tax assessment, the amount of the refund available is limited to the closing balance of the ICA for the previous year. The amount of a refund in excess of the balance is carried forward and may be used to reduce future tax liability of the corporation.

The ICA is debited when the corporation attaches imputation credits to dividends paid to shareholders, receives refunds of New Zealand income tax, or alters its credit ratio without making a ratio change declaration. See

"Allocating Credits to Dividends," below. A closing debit must be cleared within two months by making a "further income tax" payment—available to offset future income tax liabilities, but not arrears—and also results in a 10 percent penalty.²⁸ See also "Streaming" below.

Compensatory or Withholding Tax

New Zealand does not impose a compensatory tax. Recently, New Zealand introduced a withholding tax for dividends paid to residents that do not carry imputation credits. Technically, the resident withholding tax is imposed on all dividends at a rate of 33 percent (the higher individual marginal rate), but an offset is allowed to the extent the corporation is passing through imputation and foreign source dividend withholding payment credits allocated to the dividend. (See "Treatment of Foreign Source Income" below for a discussion of the "dividend withholding payment" relating to foreign source dividends.) As with imputation credits, the amount of the dividend includes the resident withholding tax paid and the withholding tax is creditable against shareholder tax liability. However, excess resident withholding tax credits are refundable.

Dividends Defined, Bonus Shares, Share Repurchases

In general, all nonliquidating distributions to shareholders are treated as taxable dividends (under corporate law, the corporation cannot pay dividends as a return of capital without a court order); on liquidation, the amount in excess of paid-up capital is a dividend.

A taxable bonus issue, although technically not a dividend, may carry imputation credits. A corporation with profits essentially may elect whether to treat a bonus issue as taxable. In addition, a bonus issue is taxable if shareholders may elect to receive cash in lieu of stock. However, the importance of bonus issues as a mechanism for extending the imputation system to retained earnings is reduced, because, as described under "Tax Rates," below, New

Zealand does not impose tax on capital gains (including gains on sales of stock of New Zealand corporations).

In the case of share repurchases, the amount treated as a dividend is limited to the excess of the amount paid over the sum of the stated capital and qualifying premium with respect to the share. The qualifying premium is equal to the proportionate share of the subscription premium paid on issuance of the class. The limitation applies, however, only if the Inland Revenue Department is satisfied that the shares are not being redeemed pursuant to an arrangement to redeem shares in lieu of the payment of dividends.

Allocating Credits to Dividends

New Zealand's imputation statute does not require a corporation to allocate any credit to a dividend, but certain allocation rules significantly limit a corporation's flexibility to reduce opportunities to stream imputation credits to shareholders who can best use them. The maximum amount that can be allocated to a dividend is determined by multiplying the dividend by a fraction, the numerator of which is the corporate tax rate and the denominator of which is one minus the corporate tax rate. Once the corporation allocates credits to a dividend, the corporation has established the "benchmark" imputation ratio, and the corporation must generally use the same ratio in allocating credits to any other dividend paid in the same imputation year on any class of stock. The corporation may change its ratio, if it files with the Inland Revenue Department a "ratio change declaration" showing that the change is made for commercial reasons and not to convey an imputation credit benefit to one group of shareholders over another. If the corporation uses a ratio different from the benchmark and has not filed a ratio change declaration, it must debit its ICA by the amount by which the account would have been debited if all dividends that year had been credited at the highest rate used that year. Additional tax and penalties are due if, as a result, the closing balance is negative.

Tax Rates

The corporate tax rate is currently 33 percent. Individuals pay tax at two marginal rates: 24 and 33 percent. The 33 percent rate applies to individuals with taxable incomes exceeding NZ \$30,875, adjusted for inflation. New Zealand currently imposes no tax on capital gains.

Treatment of Preference Income

Because a corporation may attach credits to dividends only to the extent of taxes actually paid by it, corporate tax preferences generally are not extended to shareholders. When preference income is distributed as an uncredited dividend, the amount of the dividend, in general, is subject to resident withholding tax. However, subject to the credit allocation limitations described above, a corporation may choose the order in which taxable income and preference income are considered distributed. In addition, New Zealand recently attempted to eradicate most tax preferences. Various concessions remain for certain industries, most relating to timber, livestock, farming and fishing. New Zealand also offers certain export incentives. The research and development deduction is 100 percent, with special rules for depreciable property.

Treatment of Domestic Intercorporate Dividends

Until April 1, 1992, corporations are exempt from tax on the receipt of domestic source dividends. Any imputation credits attached to such dividends are credited to the recipient's ICA and may be used to frank dividends to its shareholders. The effect of this system is preserve corporate tax preferences until preference income is distributed out of corporate solution.

Under a recent decision of the New Zealand Government, domestic source dividends are not exempt from tax when received by a corporate shareholder on or after April 1, 1992. Instead, the normal gross-up and credit rules apply and a

corporate shareholder thus will be taxed on the receipt of an unfranked, domestic source dividend. The reason for this change is to prevent corporations with tax losses from effectively transferring the losses to corporate shareholders through the issuance of redeemable preference shares and using the proceeds to invest in interest-bearing securities. Another effect of the change is to recapture preferences on the distribution of preference income to a corporate shareholder.

To mitigate the effect of the repeal on affiliated groups of corporations and for other reasons, a group of corporations with 100 percent common ownership is allowed to consolidate for tax purposes. A consolidated group would maintain a single ICA and intercorporate dividends would be ignored.

Treatment of Foreign Source Income

Foreign source income other than dividends is includable in income, and New Zealand allows a credit for foreign taxes paid. Because a corporation credits its ICA only with any additional New Zealand corporate tax paid, foreign taxes do not give rise to imputation credits, and dividends to shareholders of a New Zealand corporation paid out of foreign source nondividend income are exposed to a second level of tax. Foreign source dividends received by New Zealand corporations are exempt from tax but are subject to a "dividend withholding payment" as described below. Foreign taxes paid on the dividend generally are not added to the ICA and, accordingly, dividends paid to shareholders of the New Zealand corporation out of foreign source dividend income also are subject to shareholder level tax. Special rules apply to income derived from controlled foreign corporations (CFCs). The net effect of the New Zealand system is the equivalent of allowing a deduction for foreign taxes on distributed foreign source income earned through a New Zealand corporation.

Dividend Withholding Payment Account (WPA)

New Zealand enacted a withholding payment system (at the 33 percent corporate rate) that

applies to all foreign source dividends received by New Zealand resident corporations. The payment is designed to approximate the income tax that a New Zealand individual shareholder would pay on a dividend from a nonresident company. The corporation makes dividend withholding payments only to the extent the New Zealand corporate tax rate exceeds the foreign withholding tax rate.

Although styled a withholding payment, the payment is imposed when the corporation receives the foreign dividend, regardless of whether it makes a distribution to its own shareholders. However, the corporation records the dividend withholding payments in its ICA, and thus can pass through a credit to its shareholders when it pays dividends. Alternatively, the corporation may establish a separate Withholding Payment Account (WPA) and allocate dividend withholding payment credits from the WPA to its shareholders. A WPA might be desirable because the imputation credit is nonrefundable and can only be converted into a loss, but the dividend withholding payment credit is refundable to shareholders. In addition, only dividend withholding credits are creditable against the withholding tax that applies to dividends paid to nonresident shareholders. Accordingly, a corporation that owns significant interests in nonresident companies and that is owned in significant part by tax-exempt or foreign shareholders will find the additional paperwork of a separate WPA worthwhile.

The WPA is maintained under rules similar to the ICA rules. The WPA is credited when the corporation pays dividend withholding payments, and when it receives dividends bearing dividend withholding payment credits. The WPA is debited when dividend withholding payment credits attach to dividends paid to shareholders, and when the corporation chooses to transfer any part of a WPA closing credit balance to its ICA. If the corporation has an income tax loss carryforward, or expects to generate one, it may reduce that loss to satisfy all or part of the dividend withholding amount payable (or obtain a refund of payments). A closing negative balance in the WPA must be satisfied with a "further" dividend withholding payment (which may be credited against future

dividend withholding payments due, but cannot be refunded). A debit closing balance, in addition, automatically incurs a 10 percent penalty.

Dividend withholding payment credits may be allocated to dividends paid to shareholders under rules similar to and coordinated with the allocation rules for imputation credits.

Branch Equivalent Tax Account (BETA)

The Branch Equivalent Tax Account (BETA) regime is designed to reduce the potential for deferring New Zealand tax by accumulating income in low-tax countries. A CFC is a foreign corporation (not resident in Australia, the United States, the United Kingdom, Japan, France, Germany or Canada) in which five or fewer New Zealand residents have a controlling (50 percent or more) interest.²⁹ Any New Zealand resident with a 10 percent interest in a CFC must include in income its proportionate share of the CFC's income and receives credit for its proportionate share of foreign income taxes paid by the CFC. Any New Zealand tax paid is then credited to the BETA (or to the ICA if the corporation does not elect to maintain a separate BETA). Credits from a BETA can be used to satisfy the dividend withholding payment liability on later dividends actually received from the CFC. When BETA credits are so used to satisfy the WPA liability, a corresponding credit to the ICA is made.

Treatment of Tax-Exempt Shareholders

New Zealand has a small tax-favored investor sector. Under recent reforms, New Zealand fully taxes pension plans. At the same time the new imputation scheme went into effect, New Zealand conformed the treatment of Maori authorities to that of corporations (or, in appropriate cases, to that of trusts). In addition, New Zealand repealed the income tax exemption on "qualifying activities" enjoyed by certain cooperatives dealing in primary products.

For tax-exempt charitable and governmental shareholders, imputation credits in excess of tax

liability are not refundable. However, such tax-exempt shareholders are exempt from resident withholding tax so preferences are not recaptured where preference income is distributed to them.

Treatment of Foreign Shareholders

In general, the benefits of the imputation credit system generally are not extended to foreign shareholders. New Zealand imposes a non-resident withholding tax at the rate of 30 percent for dividends, with no difference in treatment of portfolio and nonportfolio investors. In some cases, treaties reduce that rate, but to no less than 15 percent. Imputation credits are not creditable against nonresident withholding tax (although dividend withholding payment credits are creditable against such tax).

Low-Bracket Shareholders

Excess imputation credits are available to offset any other tax liability of the taxpayer, but are not refundable. Imputation credits not used in the year that they are received convert into a loss, which carries forward indefinitely. Excess dividend withholding payment credits and resident withholding tax credits are refundable.

Streaming

In addition to the allocation rules discussed above, New Zealand's imputation system contains several anti-streaming provisions. The ICA, WPA, and BETA must be debited to reverse a credit where, after the credit arises, the corporation undergoes a change of beneficial ownership of more than 25 percent (34 percent after April 1, 1992).³⁰ In addition, the ICA and WPA are debited if there is a "shareholder or company tax advantage arrangement" (a streaming arrangement). The use of credits by shareholders is denied if the shareholders are party to such an arrangement or if there is an arrangement for the shareholder to be paid a dividend by another company. The latter provision applies, for example, where streaming is accomplished through stapled share arrangements.

Treatment of Interest

Interest paid by a New Zealand corporation is generally deductible. Interest paid to a resident lender is includable in the lender's income and, with certain exceptions, is subject to a withholding tax imposed at a rate of 24 percent. Withholding tax at a statutory rate of 15 percent is imposed on interest paid to a foreign lender. The New Zealand Government recently announced its decision to exempt from withholding tax interest paid on debt issued on or after August 1, 1991 by "Approved Issuers" (issuers that agree to pay a levy equal to 2 percent of the amount of the interest paid for the right to pay exempt interest). In addition, in some cases, treaties reduce the withholding rate, but to no less than 10 percent.

B.6 UNITED KINGDOM

Introduction

The United Kingdom provides for distribution-related integration of the individual and corporate income tax systems by allowing a credit for corporate tax paid with respect to distributed earnings. The amount of the credit is determined as though the corporation had paid tax at the "basic" individual rate, currently 25 percent, rather than at the corporate rate, currently 33 percent (except for small corporations, which may be taxable at a 25 percent rate). Thus, the credit provides only partial relief (except for small corporations) from corporate level tax because actual corporate tax paid with respect to distributed earnings is not fully creditable at the shareholder level.

Description of Mechanics

Imputation Credit

When a corporation makes a "qualifying distribution" (described below) to its shareholders, the distribution carries with it an imputation credit. The shareholder includes the amount of the credit in his taxable income in addition to the amount of the distribution and may use the credit against his income tax liability. The amount of the

imputation credit equals the amount of net qualifying distributions, grossed up at the basic personal rate (25 percent), and then multiplied by that rate.³¹ Accordingly, if the shareholder's actual marginal tax rate equals the basic rate, then the shareholder owes no tax on the distribution. Generally, the imputation credit is refundable to all resident, non-corporate shareholders, including tax-exempt shareholders.

Compensatory or Withholding Tax

The United Kingdom imposes an "Advance Corporation Tax" (ACT) on qualifying distributions equal to the amount of corporate tax imputed to shareholders (at a 25 percent grossed-up rate). The corporation may apply ACT payments against its regular tax liability (mainstream tax) subject to the limitations described below. Because preference income generates no mainstream tax, ACT effectively recaptures preferences at the corporate level on the distribution of preference income, thereby assuring that preference income ultimately is taxed at shareholder rates.

The amount of ACT that may be applied against mainstream tax is limited to an amount that equals 25 percent of the corporation's taxable income for the year. Excess ACT may be carried back for up to 6 years and may be carried forward indefinitely. Alternatively, current year and surplus ACT can be surrendered to a more than 50 percent-owned subsidiary. Because excess ACT is not refundable, uncredited ACT represents an additional tax liability to the corporation until the corporation earns sufficient additional taxable income to absorb it. In practice, because of the numerous tax preferences provided by U.K. law, many corporations carry excess ACT credits on their books.³²

Dividends Defined, Bonus Shares, Share Repurchases

The U.K. system generally defines a qualifying distribution to include any non-liquidating distribution of cash or property made by a corporation with respect to its shares, other than a repayment of share capital. Liquidating

distributions are not treated as qualifying distributions, and thus neither the ACT nor the gross-up and credit mechanism applies.

Bonus issues are not qualifying distributions. This rule prevents corporations from having to pay ACT on bonus issues. However, cash distributions on bonus issues of redeemable shares made within 10 years of their issuance generally are qualifying distributions even if paid out of share capital.

Share repurchases are generally treated as qualifying distributions to the extent that the amount paid exceeds share capital, and the corporation must pay ACT on the amount so treated.

Allocation of Credits to Dividends

Because the gross-up and credit mechanism described above applies to each qualifying distribution at the assumed 25 percent rate, no allocation rules are necessary.

Tax Rates

The corporate rate, until recently, was 25 percent for income up to £100,000 and 35 percent for income greater than £100,000. (The U.K. system phases out the reduced corporate rate, which resulted in a marginal rate of 37.5 percent for corporate income between £100,000 and £500,000.) On March 29, 1991, the Chancellor of the Exchequer introduced a budget that (1) reduces the 35 percent corporate rate to 34 percent retroactive for profits earned in financial year 1990, and to 33 percent for profits earned in 1991, and (2) raises the ceiling on the 25 percent rate to £250,000.

The individual rate is 25 percent for income up to £20,700 and 40 percent for income over this level.

Capital gains are taxed at the same rate as ordinary income. In calculating the amount of gain on disposition of a capital asset, the basis in the asset is indexed for inflation. In addition,

individuals are eligible for an annual capital gains exclusion of £5,000, also indexed for inflation.

Treatment of Preference Income

As discussed above, the ACT generally prevents corporate preferences from being extended to shareholders (preference income is taxed at shareholder rates when distributed). However, crediting ACT against mainstream tax has the effect of treating distributions as made first from taxable income.

The U.K. system provides corporations with a variety of tax preferences. The most significant is accelerated capital allowances or "writing down" allowances (equivalent to accelerated depreciation or amortization). To provide investment incentives, accelerated cost recovery is allowed for certain types of capital expenditures. Generally, all investments in business machinery and equipment are "pooled," i.e., treated as a mass asset. In lieu of depreciation, taxpayers are permitted to recover 25 percent of the pool each year, on a declining balance basis. Scientific research expenditures and certain oil exploration costs in the U.K. can be fully deducted in the year incurred even if they create an asset. Capital expenditures on industrial and commercial buildings in enterprise zones are deductible in full when incurred. Additional preferences are available for mineral extraction operations, industrial buildings, and patents and know-how.

Treatment of Domestic Intercorporate Dividends

A U.K. corporation paying a qualifying distribution to another U.K. corporation generally must pay ACT on the distribution, but the recipient corporation is exempt from tax on the distribution. A U.K. corporation receiving a dividend generally cannot claim a refund or credit of ACT paid on that dividend. However, the recipient corporation can redistribute a dividend that has been subject to ACT (franked investment income) without incurring further ACT, and its shareholders are entitled to a credit for the ACT paid

by the original distributing company. The effect of imposing ACT on intercorporate dividends is to recapture preferences prior to distribution of preference income out of corporate solution.

If a recipient corporation receives more franked investment income than it distributes, it can carry forward the excess franked investment income indefinitely. Alternatively, the recipient corporation may claim a refund of ACT paid on the excess franked investment income by offsetting the excess against any losses for the year. If, in a subsequent year, payments by the corporation of franked investment income exceed receipts of franked investment income, any refund of ACT received in the earlier year is recaptured.

Qualifying distributions between U.K. corporations are not subject to ACT if a group dividend election has been made. Such an election may be made with respect to dividends from a more than 50 percent owned subsidiary. If a group dividend election is made, the distribution is not treated as franked investment income and thus is subject to ACT when redistributed.

Treatment of Foreign Source Income

U.K. corporations are taxed on their worldwide income, with relief from double taxation provided through a foreign tax credit system. U.K. corporations are allowed a credit for foreign taxes paid subject to the following limits.³³ First, the foreign tax credit is allowed only against U.K. tax payable on foreign source income from the particular source with respect to which the foreign tax was paid. Second, unused foreign tax credits may not be carried forward or back.

Foreign tax credits cannot be used to satisfy liability for ACT where qualifying distributions are paid out of foreign source income. Thus, the benefit of the foreign tax credit is washed out with respect to distributed foreign source income.

The amount of ACT that may be applied against mainstream tax imposed on foreign source income effectively is the lesser of (1) the mainstream tax on foreign source income and (2) 25

percent of foreign source taxable income. The effect is that foreign tax credits are allowed before the ACT and ACT that is unused because of foreign tax credits is carried back or forward. This ordering rule favors taxpayers because surplus ACT, unlike surplus foreign tax credits, can be carried forward.³⁴

Treatment of Tax-Exempt Shareholders

A tax-exempt shareholder is entitled to a refund of the shareholder credit. The primary entities exempt from tax on investment income are charities, pension plans (called "exempt approved schemes"), and building societies.

Treatment of Foreign Shareholders

The treatment of dividends paid by U.K. corporations to foreign shareholders varies depending on whether they are entitled to treaty benefits. Except as provided by treaty, only shareholders that are U.K. residents are entitled to imputation credits on dividends received from U.K. corporations. On the receipt of such dividends, a foreign shareholder not entitled to treaty benefits is treated as having income equal only to the amount of the distribution (rather than the distribution plus the imputation credit), the rate of tax applicable is the same as for residents (25 or 40 percent for individuals), the foreign shareholder is treated as having paid tax at the 25 percent rate on the distribution, and the foreign shareholder generally is not entitled to the imputation credit.

Under tax treaties, foreign shareholders generally are entitled to some or all of the imputation credits otherwise allowable to resident shareholders with respect to a dividend from a U.K. corporation, and the rate of tax is reduced (the amount of the reduction may vary depending on whether the shareholder is a portfolio or nonportfolio investor). For example, for a U.S. shareholder owning less than 10 percent of the stock of the distributing corporation, the U.S. treaty entitles the shareholder to the full imputation credit and reduces the tax to 15 percent of the

amount of the dividend grossed up for the credit (imposed as a withholding tax). For a U.S. shareholder owning at least 10 percent, the shareholder is entitled to one-half of the imputation credit and the rate of tax is reduced to 5 percent of the dividend grossed up for the amount of the credit allowed (also imposed as a withholding tax).³⁵

Streaming

The U.K. system contains several anti-streaming provisions. For example, tax-exempt shareholders purchasing at least 10 percent of a corporation are subject to tax at a 10 percent rate on dividends made out of pre-acquisition earnings (but may use attached credits to offset the tax). Restrictions on entitlement to imputation credits apply where there is an arrangement to channel credits to shareholders of a close investment holding company.

In addition, the United Kingdom has adopted measures to prevent trafficking in excess ACT.

The principal limitation is triggered where, following a major change in share ownership (a more than 50 percent increase by one or more 5 percent shareholders over a 3 year period), there is a major change in nature or conduct of the corporation's business or a considerable revival of business that had been negligible prior to the ownership change. In such a case, pre-change surplus ACT cannot be used to offset post-change mainstream tax.

Treatment of Interest

Interest paid by U.K. corporations generally is deductible if the indebtedness is incurred for business purposes. Interest received by a resident lender generally is includable in the lender's income. Foreign lenders are taxed on U.K. source interest at the same rate as residents, but this tax may be reduced or eliminated under treaties. For example, U.K. source interest received by a U.S. resident is exempt from U.K. tax under the U.S. treaty.

APPENDIX C: EQUIVALENCE OF DISTRIBUTION-RELATED INTEGRATION SYSTEMS

The dividend exclusion, imputation credit and dividend deduction systems produce equivalent results if corporate and shareholder tax rates are the same, all shareholders are taxable, and no corporate tax preferences exist. This appendix illustrates that equivalence and shows how the three systems diverge when each of these assumptions is relaxed.

C.1 EQUIVALENCE OF SYSTEMS IF TAX RATES WERE EQUAL

Table C.1 illustrates the equivalence of the three different types of systems when individual and corporate tax rates are equal (34 percent in the example), all shareholders are subject to tax, and no corporate tax preferences exist. For simplicity, all examples assume that corporations distribute all income when earned.

It might appear counterintuitive that the dividend deduction and imputation credit systems lead to exactly the same result. Nevertheless, from an economic perspective, the two systems are equivalent under these assumptions. This equivalence depends on the assumption that shareholders are indifferent between receiving a certain amount of money as a cash dividend or the

same amount split between a cash dividend and a tax credit. Under either the dividend deduction or the imputation credit system, the shareholder has the same after-tax income and pays the same amount of tax. Thus, the corporation's behavior should be the same economically under both systems. To achieve equivalence under the three systems, in the example above, the corporation must adjust its cash dividends to leave its shareholders in identical after-tax positions. This assumption probably better reflects long-term than short-term behavioral responses to the various integration mechanisms.

C.2 EFFECTS OF RATE DIFFERENCES, PREFERENCE INCOME, AND EXEMPT SHAREHOLDERS

Rate Differences

If corporate and shareholder tax rates differ, the three systems no longer produce equivalent results. A dividend exclusion system eliminates whatever shareholder level tax would otherwise be imposed. A dividend deduction system eliminates the corporate level tax and retains the shareholder level tax.

An imputation credit system can be structured to tax distributed earnings at either the corporate or individual rate. To tax distributions at the individual rate, a credit would be allowed to shareholders for the full amount of corporate tax paid with respect to a distribution. This credit would be allowable against tax on other income, or, if there were no such tax, fully refundable. To tax distributions at the corporate rate, a credit would be

Table C.1
Equivalence of Distribution-Related Integration Systems

	Classical System	Dividend Exclusion	Dividend Deduction	Imputation Credit
Corporate income	100	100	100	100
Distribution	66	66	100	66
Corporate tax	34	34	0	34
Shareholder credit	0	0	0	34
Cash received	66	66	100	66
Shareholder income	66	0	100	100
Shareholder tax ¹	22	0	34	0
Total tax paid	56	34	34	34

¹Tax due after credits, if any.

allowed only for tax at the shareholder rate on the sum of the cash distribution and the credit (\$95.65 in the second to last column in the example below).¹

Table C.2 assumes a shareholder rate of 31 percent and a corporate rate of 34 percent.

Preference Income

If some corporate income is not taxed, or is taxed at a lower rate, the alternative systems also do not produce equivalent results. Without modification of the sort described in Section 2.B, a dividend exclusion would automatically extend corporate tax preferences to shareholders, because preference income would not be taxed (or would be taxed at a lower rate) at the corporate level and, with an exclusion for all dividends received, would not be taxed at the shareholder level. A dividend deduction system would not extend preferences to shareholders because shareholders would include dividends in income.

An imputation credit system can be designed to achieve either result. If, as this Report recommends, the policy choice is not to extend preferences to shareholders, a system can be designed to limit the shareholder credit to the corporate tax actually paid with respect to the distribution. If

the policy choice is to extend preferences, where corporate and shareholder rates are equal, the system could determine the shareholder credit as though the corporation had paid tax at the full rate on all income, i.e., by grossing up the cash distribution at the full corporate rate.² Passing through preferences where there are rate differences is somewhat more difficult.³

To illustrate the effects of preferences, holding tax rates equal, Table C.3 assumes that the corporate rate and the shareholder rate are both 34 percent.

Tax-Exempt and Foreign Shareholders

If certain shareholders are wholly or partially exempt from U.S. tax, the alternative distribution-related integrated systems do not produce equivalent results, even if corporate preferences are not taken into account. A dividend exclusion system replicates the current treatment of tax-exempt shareholders, because corporate income is taxed at the corporate level, and a tax-exempt shareholder would receive no additional benefit from a shareholder level exclusion.⁴ In contrast, a dividend deduction system produces an absolute benefit to tax-exempt shareholders because corporations could reduce or eliminate the corporate level tax that applies to income from equity

Table C.2
Effect of Rate Differences

	Classical System	Dividend Exclusion	Dividend Deduction	Imputation Credit	
				At Shareholder Rate	At Corporate Rate
Corporate income	100	100	100	100	100
Distribution	66	66	100	66	66
Corporate tax	34	34	0	34	34
Shareholder credit	0	0	0	29.65	34
Cash received	66	66	100	66	66
Shareholder income	66	0	100	95.65	100
Shareholder tax ¹	20.46	0	31	0	0
Total tax paid	54.46	34	31	34	31 ²

¹Tax due after credits, if any.

²The shareholder would have an excess credit of \$3 that would be refunded or could be used to offset other tax liability.

Table C.3
Effect of Preferences

	Classical System	Dividend Exclusion	Dividend Deduction	Imputation Credit	
				Preferences Passed Through	Preferences Not Passed Through
Corporate income	100	100	100	100	100
Preference income	40	40	40	40	40
Taxable income	60	60	0	60	60
Distribution	79.6 ¹	79.6 ¹	100	79.6 ¹	79.6 ¹
Corporate tax	20.4	20.4	0	20.4	20.4
Shareholder credit	0	0	0	41	20.4
Cash received	79.6	79.6	100	79.6	79.6
Shareholder income	79.6	0	100	120.6	100
Shareholder tax ²	27.06	0	34	0	13.6
Total tax paid	47.46	20.4	34	20.4	34

¹This is the maximum amount the corporation can distribute after payment of the corporate level tax.

²Tax due after credits, if any.

supplied by tax-exempt shareholders by deducting payments of dividends to tax-exempt shareholders. A dividend deduction system also would maintain the same benefit relative to taxable investors that tax-exempt shareholders enjoy under current law.

An imputation credit system with full refundability would have the same effect as a dividend deduction system. An imputation credit system that does not permit credits to be refunded to tax-

exempt shareholders would have the same effect as a dividend exclusion system.

Table C.4 assumes that all shareholders are fully exempt from tax and that the corporation pays tax on all of its income at a 34 percent rate.

The treatment of foreign shareholders under each system is similar. A dividend deduction system would extend automatically the benefits of

Table C.4
Effect of Tax-Exempt Shareholders

	Effect of Tax-Exempt Shareholders				
	Classical System	Dividend Exclusion	Dividend Deduction ¹	Imputation Credit	
				Refundable	Not Refundable
Corporate income	100	100	100	100	100
Distribution	66	66	100	66	66
Corporate tax	34	34	0	34	34
Shareholder credit	0	0	0	34	34
Cash received	66	66	100	66	66
Shareholder income	66	0	100	100	100
Shareholder tax ²	0	0	0	0 ³	0
Total tax paid	34	34	0	0	34

¹No withholding on dividends. (A dividend deduction system with a nonrefundable "withholding" tax of 34 percent would duplicate the results under a dividend exclusion system or an imputation credit system with nonrefundable credits.)

²Tax due after credits, if any.

³The tax-exempt shareholder would receive a \$34 refund.

integration to foreign shareholders, because only one level of tax (the current withholding tax on dividends) would be collected on corporate income distributed to foreign shareholders. A dividend exclusion system would automatically deny the benefits of integration to foreign shareholders (assuming, again, that the current withholding tax remains in place). In contrast, an imputation credit system would extend benefits to foreign shareholders if the imputation credit is refundable and would deny benefits if the credit is not refundable to foreign shareholders.

NOTES

PART I

Chapter 1

1. If corporate income were not subject to tax until distributed to shareholders, retained earnings would be taxed under the individual income tax system only when shareholders realize capital gains on the sale of stock. Shareholders could defer or avoid individual income tax simply by retaining earnings in corporations. See Pechman (1987) and Warren (1981). While this argument counsels against repeal of the corporate income tax, it does not apply to the integration proposals discussed in this Report, none of which permit such indefinite deferral of tax on corporate income.

Some have suggested that a mark-to-market regime for corporate stock would remove the potential deferral associated with investment in corporations and, thus, the need for the corporate tax. Under a mark-to-market regime, shareholders would recognize each year the change in the value of the corporation, including corporate income. See Shakow (1986) and Thuronyi (1983). While marking to market corporate stock could be considered a method of integrating the corporate and shareholder tax systems, it also would tax shareholders on income that is unrealized at the corporate level. We do not explore that approach in this Report, because abandoning the realization requirement goes well beyond the changes necessary to achieve integration.

2. Tax Reform Act of 1986, P.L. 99-514, 100 Stat. 2085, Oct. 22, 1986.

3. *General Utilities & Operating Co. v. Helvering*, 296 U.S. 200 (1935).

4. This increase in welfare compares favorably to that estimated for the 1986 Tax Reform Act at the time of its adoption. See Fullerton, Henderson, and Mackie (1987).

5. Appendix A contains a more detailed discussion of the taxation of corporations under current law.

6. Characterizing the corporate income tax as a double tax rests on the assumption that the corporate level tax reduces corporate income available to shareholders. If the corporate tax does not reduce profits but instead increases prices charged to consumers or lowers wages paid to workers, little or no additional tax may be paid on dividends. Section 13.G discusses the incidence of the corporate tax. In addition, not all income earned by corporations is taxed when earned, and not all shareholders are subject to taxation. Chapter 5 discusses tax preferences and Chapters 6 and 7 examine the issues of tax-exempt and foreign investors.

7. The Omnibus Budget Reconciliation Act of 1990, Pub. L. 101-508, 104 Stat. 1388 (the 1990 Act) made three changes in the individual income tax rate structure. First, the 1990 Act increased the top marginal tax rate for individuals to 31 percent from 28 percent. A number of other statutory provisions may affect statutory marginal rates. For example, the 1990 Act created an explicit phaseout of personal exemptions for taxpayers with adjusted gross income (AGI) above certain thresholds. For a married couple filing jointly, for example, the deduction for personal exemptions phases out at a rate of 2 percent for each \$2,500 of AGI above \$150,000. The 1990 Act also enacted a rule disallowing a portion of itemized deductions otherwise allowable to high-income taxpayers. Itemized deductions (other than medical, casualty and theft, and investment interest deductions) are generally reduced by 3 percent of AGI in excess of \$100,000, except that the disallowance cannot exceed 80 percent of the affected itemized deductions.

8. Interest received by foreign lenders that are related to the borrower or by foreign banks on loans made in the ordinary course of business, is, however, subject to withholding tax at 30 percent or a lower treaty rate.

9. In addition to the distortions created by the two-tier tax, distortions may result from the rules used to measure business income. For example, the Code generally fails to correct for distortions in the tax base attributable to inflation or to the requirement that a capital gain be realized before being subject to tax. These measurement problems affect both corporate and unincorporated business income. Because the general reform of business income measurement rules is beyond the scope of this Report, we take the existing system of income measurement rules as given.

10. See Harberger (1962 and 1966) and the subsequent studies cited in Chapter 13, note 1.

11. This simple example abstracts from other factors affecting the cost of capital, including: (i) differences between tax and economic depreciation; (ii) differences in tax rates among investors; and (iii) inflation.

12. See Gravelle (1991). These calculations assume (i) a rate of inflation of 4 percent; (ii) an average holding period of 7 years; and (iii) that two-thirds of capital gains are deferred until death.

13. Data for the past few years (some of it preliminary) shows a reduction in the size of the corporate sector relative to the noncorporate sector and the overall economy. Particularly since 1986, S corporations have accounted for an increased share of corporate profits. Long-term comparisons of corporate activity with general economic activity, however, present no clear trend toward disincorporation. See Chapter 13.

14. See Gravelle (1991).

15. Inflation adds a complication here. Because the tax system taxes nominal rather than real returns, the deductibility of interest expense under current law offers an even greater tax advantage to corporate debt financed investments (relative to corporate equity financed or noncorporate investments) in the presence of inflation, since corporations typically deduct nominal interest payments at a higher tax rate than the rate at which lenders are taxed on these payments. See Fullerton, Gillette, and Mackie (1987) and Gertler and Hubbard (1990).

16. While both book-value and market-value measures are subject to criticism, market-value measures of debt burdens are generally superior for measuring bankruptcy risks because they reflect inflation and other factors that influence the value of alternative claims on the firm. See, e.g., Bernanke and Campbell (1988) and Warshawsky (1991).

During inflationary periods, book-value measures tend to overstate the burden of debt and to understate the value of a firm's assets. The debt burden may be overstated because with inflation part of the interest rate reflects a return of principal, not a real cost to the firm. As a result of inflation, new debt can be issued without increasing the effective debt burden of the firm; some new debt would merely represent a rollover of the portion of the real principal that must be repaid, rather than a net issuance of new debt. In addition, to the extent that inflation is higher than anticipated, the burden of a given amount of debt falls because real income is transferred from bondholders to shareholders. Book-value ratios also understate the value of the firm's assets because traditional accounting measures of asset values are based on the historical price of the asset, not on its current market (replacement) price. In addition, because book-value debt to asset ratios do not reflect changes in equity values, they may be misleading indicators of the true burden of debt, especially during periods (such as the 1980s) with large increases in stock prices.

While market-value measures of the firm's debt and equity reflect adjustments for inflation and for other changes in the market value of the firm and its securities, they also may be criticized. First, market-value measures generally are estimated rather than directly observed. One approach for estimating the market value of equity and debt, for example, is to capitalize dividend and interest payments, respectively. The Federal Reserve market value ratio shown in Figure 1.5 is a more sophisticated measure, but it also relies on estimates of equity and debt values. Second, market-value ratios are inaccurate if stock market prices do not reflect fundamental values.

17. See, e.g., Shoven (1987) and Auerbach (1989). Share repurchases are discussed further in Chapters 8 and 13.

18. See the evidence in Shoven (1987) and Auerbach (1989).

19. Estimates are based on data for dividends and buybacks from the COMPUSTAT II database, Standard and Poor's COMPUSTAT Services, Inc. Assuming the corporate AAA bond interest rate for all years, the figures represent the maximum interest properly attributable to the increase in share repurchases because they assume that (1) repurchases were financed completely by debt, and (2) the additional debt remains outstanding during the 1980s. The elimination of the capital gains exclusion by the 1986 Act reduced the attraction for investors of share repurchases, since the gain component of the distribution is no longer generally taxed at preferential rates. Share repurchases continued strong through 1989, but declined in 1990.

20. Similarly, leveraged buyouts (LBOs), which replace substantial equity with debt, also may have contributed to the increase in corporate debt during the 1980s. The dollar value of completed mergers and acquisitions in the United States rose at an annual rate of 14.3 percent between 1981 and 1989. The LBO share of this activity rose 8.6 percent in 1983 to 22.7 percent in 1986, but receded to 18.4 percent in 1989 (excluding RJR Nabisco), dropping sharply to 9.3 percent in 1990. (Source: *Mergers and Acquisitions*, Almanac and Index, May-June 1985-1991). By the end of 1988, outstanding LBO debt was estimated to be about 20 percent of the (book) value of outstanding corporate bonds or more than 9 percent of the (book) value of total nonfinancial corporate debt (based on data from the Federal Reserve Board's Flow of Funds Accounts,

Financial Assets and Liabilities, Year End (1967-1990), hereinafter cited as Flow of Funds Accounts). See Gertler and Hubbard (1990)).

21. See, e.g., Warshawsky (1991).

22. See Friedman (1990) and Gertler and Hubbard (1990).

23. Potential nontax benefits of debt finance are discussed in Chapter 13. See also Jensen (1986) and Gertler and Hubbard (1990).

24. See Chapter 13 and Gordon and Malkiel (1981).

25. The Congressional Research Service estimates that the shareholder level effective Federal income tax rate on dividends is 32 percent, compared to 11 percent or less on capital gains attributable to retained earnings. See Gravelle (1991).

26. This assumption is controversial, since not all economic models of the effects of taxation on dividend payments maintain that nontax benefits are associated with dividend payments. There are two leading explanations of why corporations continue to pay dividends in spite of the greater investor level tax burden on dividends than on capital gains attributable to retained earnings or share repurchases: the "traditional view" and the "new view." The "traditional view" asserts that dividends offer nontax benefits to shareholders that offset their tax advantage. Accordingly, dividend taxes distort payout decisions and raise the cost of capital. The "new view" assumes that dividend payments offer no nontax advantages to shareholders and that corporations have no alternative to dividends for distributing funds to shareholders. Under this assumption, dividend taxes reduce the value of the firm, but do not affect firms' dividend or investment decisions. This Report adopts the framework suggested by the "traditional view." The two approaches are discussed in more detail in Chapter 13.

27. These studies are discussed in Section 13.B.

28. The 1970 data in the text are from Shoven (1987). The 1989 and 1990 data are from Department of the Treasury calculations based on tabulations of the Standard and Poor's COMPUSTAT Industrial and Research files.

29. The effect of taxation on savings is uncertain because changes in the after-tax rate of return have an ambiguous effect on savings. A higher after-tax return makes future consumption cheaper than foregone present consumption. This substitution effect encourages households to reduce present consumption and increase savings. However, a higher after-tax return also allows a given level of future consumption to be reached with less savings today. This second effect, called the income effect, reduces saving. Because the substitution effect of a rise in the after-tax return increases saving, while the income effect reduces saving, the net effect of a rise in the after-tax return is an empirical question.

30. As noted in note 29, the net effect of changes in the after-tax rate of return on saving is difficult to determine because it depends on opposing income and substitution effects. There is less theoretical uncertainty about the direction of the effect of capital taxation on investment. The distinction between saving and investment is an important one in an analysis of corporate taxation. In an economy without international trade and investment flows, national saving equals national investment, and the average cost of capital summarizes tax incentives to save as well as to invest. International capital flows break the equivalence of domestic saving and investment, however. In a world with perfect international capital mobility, incentives for domestic investment would be governed by the pre-tax return needed to cover taxes and the worldwide opportunity cost of funds. At the same time, domestic saving would depend on the after-tax return earned by savers from investing at the worldwide rate of return. Hence, domestic investment depends on domestic corporate level taxes, while domestic saving depends on domestic individual level taxes.

31. U.S. Department of the Treasury, Tax Reform for Fairness, Simplicity, and Growth (1984) (hereinafter cited as Treasury I), Vol. 2, pp. 135-144 and The White House, The President's Tax Proposals to the Congress for Fairness, Growth, and Simplicity (1985) (hereinafter cited as The President's 1985 Proposals), pp. 120-129. See also U.S. Department of the Treasury, Blueprints for Basic Tax Reform (1977) (hereinafter cited as Blueprints).

32. See Appendix B.

33. See, e.g., McLure (1979).

34. So-called partial integration (referred to in this Report as distribution-related integration) has been viewed as a compromise between the passthrough ideal and considerations of administrability. A conventional definition of full integration

is given in McLure (1979), p.3: "...income earned at the corporate level, whether distributed or not, would be attributed to shareholders, as in a partnership, and taxed only at the rates applicable to the incomes of the various shareholders."

35. Appendix C discusses the effect of rate relationships on integration proposals.

36. For general discussion of economic benefits of neutrality in the taxation of capital income, see Institute for Fiscal Studies (1978) and Bradford (1986).

37. See Sections 2.D and 4.F.

38. This Report also does not generally address tax distortions created by inflation.

39. Under a corporate cash-flow tax, corporations would be taxed on the net cash flow from their business activities. Corporate cash-flow taxes have generally been advanced as part of an overall restructuring of the tax system that would replace the individual income tax with a consumption or cash-flow individual tax. See Institute for Fiscal Studies (1978), Aaron and Galper (1985), and Bradford (1986). Recently, however, some economists have proposed cash-flow taxes on businesses, while the current income tax rules would be maintained at the individual level. See, e.g., King (1987), Feldstein (1989), and Hubbard (1989).

Under one corporate cash-flow tax proposal, a corporation would determine its tax base by subtracting from its receipts from sales of goods or services its cost of purchasing real goods and services for production. No deductions for financing investments would be allowed; that is, neither dividends nor interest payments would be deductible. Several significant changes would be required to convert the current corporate income tax base to a cash-flow tax base, including replacing depreciation deductions with a deduction for the cost of capital assets in the year of acquisition (expensing), and eliminating corporate investment interest deductions. Other ways to define the base of a corporate cash-flow tax are discussed in Institute for Fiscal Studies (1978) and King (1987).

Proponents of a cash-flow tax emphasize that, because the initial purchase of assets would be deductible, the system would generate a zero marginal effective tax rate on investment. In effect, the tax system would not distort the cost of capital investment decisions. Income generated in the corporate sector, however, would continue to bear a tax at the individual level. In contrast, noncorporate business income would face no tax at the margin if it were taxed on a cash-flow basis. Hence, a bias against investment in the corporate sector would still exist.

Because interest payments would not be deductible, the tax advantage that debt enjoys under the current system would be eliminated, but a cash-flow tax would not achieve neutrality with respect to choice of finance. Rather, under the reasonable assumption that the marginal individual tax rate on dividends exceeds the marginal effective accrual tax rate on capital gains, retained earnings would have an advantage over either debt or new equity as a source of corporate finance.

40. See generally Treasury I.

Part II

Introduction

1. While the prototypes discussed in this Part and in Part IV contain considerable technical detail, they do not provide a comprehensive summary of technical changes that would be required. For example, the prototypes do not address the effect of an integration system on groups of corporations filing consolidated returns. We concluded, consistent with the approach to consolidated return matters under the current corporate tax system, that consolidated return issues are better addressed after a basic integration approach is selected.

2. The distribution-related integration systems of several major U.S. trading partners are described in Appendix B.

Chapter 2

1. Peel (1985) also proposes a dividend exclusion system. While Peel's proposed system resembles the dividend exclusion prototype discussed here (e.g., in allowing shareholders to exclude dividends only to the extent of income that has been taxed fully at the corporate level), there are significant differences. For example, Peel's proposed system would track taxable

income rather than taxes paid, would extend the benefits of integration to foreign shareholders by statute, and would treat foreign taxes like U.S. taxes in determining the extent to which a corporation's income has borne tax.

From 1954 to 1986, the Code provided a very small exclusion for dividends received by individuals. Immediately preceding repeal, IRC § 116 provided an exclusion of up to \$100 of dividends received (\$200 on a joint return).

2. Although a detailed treatment of the financial accounting consequences of adopting an integrated system is beyond the scope of this Report, and the financial accounting authorities have never addressed the integration prototypes developed in this Report, a few preliminary observations can be made. Because the dividend exclusion prototype generally retains the current rate structure and rules for calculating corporate income subject to tax, adoption of the prototype should not significantly change corporations' provision for income tax expense or the determination of taxes currently payable or payable at a future date. Of course, the economic effects of moving to an integrated tax system, e.g., changes in corporations' distribution policies and capital structures, would be reflected in financial statements.

3. This is similar to an imputation credit system that taxes corporate income at a 34 percent rate and allows shareholders imputation credits at the individual shareholder rates.

4. An imputation credit system that denies refundability of imputation credits to tax-exempt shareholders achieves the same results. See Section 11.E.

5. An imputation credit system that relies on a shareholder credit limitation rather than a compensatory tax reaches the same result. See Section 11.B.

6. An imputation credit system reaches the same result if foreign taxes are not added to the shareholder credit account. See Section 11.D.

7. In an imputation credit system, this result can be achieved by denying refundability of imputation credits to foreign shareholders and continuing to impose withholding tax. See Section 11.E.

8. For simplicity, Table 2.1 (and the corresponding tables in Chapters 3, 4, and 11) refer to the tax imposed on a foreign investor's noncorporate equity income as a withholding tax, t_{WN} , although the method and rate of taxation actually vary depending on the type of income. Very generally, a foreign investor is taxed on income from an equity investment in a noncorporate business as if the foreign investor had earned directly the income earned by the business. A foreign investor is generally subject to tax at rates applicable to U.S. persons on income that is "effectively connected" with a U.S. trade or business. A partnership generally must withhold tax from a foreign partner's distributive share of effectively connected income under IRC § 1446. A partnership also withholds tax on a foreign partner's distributive share of dividends, interest, and other income to the extent required by IRC § 1441.

9. A compensatory tax is used in some foreign imputation credit systems, e.g., the United Kingdom, France, and Germany, to ensure that corporate level preferences are not extended to shareholders. See Appendix B.

10. Because the prototype treats AMT as corporate taxes paid, it does not treat as taxes paid the portion of a later year's regular taxes that are offset by the AMT credit allowed by IRC § 53.

Example. A corporation earns \$100 of preference income. The corporation's regular tax is \$0, and its AMT is \$20. The addition to the EDA is \$38.82 ($(\$20/.34) - \20). This is the amount of hypothetical income that would be left for distribution if the corporation had earned taxable income of \$58.82 and paid \$20 of regular tax at the 34 percent rate ($58.82 \times .34 = 20$).

11. In mathematical terms, for each dollar of taxes paid, the corporation can add $(1/t) - 1$ to its EDA, where t is the corporate tax rate. This formula also can be expressed as $(1 - t)/t$.

The graduated rates set forth in IRC § 11(b) for corporations with incomes of less than \$75,000 would continue to be available. Converting the entire amount of taxes paid at a 34 percent rate provides a simple rule and should not harm most corporations, because the benefit of graduated rates begin to phase out for corporations with taxable incomes greater than \$100,000. It would, however, be possible to modify the EDA conversion formula to reflect graduated rates. One possibility is to build the graduated rate structure into the EDA formula for corporations with taxable incomes of less than \$100,000 by permitting conversion of the first \$7,500 of taxes paid at the 15 percent rate (into \$42,500 of EDA) and conversion of

the second \$6,250 of taxes paid at the 25 percent rate (into \$18,750 of EDA). These amounts would be reduced for corporations in the phaseout range.

12. Example. In year one, a corporation reports \$100 of income and pays \$34 of tax. The corporation's EDA balance is \$66, and it pays an excludable dividend of \$66. In year two, the corporation incurs a net operating loss of \$50 and files a claim for refund of \$17. Making that adjustment retroactive to year one would require adjusting shareholders' incomes to reflect a taxable dividend of \$33. Because this is impractical, the prototype requires that the refund in the year of the adjustment be carried forward to be applied against future corporate taxes.

13. Payment of a refund when the EDA balance is exhausted would, in effect, refund corporate taxes that have already been used to qualify distributions as excludable by shareholders; only by requiring a negative balance in the EDA could this be compensated for in later years.

14. We rejected the alternative of permitting refunds and NOL carrybacks to create a negative EDA. If such an approach were adopted, a negative EDA would be increased by subsequent payments of corporate tax. In addition, a corporation with a negative EDA would be required to pay additional tax to increase its EDA to zero upon certain events, e.g., upon liquidation.

15. While a 100 percent dividends received deduction could be extended to all corporate shareholders to defer completely taxation of corporate preference income until it is distributed out of corporate solution, it would add approximately \$400 million to the revenue cost of the dividend exclusion prototype. Because of the additional complexity that would arise from a partial dividends received deduction under an imputation credit system, we make a different recommendation under that system. See Section 11.B.

16. As under current law, hybrid instruments and derivative products (e.g., convertible debt and options may allow a tax-exempt or foreign investor to capture the portfolio benefits of holding stock while avoiding corporate level tax.

17. One anti-streaming mechanism is inherent in the prototype. Because all dividends paid reduce any positive balance in the EDA, a corporation cannot simultaneously pay excludable dividends on one class of stock and taxable dividends on another. The imputation credit system, described in Chapter 11, allows greater flexibility in attaching shareholder level tax credits to dividends and, as a result, demands additional anti-streaming restrictions.

Requiring dividends to reduce the EDA does not prevent all streaming, however. For example, excludable dividends can be paid to taxable shareholders to the extent of the EDA and thereafter all taxable dividends can be paid to tax-exempt shareholders. Further, complex corporate structures and corporate reorganization (either acquisitive or divisive) also might be used to stream excludable dividends by isolating or shifting shareholders' interest in a corporation's EDA. If necessary, anti-abuse rules can be formulated to prevent such arrangements.

18. IRC § 246 (which governs corporations' eligibility for the dividends received deduction) may provide a model for developing related rules.

19. IRC § 1059 limits the ability of corporate shareholders to strip dividends by claiming the dividends received deduction with respect to distributions more properly treated as a return of capital. It does so by requiring stock basis to be reduced to the extent of the dividends received deduction with respect to extraordinary dividends paid within 2 years of an acquisition of stock. The appropriate scope of an IRC § 1059-type basis adjustment will depend on the treatment of capital gains under integration. See Chapter 8.

As discussed in the text under "Corporate Shareholders," an excludable dividend received by a corporate shareholder increases the recipient's EDA. Consideration should be given to whether additional anti-streaming rules are necessary to prevent streaming through the shifting of EDA balances among corporations.

20. Under IRC § 305(b)(2), a distribution (including a deemed distribution) by a corporation of its stock is treated as a dividend if the distribution (or a series of distributions of which distribution is a part) has the result of (1) the receipt of money or other property by some shareholders, and (2) an increase in the proportionate interests of other shareholders in the assets or earnings and profits of the corporation. For example, assume a corporation issues two classes of common stock in an attempt to stream excludable dividends to certain shareholders. The first class pays excludable dividends and is intended to be held by taxable persons. The second class pays stock dividends (or receives an increased interest in the corporation's assets) and is intended to be held by tax-exempt persons. In such a case, IRC § 305 would impute dividends on the second class of stock and the corporation's EDA would be reduced accordingly.

Similarly, IRC § 305(c) authorizes the Department of the Treasury to issue regulations treating a wide variety of transactions as constructive distributions to any shareholder whose proportionate interest in the corporation's assets or earnings and profits is increased thereby. For example, IRC § 305(c) would prevent a corporation from issuing preferred stock on which a redemption premium substitutes for dividends.

21. **Example.** Corporation X is owned by a tax-exempt shareholder, and its only asset is a \$100 EDA balance, e.g., because it previously distributed preference income and retained only enough cash to pay the tax liability when the preference subsequently turned around. Corporation Y is owned by taxable shareholders and has substantial preference income and cash but a \$0 EDA balance. Corporation Y acquires corporation X in a tax-free merger described in IRC § 368(a)(a)(A), and subsequently uses X's EDA balance to distribute \$100 of Y's cash as excludable dividends. If Y's \$0 EDA balance is attributable to deferral preferences, it will ultimately owe tax when the preferences turn around. However, the acquisition of X's EDA enables Y to defer tax on the preference income that otherwise would have resulted from Y's current distribution of dividends.
22. The American Law Institute, Reporter's Memorandum No. 3, (1991), pp. 7-8, makes a similar recommendation in discussing an integration proposal involving maintenance of a "taxes paid account" at the corporate level.
23. In the interim, the rules of IRC § 269 could be applied to prevent the most obvious tax-motivated acquisitions.
24. Similar issues arise under the shareholder allocation and imputation credit prototypes, but we do not discuss them separately in Chapters 3 and 11. The dividend exclusion prototype taxes corporate equity income once at a 34 percent rate, regardless of the tax rate of the shareholder. Thus, if an interest disallowance rule applied, it should apply regardless of whether the dividends paid on the stock are excludable or taxable. While excludable dividends bear a superficial similarity to tax-exempt interest under IRC § 103, one level of tax on the earnings used to pay the dividend has been collected. Similarly, taxable dividends paid, for example out of preference income, to a taxable shareholder also bear one level of tax, although at the shareholder's rate. Thus, if an interest disallowance rule were adopted, it would be inappropriate to apply it only to the extent of excludable dividends. On balance, this Report does not recommend developing rules to deal with the potential rate arbitrage of equity holders borrowing from low rate or tax-exempt lenders for either excludable or taxable dividends. See note 25.
25. As under current law, the general deductibility of interest permits significant rate arbitrage through the issuance of debt by taxable issuers to tax-exempt and foreign lenders. The relative importance of the rate arbitrage potential of borrowing to purchase corporate stock may be less in an integrated system that does not change the treatment of interest generally. In contrast, CBIT generally eliminates businesses' ability to pay interest to tax-exempt and foreign lenders without the payment of one level of tax. Thus, in CBIT, we found it appropriate to eliminate investor level rate arbitrage through borrowing as well. Compare IRC § 246A.
26. No other country with an integrated system has adopted this approach, however.
27. If such treatment of foreign taxes were permitted, special rules would be required to ensure that appropriate amounts are added to the EDA when foreign tax rates exceed the U.S. rate. If the foreign tax rate is less than the U.S. rate, foreign taxes paid could be converted into the appropriate EDA balance by applying the formula set forth in Section 2.B.

Example 1. A corporation has \$100 of foreign source income and pays \$20 in foreign taxes. After applying the IRC § 904 limitation, the corporation would be entitled to credit all \$20 of foreign taxes against its U.S. tax liability of \$34. The U.S. residual liability would be \$14, which would convert into a \$27 ($\$14 / .34 - \14) addition to the EDA. The \$20 of foreign taxes paid would convert into a \$39 ($\$20 / .34 - \20) addition to the EDA. The total EDA would be \$66, which would enable the corporation to distribute its after-tax earnings of \$66 as excludable dividends.

However, if foreign tax rates exceed U.S. tax rates, the foreign taxes cannot be converted into an EDA balance using the formula set forth in Section 2.B. In that case, the foreign taxes must be converted using the higher foreign tax rate.

Example 2. A corporation has \$100 of foreign source income and pays \$40 in foreign taxes. After applying the IRC § 904 limitation, the corporation would be entitled to credit \$34 against its U.S. tax liability of \$34. The U.S. residual liability would be \$0. It would be inappropriate, however, to add \$66 to the EDA, because the corporation has only \$60 (\$100 income - \$40 foreign taxes) of after-tax earnings to distribute. Adding \$66 rather than \$60 would permit the distribution of \$6 of U.S. source preference income without shareholder level tax. Thus, the amount to be added to the

EDA should be limited to \$60, which can be accomplished by applying the EDA formula to actual foreign taxes paid using the higher foreign rate ($\$40/.4 - \40).

This approach would create some complexity at the corporate level, because it would require separate tracking of foreign taxes paid and foreign tax rates. The alternative of tracing foreign income and adding to the EDA foreign income less foreign taxes is likely to be at least as complex.

28. A low taxable income is not necessarily inconsistent with wealth. For example, a low-bracket individual may have large amounts of income from tax-exempt sources, e.g., tax-exempt bond interest. Alternatively, a low-bracket individual who is retired may have a small income but a large accumulation of wealth. That is, individuals may prefer to maintain a level of consumption over their lifetime, and thus reduce consumption during high-income working years in order to be able to maintain consumption during low-income retirement years. See, e.g., Ando and Modigliani (1963).

29. The credit formula is: $\text{Credit} = (\text{DIV}/.66) \times (.34 - t)$, where DIV is the dividend and t is the shareholder's marginal rate. This credit formula is designed to replicate the excess credit under an imputation credit system, i.e., the difference between the imputation credit ($.34 \times (\text{DIV}/.66)$) and the amount of shareholder tax due on the grossed up dividend at the shareholder rate ($t \times (\text{DIV}/.66)$).

30. Alternatively, relief for low-bracket shareholders also might take the form of a deduction. The credit formula could be converted into a deduction formula by dividing the credit by the shareholder tax rate: $[(\text{DIV}/.66) \times (.34 - t)]/t$, where DIV is the net dividend and t is the shareholder's marginal rate. Thus, a shareholder in the 15 percent bracket would be entitled to a deduction of \$127 ($(\$66/.66) \times .19/.15$).

31. A corporation's EDA would be allocated among shareholders in proportion to the amount of other assets distributed to them.

32. The policy underlying the reorganization provisions is that imposition of tax is inappropriate if a corporate reorganization merely effects a readjustment of shareholders' continuing interests in corporate property under modified corporate forms. This policy applies equally under the prototype, because it reflects a judgment about when income should be recognized under a realization-based tax system that does not require corporate assets or stock to be marked to market, not a judgment about whether two levels of tax should be imposed on recognized corporate income.

33. Under current law, earnings and profits of the distributing corporation in a divisive reorganization that qualifies as a reorganization under IRC § 368(a)(1)(D) are divided between the distributing corporation and the controlled corporation based on the relative fair market value of their assets.

34. Under current law, nonliquidating distributions to shareholders are treated as dividends to the extent paid out of the corporation's post-February 28, 1913, accumulated earnings and profits or its earnings and profits for the current taxable year. The earnings and profits rules may be viewed as serving two principal functions with respect to dividend taxation. First, the earnings and profits rules may be seen as a mechanism to assure that corporate preferences are not extended when preference income is distributed to shareholders. Second, the rules may be seen as a mechanism to distinguish whether a distribution represents a distribution of income earned on the shareholder's investment or a return of that investment.

35. IRC § 301(c).

36. See, e.g., Andrews (1956), Blum (1975), and American Bar Association (1986).

37. Earnings and profits also are relevant in contexts other than determining dividend taxation. Earnings and profits are relevant, for example, in determining the extent to which gain on a disposition of IRC § 306 stock is recaptured as ordinary income, whether certain corporate divisions qualify for tax-free treatment under IRC § 355, the amount of taxes paid by a foreign corporation that under IRC § 902 are credited to its 10 percent corporate shareholder upon receipt of a dividend, the amount of Subpart F income that must be currently included in income by a United States shareholder of a controlled foreign corporation, whether an S corporation with substantial passive income is subject to entity level tax on such income under IRC § 1375 or whether such income causes the termination of S corporation status under IRC § 1362(d)(3); the amount of any basis adjustments in the stock of consolidated subsidiaries pursuant to the consolidated return regulations, and the amount of the adjusted current earnings adjustment for AMT purposes. In some contexts, it is possible to eliminate references to earnings and profits or to devise alternatives that are simpler. Nevertheless, in other contexts—especially in the rules governing the taxation of foreign income—developing simple alternatives may prove more difficult. The benefit of

eliminating the earnings and profits rules for purposes of dividend taxation is considerably reduced if alternatives are not found for the rules in other contexts.

38. Recently, the American Law Institute Reporter circulated a draft memorandum that would eliminate earnings and profits as part of its distribution-related integration proposal. American Law Institute, Reporter's Memorandum No. 3 (1991), p. 5.

39. Just as under current law, however, the connection between earnings and profits and the economics of shareholder investment is severed, however, by sales of stock and other transactions or events increasing or decreasing shareholder basis without adjusting earnings and profits. Preserving the connection would require earnings and profits accounts to be maintained and adjusted on a per share basis. Thus, for example, a seller of stock in a corporation with retained earnings would recognize dividend income to the extent of the earnings and profits attributable to such stock and the earnings and profits account for the stock would be reduced to zero. This system would not be feasible for actively traded stock. Accordingly, the earnings and profits rules may yield arbitrary and incorrect results from the shareholder's perspective. The alternative rules are likely to be no more accurate in distinguishing between income distributions and returns of capital because they also do not take into account changes at the shareholder level. Indeed, by eliminating earnings and profits as a limitation on dividend taxation, the alternative rules would tend to increase the likelihood of imposing dividend taxation on a distribution that economically is a return of shareholder investment.

40. For a discussion of the equivalence of deducting the cost of an investment and exempting investment income from tax, see Graetz (1979), Warren (1975), Andrews (1974), and Brown (1948).

Chapter 3

1. If income is not taxed at the corporate level (because of tax preferences or foreign tax credits), there is no additional tax burden on retained earnings, and therefore corporations will tend to retain preference income. Under the dividend exclusion prototype, as well as under the current system, retained preference income is taxed at the shareholder level only when the stock is sold. To the extent that retaining preference income increases the value of stock, it also increases the capital gain realized on the sale. Thus, distribution-related integration treats retained corporate preference income more favorably than distributed preference income.

2. Because the shareholder allocation prototype would generally continue to tax the corporation in the same manner as under current law, it should not significantly change a corporation's financial statement provision for income tax expense, taxes currently payable, and taxes payable at a future date. The prototype's denial of carrybacks for net operating losses and removal of the corporate AMT will, however, be reflected in the reporting of corporate tax liability for financial accounting purposes.

The denial of carryback treatment for net operating losses may increase the provision for income tax expense in certain circumstances. For financial accounting purposes, when a operating loss can and will be carried back, the tax effects of such carryback generally increase net income, or reduce the net loss, during the loss period. See Accounting Principles Board, Opinion No. 11 (1967), paragraph 44 and Financial Accounting Standards Board, Statement No. 96 (1987), paragraph 52. The tax effect of the NOL carryback (which is included in the determination of net income or loss) is based on income, or loss, reported for financial accounting purposes rather than for tax purposes. The refund of taxes expected as a result of the carryback is recorded as a current asset. Any difference between the tax loss and financial accounting loss carryback benefit is recorded in the deferred tax account. The shareholder allocation prototype would preclude corporations from recognizing the benefits of NOL carrybacks.

Because the shareholder allocation prototype eliminates the corporate AMT, it would reduce the provision for tax expense in those limited situations in which a corporation would otherwise calculate a hypothetical AMT liability. For financial accounting purposes additional tax expense is only provided with respect to the corporate AMT when the application of the AMT rules to financial accounting income would result in a hypothetical AMT liability, i.e., to the extent AMT relates to deferral items no additional tax expense is recorded for financial statement purposes. The corporate AMT also affects the financial statement allocation of tax expense among taxes currently payable and taxes payable at a future date. Accordingly, the shareholder allocation prototype also could affect these allocations.

3. Because both the dividend exclusion and shareholder allocation prototypes retain the corporate interest deduction, interest paid to tax-exempt organizations and foreign investors generally escapes U.S. tax, while corporate equity income distributed to such investors is subject to at least one level of U.S. tax. Achieving equal treatment of debt and equity under a shareholder allocation system would require a corporation to allocate its taxable income to both bondholders and shareholders each year,

whether or not interest or dividends were paid. A bondholder, like a shareholder, would be entitled to a credit for the corporate level tax on the income allocated, and the bondholder's basis would increase by the after-corporate tax amount of income allocated. Tax-exempt and foreign bondholders would not be entitled to claim refunds of tax credits. Unlike current law, which requires accrual-basis bondholders to include interest in income whether paid or not, a shareholder and bondholder allocation system might limit bondholders' interest income to the amount of the corporation's earnings.

Such a system would require rules for allocating corporate earnings to classes of debt as well as stock. The allocation rules in such a system should provide that earnings would be allocated first to interest payable or accrued on debt, and any remaining income would then be allocated to equity. One method for allocating income to traditional debt instruments would determine the maximum amount of income to be allocated to a given class of debt based on the current law rules for accrual-basis taxpayers (or for holders of bonds with original issue discount). Available earnings could then be allocated to each class of debt according to its priority, i.e., first to senior debt, then to senior subordinated debt, and then to subordinated debt. For example, assume that a corporation has \$100 of earnings and three classes of debt. The first class of debt is bank debt, senior to the other two classes. The second and third classes are of equal priority. The interest accruing on the bank debt is \$80; the interest accruing on the second class is \$30; and the interest accruing on the third class is \$10. Of the corporation's \$100 of earnings, \$80 would be allocated to the bank debt. The remaining \$20 would be allocated proportionately between two classes of junior debt, so that \$15 (or \$20 multiplied by $30/40$) would be allocated to the second class, and \$5 (or \$20 multiplied by $10/40$) would be allocated to the third class. No earnings would be allocated to equity.

4. For a more detailed examination of problems involved in administering a widely held passthrough entity, including reporting issues, allocating items (such as built-in gain on contributed property) to members, and collection issues, see Department of the Treasury, Widely Held Partnerships (1990). Proposals are pending in the Congress to modify the conduit treatment of certain large partnerships. Under H.R. 2777 and S. 1394, 102d Congress, 2d Session (1991) the income of partnerships with at least 250 partners would be consolidated at the partnership level, resulting in a reduction in the number of separate items that would be reported to partners. Audit adjustments would result in a single, current year adjustment to partnership income, rather than adjustments to the returns of prior year partners. Under these bills, the tax administration of large partnerships would move toward an entity approach and away from the aggregate approach that dominates current law partnership rules.

In 1966, Canada's Carter Commission recommended a modified shareholder allocation integration system, but Canada did not adopt the recommendation. See Royal Commission on Taxation (1966). Similarly, the United States did not adopt the Blueprints proposal for a shareholder allocation integration system. In 1971, the Federal Republic of Germany's Tax Reform Commission rejected a shareholder allocation integration system because of administrative complexity. See Gourevitch, (1977), pp. 48-54. In addition, other countries have implicitly rejected shareholder allocation integration by adopting distribution-related integration systems, although most countries have passthrough entities that are taxed under a shareholder allocation integration approach.

5. For ease of computation, the discussion and examples in this chapter use a 31 percent corporate tax rate. The shareholder allocation prototype could retain the current 34 percent corporate tax rate but provide credits to shareholders at a 31 percent rate if maintaining the credit rate differential were desirable or necessary. The revenue estimates set forth in Chapter 13 assume a 34 percent corporate rate. Maintaining the corporate tax rate at 34 percent would require an adjustment in the amount of tax passed through to shareholders to allow shareholders a tax credit no greater than the maximum 31 percent individual rate. For example, if a corporation reported \$100 of taxable income and owed \$34 of tax, only \$31 of tax would be passed through to shareholders. Retaining the rate differential would necessitate numerous calculations to transform corporate level preferences into shareholder level preferences; for example, if a corporation also had a \$10 low-income housing credit, the shareholders should be entitled only to 31/34 of the credit.

6. The additional economic income sheltered by the credit, absent an upward adjustment of the shareholder's basis, will be taxed upon distribution by the corporation or sale of the shareholder's stock.

If the corporation had a \$40 credit, shareholders would be allocated \$31 of tax credits, and the \$9 excess credit would be carried forward at the corporate level to the extent permitted under the Code. As discussed above, a shareholder with tax liability less than the amount of credit allocated to him could use excess credits against other income. As in the imputation credit prototype discussed in Chapter 11, consideration might be given to providing a carryforward at the shareholder level for unused credits. See Chapter 11, note 33.

7. Example. A corporation earns \$100 of taxable income and pays \$31 of corporate tax. The corporation's shareholders increase their basis in their stock by \$69, the after-tax income of the corporation. This achieves the same result as a partnership that earns \$100 of taxable income and distributes \$31 in cash to partners to pay the tax.

8. Because the shareholder allocation prototype treats distributions first as a nontaxable return of capital to the extent of shareholder basis and second as capital gain to the extent of any excess over basis, the earnings and profits rules are not needed. Compare note 14, below.

9. To mitigate somewhat the effect of eliminating loss carrybacks, consideration might be given to extending somewhat the carryforward period, for example, from 15 to 18 years, so the total period in which corporate losses could be used would not be reduced under shareholder allocation.

10. Corporations with more complicated capital structures may require more complicated allocation provisions. See Section 3.F.

11. While noting that corporate level payment would facilitate payment of tax, Blueprints did not include such payment in its model system. See Blueprints, pp. 73-74. Compare IRC § 1446, which requires withholding by partnerships on income that is effectively connected with a trade or business in the United States and that is allocable to a foreign partner.

12. If passthrough of losses were permitted, corporate losses, like partnership and S corporation losses, could be used by shareholders to the extent of share basis. Losses in excess of share basis might be carried forward at the shareholder level. See IRC § 704(d).

13. One method for eliminating most preferences would require corporations to allocate AMTI, rather than taxable income, to shareholders. Each corporation would thus impute to shareholders the full amount of both taxable and preference income (at least to the extent preference items are included in AMTI), regardless of whether the corporation was subject to the AMT.

Example. Assume that a corporation has \$100 of taxable income and \$30 of tax-exempt interest as its only preference item. The corporation would not be subject to the AMT, because the tentative AMT (\$26) would not exceed the regular corporate level tax (\$31). Nevertheless, the corporation would allocate \$120 of income among its shareholders.

Under this approach, corporations would continue to pay corporate level tax as under current law, at either the regular or AMT rate, whichever is applicable. Shareholders would be entitled to credit both corporate level tax and AMT but would not be entitled to credit corporate tax to the extent it was offset in later years by the AMT credit.

The following example illustrates this method. The example assumes a 31 percent corporate and shareholder rate and a 20 percent corporate AMT rate.

	Year 1	Year 2	Year 3
Corporate Level Tax Calculation			
Corporate taxable income	\$100	\$100	\$164
Corporate preference income	200	0	0
AMTI	300	100	164
Tentative AMT	60	20	33
Regular tax	31	31	51
AMT	29	0	0
AMT credit	0	11	18
Net corporate tax payable	60	20	33
Shareholder Level Tax Calculation			
Shareholder income	\$300	\$100	\$164
Shareholder tax	93	31	51
Credit for corporate taxes paid	60	20	33
Net shareholder tax payable	33	11	18

In this case, a total of \$175 of tax has been paid on \$564 of economic income (a 31 percent rate).

This approach would effectively eliminate corporate level preferences, whether or not distributed, by taxing corporate preference income currently at shareholder rates. A shareholder in the 31 percent bracket would generally be liable for additional shareholder level tax to the extent that corporate AMTI exceeded corporate taxable income. Thus, corporate level preferences essentially would be taxed the same as corporate level taxable income, unless the absence of a corporate level

tax were significant. For example, a tax-exempt shareholder would not owe additional shareholder level tax, with the consequence that allocated preference income would be tax-exempt (except to the extent of the corporate AMT).

14. The following approach would tax preference income to shareholders only upon a distribution or a sale of stock. Corporations would track taxes paid, which would include payments of regular tax and AMT, as well as any AMT credits for AMT paid in prior years. An amount of deemed income equal to the amount of income that would give rise to the actual amount of corporate tax paid if tax had been imposed at a 31 percent rate would be allocated among shareholders. Thus, each \$1 of regular tax or AMT would give rise to \$3.23 of deemed income ($\$1/.31$). Shareholders would report the deemed income and would be entitled to a credit for corporate taxes paid. Because this approach treats the amount of income that would be allocated to shareholders as if it had been taxed at the maximum corporate rate, no shareholder would owe additional tax on corporate level preferences currently and lower bracket shareholders could use excess credits to offset other tax liability. Share basis would increase by the amount of deemed income reported to the shareholder, net of the credit for taxes paid.

The following example compares the treatment of two corporations, only one of which, corporation B, is an AMT taxpayer. It assumes a 31 percent corporate rate and shareholder rate and a 20 percent AMT rate.

	Corporation A	Corporation B
Corporate Level Tax Calculation		
Corporate taxable income	\$645	0
Corporate preference income	350	\$1,000
Regular tax	200	0
AMT	0	200
Total corporate taxes paid	200	200
Shareholder Level Tax Calculation		
Shareholder income	\$645	\$645
Shareholder tax	200	200
Credit for corporate taxes paid	200	200
Net shareholder tax payable	0	0

Under this approach, corporations with significant preference income would pay tax at corporate AMT rates, but no additional shareholder level tax would be imposed currently. Additional shareholder tax would be collected only when preference income is distributed or shares are sold. Tax would be collected at that time because share basis is increased only by the amount of the deemed income. Thus, if a corporation has income that is taxed at less than a 31 percent rate, the shareholders' aggregate basis in their shares will be less than the corporation's aggregate earnings available for distribution. When distributions exceed shareholder basis (or when shares are sold for amounts in excess of basis), additional shareholder tax will be paid.

Example. A corporation has \$100 of assets and a single shareholder with a stock basis of \$100. During the year, the corporation earns \$200 of preference income and pays AMT of \$40. The corporation allocates \$129 ($\$40 \div .31$) of income and \$40 of tax credit to the shareholder. The shareholder's basis increases to \$189 (\$100 original basis plus $(\$129 - \$40)$). The corporation has \$260 of assets available for distribution. If the corporation distributes \$260 to its shareholder, the shareholder will recognize gain of \$71, the amount of preference income not previously taxed at 31 percent.

Under this approach, distributed preference income is generally taxed at capital gain rather than at ordinary income rates, because distributions in excess of basis are treated as gains from the sale of stock. In contrast, under current law and under distribution-related integration, only retained preference income (which increases share value) is taxed as capital gains, while distributed preference income is taxed as ordinary income.

In contrast to the treatment of dividend distributions under current law, this method treats distributions first as a return of capital, so preference income is not taxed until share basis is exhausted. This stacking order is not consistent with the dividend exclusion or CBIT prototypes or the imputation credit prototype, described in Chapter 11, which require that distributions in excess of fully-taxed income be treated as taxable distributions of preference income before they are treated as returns of the shareholder's investment. It is possible, however, to conform the stacking order in the shareholder allocation prototype to the stacking in those prototypes. To do so, a corporation would be required to maintain an accumulated earnings and profits account (essentially under the rules of current law). Within the earnings and profits account, the corporation

would maintain a subaccount for fully-taxed earnings and profits (computed by tracking taxes paid, as in the EDA). See Section 2.B. Distributions in excess of the fully-taxed earnings, up to the amount of earnings and profits, would be treated as taxable dividends, rather than a return of the shareholder's investment.

15. Example. Assume that a shareholder has a basis of \$10 in stock of a corporation. If the corporation earns \$100 of taxable income and receives \$50 of tax-exempt bond interest in year one, the corporation would pay \$31 in tax. The shareholder would include \$100 in income and would be entitled to offset the \$31 shareholder tax by the \$31 credit for corporate level tax. The shareholder's basis would increase by \$119 (the tax-exempt interest income plus the taxable income, reduced by the amount of taxes paid). Thus, the corporation could distribute its net cash of \$119 without giving rise to shareholder level tax. This basis adjustment differs from the \$150 adjustment that would be made in a partnership because of the \$31 of tax collected at the corporate level.
16. Example. Assume that a shareholder invests \$100 in stock of a corporation. The corporation invests the \$100 of contributed capital in an asset that costs \$100. Assume that the corporation earns \$100 and is entitled to expense the asset in year one, rather than depreciating it over its economic life of three years. The deferral preference will reduce the corporation's income subject to corporate level tax in year one to \$0. In years two and three, however, the preference turns around, because the corporation will have more income than it would have if the asset had been depreciated over 3 years. Thus, the corporation's and the shareholder's income in years two and three will be higher.
17. Example. A corporation's only income is \$100 of tax-exempt interest on bonds described in § 57(a)(5). Thus, its taxable income is \$0 and its AMTI is \$100. The corporation pays \$20 of AMT. Assume that an individual taxpayer with a 31 percent marginal tax rate holds all the stock of the corporation and has no other income. Disregarding AMT exemption amounts, the shareholder would include the \$100 of corporate AMTI in his own AMTI, and thus would owe individual AMT of \$24. The shareholder could then credit the \$20 of corporate AMT against his own AMT liability, resulting in a net AMT liability of \$4.

If the shareholder had other income, e.g., \$100 of wage income, the shareholder would pay \$31 of regular tax and \$17 of AMT ($\$200 \text{ AMTI} \times .24 = \31). The \$20 of corporate level AMT paid at the corporate level would be creditable to reduce the total tax due from the shareholder to \$28. The shareholder would have an AMT credit of \$17 to use against future regular tax liability but no corporate level AMT credit would be allowed.

18. Permitting shareholders to credit corporate AMT paid against their regular tax liability without including any amounts in shareholder AMTI, in effect, would refund the corporate AMT to taxable shareholders.

Example. The facts are the same as in the example in the preceding footnote. The 31 percent bracket shareholder also has \$100 of wage income. If the AMT paid at the corporate level were creditable against regular tax, but no AMTI were imputed to the shareholder, the shareholder would pay only \$11 of regular tax.

19. One approach would continue to impose the corporate AMT without any current credit to shareholders for corporate AMT paid. Shareholders would benefit from corporate AMT payments only when the corporation made the AMT credit allowed by IRC § 53 to reduce a subsequent year's regular tax liability. The AMT credit would be passed through to shareholders like other credits. This rule would, however, deny integration benefits to shareholders of corporations that are chronic AMT taxpayers, because those corporations may never use their AMT credits. This system also would require modifications to the shareholder basis rules to decrease share basis to reflect the payment of a noncreditable, nondeductible tax.

An alternative rule would impute to shareholders, in addition to the corporation's taxable income, an amount of income based on the corporate AMT paid, and allow shareholders to credit the corporate AMT against their regular tax. The additional income imputed would equal the amount of corporate AMT paid, grossed up at 31 percent.

Example. The facts are the same as in the examples in the preceding two footnotes. Instead of including corporate AMTI in shareholder AMTI, the corporation would allocate \$64.52 of additional income ($\$20/.31$) to its shareholder. The shareholder would then credit the \$20 of corporate AMT against his regular tax liability. Thus, the shareholder's total taxable income would be \$164.52; total tax liability would be \$51; and the shareholder would be allowed to credit the corporate AMT to reduce the tax due to \$31.

This approach is similar to the method described in note 13. Unlike that method, however, this rule imputes a grossed-up amount of income to shareholders only to the extent of corporate AMT paid. As a consequence, it produces erroneous basis

adjustments in the case of deferral preferences, because deferral preference gives rise to partial basis when AMT is paid and subsequently gives rise to the full amount of basis when the preference turns around and generates regular taxable income. The basis adjustments could be corrected by continuing to calculate basis adjustments based on grossed-up taxes paid (rather than taxable income allocated to shareholders). Such alternative basis adjustments would require complex rules, complicated information reporting, and would create basis adjustments the timing of which differ from the timing of income passed through to shareholders.

20. S corporations allocate income items pro rata. An S corporation allocates to each share of stock exactly the same amount of each item arising in a taxable year. This system is simple and administrable; it works well for S corporations because they may not have more than one class of stock. IRC § 1361(c)(4) permits classes of stock in an S corporation to have different voting rights, but other differences generally are prohibited. Thus, the system achieves simplicity by requiring all the stock of an S corporation to possess similar economic rights. An integration proposal that limits all corporations to a single class of stock, however, is neither feasible nor economically desirable. The variety of existing corporate capital structures precludes serious consideration of such a system.

21. IRC § 704(b).

22. Treas. Reg. § 1.704-1.

23. The complex capital account maintenance rules contained in the regulations under IRC § 704(b) illustrate the variety of issues that would have to be addressed. An alternative approach would look to IRC § 305 to impute income to a shareholder whose proportionate interest in the corporation increases as does the holder of class B stock in the example in the text. We do not explore the implications of such an approach.

24. Example. Two shareholders form a corporation and contribute \$100 each. One shareholder receives preferred stock with a liquidation preference of \$100 and a return of 10 percent. The other shareholder receives common stock, which is entitled to the remaining income and assets. Assuming the corporation makes no cash distributions, corporate income would be allocated as follows:

Year	Corporate Income	Allocations		Year-End Capital Accounts	
		Preferred	Common	Preferred	Common
1	50	10	40	110	140
2	50	11	39	121	179
3	50	12	38	133	217

Under the terms of the preferred stock, the liquidation preference of the preferred stock increases each year as its capital account increases. In year one, the preferred shareholder is treated as if it received \$10 and purchased an additional \$10 of preferred stock. As a consequence, the preferred shareholder is allocated \$11 in year two (10 percent of \$110 of preferred stock). If the corporation is liquidated at the end of year three, the corporation has total assets of \$350 and the preferred stock has a capital account (liquidation preference) of \$133. The common stock would thus receive the remainder of the assets, or \$217.

As the text notes, capital accounts would be adjusted to reflect corporate losses. Assume that the corporation is not liquidated until year four and there is a \$100 loss in year four, so the corporation's assets are reduced to \$250. In that case, no income would be allocated to either shareholder in year four, but the \$100 loss would reduce the common shareholder's capital account to \$117. Upon liquidation at the end of year four, the preferred shareholder would receive \$133 and the common shareholders would receive \$117.

25. The full integration proposal in Blueprints used an annual record date method and designated the shareholders on the first day of the taxable year as the shareholders of record to avoid "trafficking" in shares of loss corporations at year end. Blueprints, pp. 70-71, rejected a "last day" rule because, at year end, the market would have information indicating that the corporation would incur a tax loss for the year, and shares could then be sold to high-bracket taxpayers to whom the loss would be most useful. Because the shareholder allocation prototype does not permit the passthrough of losses to shareholders, loss trafficking is not an issue. The quarterly record date approach also minimizes tax-motivated year-end trading to capture credits for corporate taxes paid by limiting the benefit of year end ownership to one quarter of income and its proportional share of tax.

26. It may be desirable to allow (or require) corporations to close their books under certain circumstances. For example, a seller of a majority stock interest in a corporation may wish to ensure that income generated by activities after the sale will not be allocated to her. Similarly, the government could have an interest in requiring closing of the books after extraordinary corporate events to assure that net income and loss are allocated to the appropriate shareholders.

27. The effect of A's loss is to defer taxation of \$10.35 of corporate income until the purchaser sells his stock. If A can fully use the capital loss, A's loss offsets the tax on \$10.35 of corporate income. The purchaser, however, has a basis of \$144.85 (\$117.25 plus \$27.60) in the stock of a corporation having assets with a value of \$155.20. The purchaser thus has built-in gain of \$10.35 in his stock.

28. The Code provides that a partnership's taxable year closes with respect to a partner whose entire interest is sold. See IRC § 706(c). If a partner's interest varies during a year, the Code simply provides the general rule that tax items are to be allocated to take into account this variation. Specific rules are provided for a few items of cash basis taxpayers, such as interest and taxes, which must be allocated on a per day basis throughout the taxable year. See IRC § 706(d)(2).

29. In that case, each prior quarter's income would be unaffected by subsequent events, and each future quarter's income would be allocated to the purchaser.

30. We also rejected the alternative of allocating a corporation's income on a per share per day basis throughout the taxable year. Although current law employs this system for S corporations, which must allocate income among stockholders on a strict pro rata basis, including daily allocation of income where there has been an ownership change, we believe that this system could not successfully be applied to large corporations with publicly held stock in which there is frequent trading. Publicly traded partnerships are widely held, publicly traded entities that are required under current law to allocate certain items among partners on a per day approach. However, these partnerships typically adopt conventions to minimize the difficulties of tracking frequent changes in ownership, for example, by allocating each month's share of partnership income to the partner holding the partnership unit on the first day of the month. Compared to publicly traded partnerships, publicly held corporations have more shares of stock outstanding, and the stock is traded more frequently; for example, trading of the most actively traded stock can exceed one million share per day. A per share per day approach would require tracking of many millions of transfers during a year, and therefore a daily allocation method would be impractical for publicly traded corporations.

31. The Blueprints system is one example. That system did not include a corporate level tax, taxed capital gains at ordinary income rates, and permitted unlimited use of capital losses against ordinary income. See Blueprints, p. 77. Accordingly, the Blueprints system permitted a shareholder of record who sold stock during the year to calculate gain or loss calculated by reference to his basis at the beginning of the year, based on the observation that the allocation of current year income would not affect the difference between the sale proceeds and his basis as of the date of sale. The corporate income or loss that he would have to report as the shareholder of record would be exactly offset by a corresponding basis adjustment. See Blueprints, pp. 71-72.

The results are somewhat different under the shareholder allocation system, which retains a corporate level tax. The introduction of a corporate level tax means that allocations of taxable income increase share basis but do not create any additional shareholder level tax liability (because the corporate tax rate is at least equal to the maximum shareholder rate). For example, under the Blueprints system, an unexpected increase in allocable earnings of \$100 would increase a selling shareholder's taxable income by \$100 but would increase basis (and reduce gain, or increase loss, on sale) by the same amount. Ignoring differences in character (which may have significant consequences), the shareholder's total income would be the same. Under the shareholder allocation prototype, however, an unexpected \$100 increase in earnings would result in an allocation of \$100 of earnings and \$31 of tax credits. If this increase occurred for a period prior to the period in which the sale took place, e.g., an unexpected increase in earnings for the first quarter with respect to stock transferred in the second quarter, the withholding credit will be available to the selling shareholder. The parties to the transfer would need to estimate the potential for material changes in earnings on pricing the stock. Blueprints acknowledged that the addition of a corporate level tax complicates calculation of gain on sale. Blueprints, p. 74.

The current treatment of capital gains and losses would complicate calculations under a record date system. A shareholder who sold stock with a basis of \$100 for \$150 might not be indifferent between \$50 of capital gain (if gain were calculated at the time of sale) and \$75 of ordinary income and a \$25 capital loss (if calculation of gain were deferred and the corporation earned \$75 for the year).

32. Where corporate tax is imposed at a rate greater than or equal to the maximum individual rate, the government does not suffer from delay in attributing income to the proper corporate entity. An upper tier corporation that held stock in a lower tier corporation might be required to report its income from the lower tier corporation with a one year delay. Thus, if an

upper tier corporation purchased stock in another corporation during year one, the upper tier corporation would report no income from the investment in year one. The upper tier corporation's share of the lower tier corporation's year-one income would be reported in year two. The government's interest would not suffer, as the lower tier corporation's income would have been subject to tax at the corporate rate in year one. The upper tier corporation and its shareholders would, however, suffer a detriment to the extent that the corporate rate exceeds shareholder rates and shareholders would have been entitled to use excess credits for corporate taxes paid. In that case, the upper tier corporation's shareholders have, in effect, made an interest-free loan of the excess credits to the government.

Such a system could be restricted to situations where the upper and lower tier corporations have identical taxable years. If taxable years differ, the upper tier corporation would report the lower tier income in its taxable year in which the lower tier corporation's taxable year ends. If two corporations own stock in each other, this system could result in a continuous delay in proper attribution of the income. Under such a system, taxpayers would have an incentive to structure their investments to minimize relationships that cause detrimental reporting delays. To the extent such arrangements are impractical, however, a shareholder allocation system would treat intercorporate investments more harshly than direct investment.

33. The pending tax simplification bills would adopt a similar approach for large partnerships. See The Tax Simplification Act of 1991, H.R. 2777 and S. 1394, 102d Cong., 1st Sess. (June 26, 1991). See also U.S. Department of the Treasury, Widely Held Partnerships (1990).

34. This problem is closely analogous to the problem of extending preferences to shareholders, discussed in Section 3.E.

35. Example. A U.S. corporation's only income is a dividend from a foreign subsidiary. Under IRC § 902, the corporation includes \$100 in income and receives a credit for foreign taxes paid of \$40. Under the foreign tax credit limitation rules of IRC § 904, the corporation's foreign tax credit is limited to \$31. The corporation's sole shareholder is Shareholder A who has a marginal tax rate of 15 percent and wage income of \$100. Without foreign tax credit limitation rules at the shareholder level, Shareholder A will treat \$31 as a credit for taxes paid and use the excess credit of \$16 to offset all tax due on his wage income.

Section 11.D discusses the feasibility of using a shareholder level exclusion of foreign source income to avoid the application of IRC § 904 at the shareholder level if foreign taxes were treated like U.S. taxes under the imputation credit prototype.

Chapter 4

1. Although there are no existing models of this prototype, others have suggested a similar approach using a bondholder credit. See, e.g., Steuerle (1989) (describing a "simplified integrated tax" that would be withheld by corporations at the maximum individual or corporate rate); Seidman (1990) (describing an FDIC proposal to require corporations to withhold 34 percent of all their dividend and interest payments and require recipients to report the grossed-up amount of the distributions and claim a credit for the tax withheld by the corporation); H.R. 4457, 101st Cong., 2d Sess. (1990) (introduced by Congressman Vander Jagt, and proposing an approach similar to the FDIC proposal outlined by Mr. Seidman). For proposals that resemble CBIT even more closely, see Jacobs (1987) (describing a 28 percent "single business tax" on capital income that would be imposed by disallowing business interest deductions and excluding interest and dividends from investors' taxable income); Bravenec (1989) (describing a "nontraditional approach to integration" that would deny corporations interest deductions and exclude from income of investors dividends and interest received from corporations).

The financial accounting ramifications of CBIT are, in many respects, the most direct of all the integration prototypes. The nondeductibility of interest expense would increase corporations' income tax burden, thereby increasing the provision for income taxes and reducing earnings per share. Generally, we would expect an increase in the provision for income taxes and a reduction in earnings per share for net borrowers. In the rare case of certain net lenders, the provision for income taxes could be reduced and earnings per share could be increased. Because nondeductibility of interest expense would increase taxes currently payable, CBIT also would serve to increase the reported current liability for income taxes and the cash flow requirements associated with this current liability. The recommended gradual phase-in of CBIT should allow for gradual changes in capital structures and enhance the comparability of interperiod financial results.

A less obvious financial accounting effect of CBIT arises if a compensatory tax is imposed. The standards for accounting for income taxes generally require corporations to recognize as income tax expense both the taxes currently payable and the taxes that are payable during a future period but are, nonetheless, associated with earnings during the current period. See Accounting Principles Board, Opinion No. 11 (1967), paragraph 34, and Financial Accounting Standards Board, Statement

No. 96 (1987), paragraph 7. Under these standards, income tax expense recognized by a CBIT entity would include the potential compensatory tax liability that is associated with preference income which is earned and retained by the entity. Thus, the compensatory tax could serve to further increase the provision for income taxes. The financial accounting for a compensatory tax has never been formally considered, however, and it is conceivable that the financial accounting authorities might permit corporations to disregard potential tax expense associated with future compensatory taxes provided the corporation's earnings distribution policy suggests that the likelihood of a distribution of preference income is remote. The Accounting Principles Board has adopted such a position with respect to the provision for taxes that may arise with respect to distributed earnings of subsidiaries, e.g., foreign subsidiaries or subsidiaries that are not consolidated for tax purposes. See Accounting Principles Board, Opinion No. 23 (1972), paragraphs 9-14.

2. See Chapter 10.

3. CBIT is related to, but not identical with, a bondholder credit system that taxes interest income at the debtholder level through an imputation credit system. CBIT differs from a bondholder credit system where the borrower and lender have different marginal tax rates. See Section 11.H, which describes a bondholder credit system and discusses the differences between that system and CBIT.

4. See Section 13.H. If gains on sale of CBIT equity and debt are not subject to tax, losses on such securities also would not be allowed. Given the difficulty of the analysis of capital gains in the context of integration (see Chapter 8), we simply note here that the CBIT prototype would be revenue neutral at a 31 percent rate with full exclusion of capital gains and losses on sales of CBIT equity and debt at the investor level.

5. See Sections 4.F and 6.D.

6. Compare Sweden's flat rate tax on capital income, adopted in 1991 as part of a comprehensive tax reform package. See Swedish Ministry of Finance (1991) and Lodin (1990). Under the new system, a flat tax rate of 30 percent applies to all capital income received by individuals, including dividends, interest, and capital gains. Earned income is taxed separately, at graduated marginal rates ranging from approximately 31 to 50 percent. Unlike CBIT, Sweden's flat rate tax on capital is not an integration proposal. Sweden generally retains the classical system of corporate taxation, taxing corporate income at a rate of 30 percent. The Swedish system provides a limited dividends paid deduction for new equity and a "tax equalization reserve" that reduces the effective tax burden on retained earnings to approximately 23 percent. Swedish Ministry of Finance (1991), p. 39.

7. A gradual phase-in also would provide an opportunity to evaluate the extent to which imposing one level of tax on interest paid to tax-exempt and foreign investors might induce those investors to change the composition of their portfolios or the level of their investment in U.S. business. Adjustments in the application of CBIT to these investors can be adopted to reduce such effects if undesirable portfolio shifts or changes in capital flows occur. See Section 4.F. Partial steps toward a CBIT regime that would narrow distinctions between debt and equity also are possible on a revenue neutral basis. See Section 6.D.

8. As recommended, the CBIT prototype can use a 31 percent rate—equal to the top individual marginal rate—rather than a 34 percent rate without losing revenue relative to current law. See Section 13.H.

9. Carrybacks would not, however, be permitted if they would create a negative balance in the EDA.

10. Fully-taxed income is determined in the same manner as under the dividend exclusion prototype. See Sections 2.B and 4.D.

11. Several nations have expressed concern about their increasing inability to tax capital income, and some interest has been shown in the adoption of a withholding tax of 10 to 15 percent on capital income, although concern over the potentially adverse implications of the unilateral adoption of such a tax has precluded general acceptance of such a tax. In 1989, the European Commission (EC) proposed a 15 percent withholding tax on savings bank and bond interest income earned by residents of the EC. This proposal, which would not have affected Eurobonds or residents of countries outside the EC, was not accepted, although an informal meeting of the Finance Ministers of the member countries supported a withholding tax on capital income if such tax also were supported by the United States, Japan, and other countries. See Turro (1989). EC Tax Commissioner Madame Scrivener subsequently proposed a 10 percent tax on interest income, but this proposal also was not generally accepted; see Goldsworth (1990). Since then, Madame Scrivener has continued to express the view that a general withholding tax on interest income is the best solution to the problem of tax avoidance in a world of increased capital mobility. See Nagle (1990) and *Daily Tax Report* (November 8, 1991).

12. This Report explores CBIT as an integration prototype directed to the taxation of equity and debt income generated by businesses. The CBIT approach, however, might be extended to other types of interest income. Such an expansion of CBIT might provide a means of taxing all interest income at a uniform rate. Economic efficiency suggests that taxing capital income at a uniform rate might improve welfare. While an expanded CBIT approach is beyond the scope of this Report, we note that it raises difficult issues.

Home mortgage interest would be one important issue in considering an expanded CBIT regime. Under current law, home mortgage interest generally is deductible by the payor and includable in the income of the recipient. While the basic CBIT prototype retains the current law treatment, an expanded CBIT regime might subject home mortgage interest to CBIT. Subjecting home mortgage interest to the CBIT rules would ensure that one level of tax is collected on home mortgage interest. Under current law, home mortgage interest paid to tax-exempt or foreign investors (who may hold mortgage passthrough certificates) escapes the U.S. tax base entirely. Depending upon the level of interest rates following adoption of an expanded CBIT regime, the average homeowner with a mortgage might be better off with CBIT treatment than with the deductibility of current law.

In addition, if all capital income were taxed at a single rate at the payor level, the distinction between interest and other types of capital income that may have a significant interest component would become more important. "Identifying Disguised Interest" in Section 4.G discusses the implications of CBIT for the current law distinction between true leases that are treated as leases and financing leases that are treated as loans. That section reflects our judgment that, under the CBIT prototype, no important changes in current rules for distinguishing between interest and other types of capital income are necessary. In an expanded CBIT regime, however, the pressure on the line between interest and other capital income would be greater.

13. Interest and dividends received from a nonCBIT business would be included in the taxable incomes of individual and business investors, and capital gains realized on the disposition of interests in nonCBIT businesses would be taxable without regard to any change due to CBIT.

14. We anticipate that entities might move freely from CBIT to nonCBIT status based on annual gross receipts, i.e., a business which had gross receipts of \$75,000 in year 1, \$125,000 in year 2, and \$75,000 in year 3 would report its income under current law provisions in years 1 and 3 and file a CBIT return in year 2. CBIT tax paid in year 2 would allow payment of tax-free distributions attributable to the taxed amounts in year 3 and later nonCBIT years. The impact of year to year changes would cause some complexity and would cause a rate notch effect as an entity moves in and out of CBIT status. An alternative would allow organizations that generally meet the gross receipts test to remain nonCBIT entities until they have exceeded the floor for several years.

15. If the lower bound were higher, an aggregation rule probably would be required. The least complicated approach would require individuals with more than a threshold amount, e.g., \$100,000, on Schedules C and K of their Forms 1040 to pay tax at a schedular rate of 31 percent on the excess. While this approach would inhibit multiplication of entities to avoid the CBIT loss limitation, it would not be effective to prevent use of multiple entities to evade the CBIT interest deduction disallowance rule. A refinement could require all nonCBIT small entities to report to their shareholders and partners their deductions for business interest paid. (Individual proprietors would, of course, know this amount for Schedule C activities.) Individuals could then be required to add these amounts to the income reported on Schedules C and K in computing the schedular tax described above.

16. An alternative would adopt graduated CBIT rates to reduce the impact of CBIT on small businesses. Because the 31 percent CBIT rate equals the top individual rate, this would have the effect of imposing CBIT at rates identical to those at the individual level. The principal disadvantage of this approach is that it would require complex rules to combat multiple use of the graduated rates by common owners. Compare IRC § 1551 (denying the benefit of graduated rates to corporations under common control).

Another alternative that we rejected as unduly complex would subject all corporations and unincorporated businesses to CBIT, but tax all income of owner-managers at their personal rates rather than at the CBIT rate. Once owner-managers have been identified, the business would proceed to calculate its CBIT tax, excluding the share of profits and other income attributable to the owner-managers (whether that income is called salary, bonuses, partnership income, dividends, or interest) from the CBIT income of the business. The owner-managers then would include these amounts in their personal income when they calculate their taxes. This alternative, however, would introduce a set of complexities that a receipts-based exception avoids. One example would be the need to separate all interest income and expense items between their business and personal components. Some taxpayers will see this task as unnecessarily difficult, while others will see it as an opportunity for tax planning. For example, a proprietorship operated out of the proprietor's home should bear a (nondeductible) portion of the home mortgage interest expense. Additional rules would be needed to address these problems. Taxpayers would likely find the rules to be complex, arbitrary, and unfair.

The criteria for being considered an owner-manager might be similar to the requirements for "material participation" under the passive loss limitations of IRC § 469. Another possible set of criteria would treat as owner-managers all individuals who report net earnings from self-employment under IRC § 1402. (Net earnings from self-employment, as defined in IRC § 1402(a), would have to be modified for CBIT purposes by adding back all the capital income that is excluded from the current self-employment tax. See, e.g., IRC § 1402(a)(1) and (2), which exclude most rents, dividends, and interest from self-employment income.) A third possibility would follow the concept in IRC § 911(d)(2)(B), which identifies individuals who are engaged in trades or businesses in which both personal services and capital are material income-producing factors. That identification also was used to apply the maximum tax on earned income of former IRC § 1348, repealed in 1981, and the IRS and the courts developed a considerable body of law on whether services and capital are material income-producing factors in a given trade or business.

17. On the other hand, imposition of tax on distributed preference income (at either the corporate or shareholder level) may be viewed as retaining, in small part, the current system's bias against dividend distributions. See Chapter 5.

18. See Section 2.B. To illustrate the functioning of such a mechanism under CBIT, assume that a corporation earned \$100 of taxable income and \$100 of preference income. The corporation would pay tax of \$31 and would add \$69 of fully-taxed income to its EDA. The balance in the account would translate into \$69 of excludable distributable income. Thus, if the corporation distributed \$75 during the year, \$6 would be deemed made from preference income and would be includable in the investor's taxable income.

19. Other solutions may be possible. For example, a compensatory tax could be imposed, but a tax credit like that described in Section 4.F could be provided to tax-exempt and foreign investors. A compensatory tax would raise sufficient revenue to allow a refund of up to 50 percent of entity level taxes paid to tax-exempt and foreign investors. We expect that such a credit would significantly reduce the distortion in payout decisions the compensatory tax would create. As Section 11.B discusses, the compensatory tax creates a real increase in the tax burden on distributed preference income because we do not recommend refunding it to tax-exempt and foreign investors. If the compensatory tax were completely refundable to such investors, the amount of tax collected from investments by those investors would remain the same, and one would expect businesses and investors to adjust, in the long run, to what is merely a change in the collection mechanism without an additional burden. A partial refund of entity level tax would mitigate the distortions created by a compensatory tax. See also Section 6.D.

20. If a compensatory tax is adopted in CBIT, consideration could be given to allowing payments of compensatory tax to be credited against subsequent regular tax liability. Such a rule would allow the most taxpayer-favorable stacking of taxable income and preference income earned in different years. However, the existence of excess compensatory tax carryforwards—like excess ACT accounts in the U.K. system—may create "trafficking" concerns. See American Law Institute, Reporter's Memorandum No. 3 (1991).

Example. A corporation earns \$100 of preference income in year 1 and distributes \$69, incurring \$31 of compensatory tax. In year 2, the corporation earns \$100 of taxable income and owes \$31 of tax, which is offset by the previous year's payment of compensatory tax. The corporation now has a zero EDA and will owe \$31 of compensatory tax when it distributes the second year's income.

If compensatory tax is not creditable against regular tax liability, the corporation would owe \$31 of regular tax in year 2 but would have a \$31 EDA. This is the approach we generally follow in discussing a compensatory tax under CBIT.

21. The CBIT prototype uses the imputed interest and OID rules to distinguish payments of interest from payments of principal; similar rules may be required for preferred stock. See "Current Law Interest Deduction Limitations Under CBIT," in Section 4.G. These rules are necessary to ensure that payments representing a return of debt or preferred stock capital do not reduce the EDA and are not subject to compensatory tax or investor level tax.

The role, if any, of the current earnings and profits rules requires reconsideration under CBIT. Although earnings and profits could be computed under CBIT principles, i.e., without an interest deduction, it is unclear whether those rules would be necessary or appropriate as an additional (or alternative) mechanism for identifying payments that represent a return of equity or debt capital. The dividend exclusion prototype, which applies only to stock, retains the earnings and profits rules. See Section 2.F.

22. The tax paid would result in an addition to the EDA and would ensure that the income would not be taxed again when redistributed.

23. It may be desirable to provide a 100 percent deduction without regard to the degree of affiliation between the payor and the recipient. Although the dividend exclusion prototype retains current law, that prototype applies only to equity. Under CBIT, which applies to both debt and equity, there seems to be no reason to accord a larger deduction to a related creditor than to a portfolio creditor, and maintaining parity between debt and equity requires the same treatment for shareholders.

24. Imposing a 31 percent tax on all individual income in excess of \$100,000 reported on Schedules C and K of Form 1040 might be required to achieve these simplifications. See note 15 *supra*.

25. Historically, the corporate and individual minimum taxes were enacted in response to public perceptions that corporations and individuals with substantial economic income were not paying any income tax. Although CBIT may result in some taxpayers not writing checks to the IRS (because most of their income is excludable CBIT interest and dividends), individuals do not in fact escape tax on interest and dividends paid by a CBIT entity, because the investors' income tax is prepaid at the entity level and at the CBIT rate (which is equal to the top individual rate and exceeds the individual AMT rate).

26. Other countries with integrated systems of corporate taxation typically treat foreign source income in a similar fashion; the domestic tax on foreign source income that is not initially collected because of foreign tax credits (or an exemption rule) is collected, at the shareholder's tax rate, when the foreign source income is distributed to resident shareholders. Collection of this tax is not considered inconsistent with income tax treaty obligations to grant relief for foreign taxes. If a compensatory tax were imposed under CBIT, the domestic tax would be collected at the 31 percent CBIT rate, rather than the rate paid by the shareholder on its other income.

27. See *U.S. v. Goodyear Tire & Rubber Co.*, 493 U.S. 132 (1989).

28. Under this approach, the CBIT prototype collects U.S. tax currently on foreign source income of a branch used to pay interest. We view this as the correct approach. Unlike other differences typically found between the U.S. and foreign computations of the foreign source income base (e.g., depreciation or inventory), the treatment of interest under CBIT would be a major systemic difference. The decision not to permit a foreign tax credit against the portion of a branch's foreign source income base used to pay interest can be analogized to placing such income in a separate limitation or "basket" under IRC § 904(d). Since the foreign jurisdiction can be expected never to impose tax on this income, it is appropriate to prevent the averaging of high foreign taxes imposed on other foreign source income against the "zero" rate of tax imposed on the income used to pay interest.

We recommend that the foreign tax credit limitation be computed as the lesser of (1) .31 times foreign source income computed with a deduction for interest expense allowable under foreign law and (2) actual U.S. tax liability. This approach has a disadvantage in that dividend income received by a U.S. corporation from a foreign subsidiary will be included in the foreign source income base without a reduction for interest expense allocable to the corporation's investment in that subsidiary, i.e., because that interest expense will not be deductible for foreign tax purposes. The resulting inflation of the limitation will permit the U.S. corporation to absorb excess foreign tax credits generated by non-dividend income.

An alternative approach would compute the foreign tax credit limitation by taking into account the interest expense that would be deductible and allocable to foreign source income under current law rules. See IRC §§ 861 and 864. Under this approach, the foreign tax credit limitation formula would be: $.31 \times (\text{worldwide income}) \times (\text{foreign source income} / \text{worldwide income})$, where worldwide income is reduced by interest expense that would be deductible under current law and foreign source income is reduced by interest expense that would be allocable to such income under current law. An obvious disadvantage of this approach is that it would require the retention of current law provisions that determine the deductibility and allocation of interest expense. On balance, the choice between these alternatives depends upon whether the complexities associated with retention of current law interest rules are more or less acceptable than the potential averaging that would arise from reliance on foreign law. See also Section 4.G.

29. Computation of the earnings of a foreign subsidiary without a deduction for interest might be considered appropriate on the ground that such earnings are calculated under IRC § 902 in order to determine the U.S. tax liability of the U.S. corporate shareholder (a CBIT entity), and not of the foreign subsidiary. In other words IRC § 902 deems the U.S. corporate shareholder to have earned the earnings used to pay the dividends it receives from the foreign subsidiary and to have paid the associated foreign tax. If this approach were adopted, an indirect credit could be granted for interest payments received by a 10 percent U.S. corporate shareholder from a foreign subsidiary. Compare IRC § 904(d)(3)(C). A U.S. corporate shareholder receiving both interest and dividends from a foreign subsidiary with no other creditor would then receive a full indirect credit for foreign taxes paid by the subsidiary. This would permit the use of foreign tax credits to shelter the interest income from U.S. tax, however, which, as discussed in the context of foreign branch income, we consider objectionable. Moreover, in cases where a foreign subsidiary paid interest to a creditor other than a 10 percent U.S. corporate shareholder, this approach would result in the stranding of foreign tax credits at the subsidiary level. Specifically, the computation of

foreign subsidiary earnings without an interest deduction would reduce the indirect credit available to a U.S. corporate shareholder with respect to dividends received from the subsidiary, i.e., because those dividends would represent a reduced proportion of a larger, hypothetical amount of subsidiary earnings. It would be impossible for the U.S. shareholder to obtain a credit for the full amount of taxes paid with respect to income distributed as dividends because a portion of such taxes would be deemed to have been paid on income paid out as interest to a third party creditor. This would be the case, even though the foreign subsidiary was not actually taxed on income paid out as interest, by virtue of the availability of an interest deduction for foreign tax purposes. To avoid this result, we have proposed that the earnings of a foreign subsidiary be calculated for IRC § 902 purposes with an interest deduction based on the interest expense claimed under foreign law.

30. In the case of foreign operations conducted through a foreign partnership, this may raise an issue of comparability with a foreign branch. This issue is discussed below at note 37.

31. Introduction of CBIT might induce some U.S. corporations to reorganize foreign branch operations as foreign subsidiaries. The nondeductibility of interest under U.S., but not foreign, tax law would effectively reduce the foreign taxes available to offset U.S. tax, thus providing greater incentives for operating in corporate form abroad in order to defer U.S. taxation.

32. The branch profits tax also would be repealed because, in the absence of a dividend withholding tax, it would no longer be needed to maintain parity between U.S. branches and U.S. subsidiaries of foreign corporations.

33. Significant exceptions to the portfolio interest exemption, i.e., interest paid to a foreign bank on a loan made in the ordinary course of business and interest paid to related foreign persons, give the United States some leverage to obtain withholding rate reductions in treaties negotiated under current law.

34. See IRC § 882(c) and Treas. Reg. § 1.882-5.

35. Note that the 30 percent withholding rate would perform a function here analogous to the 31 percent schedular tax discussed in note 15. Reduction or elimination of the 30 percent tax by treaty might encourage the use of multiple small business entities to avoid CBIT.

36. The term "nonCBIT debt" refers to debt issued by entities that are not subject to CBIT. NonCBIT debt includes Treasury securities, home mortgages (and mortgage passthrough certificates), debt issued by tax-exempt entities, and debt issued by foreign governments and businesses, all taxable to U.S. persons. State and local government debt is nonCBIT debt also; however, it would remain tax exempt to the extent provided in current law.

37. U.S. CBIT entities needing funds for foreign operations could borrow through foreign subsidiaries. Borrowing through a foreign branch would not be desirable, however. Because a foreign branch would be a component of a CBIT entity, it would not be permitted to deduct interest expense. Thus, the branch would probably find it advantageous to borrow in the United States (where its ability to pay excludable interest could be expected to produce a lower interest rate) rather than paying higher, nonCBIT interest rates that would be required to attract foreign lenders. An alternative would treat foreign branches as if they were foreign subsidiaries for CBIT purposes. Interest paid by a foreign branch would then be deductible by the branch and taxable to the lender. Rules similar to those of IRC § 861(a)(1)(B)(i) (providing foreign sourcing for interest paid by foreign branches of U.S. banks on bank deposits) could be applied to avoid the imposition of any applicable CBIT on such interest paid to a foreign lender. This approach would raise numerous technical and compliance issues. For similar reasons, borrowing through a foreign subsidiary would not be advantageous if borrowed funds were to be used in the United States.

38. Alternatively, the credit could be fully refundable, without regard to the taxpayer's other tax liability. Making the credit nonrefundable is, however, consistent with the decision in Chapters 3 and 11 not to permit refunds of excess imputation credits to low-bracket shareholders and with the treatment of tax-exempt and foreign investors described in the text below. Although interest and dividend income would not be taxable under CBIT, most low-bracket individuals who would invest in CBIT entities should have sufficient tax liability on wages and nonCBIT income to use the CBIT investor credit.

39. See also American Law Institute, Reporter's Memorandum No. 3 (1991).

40. See Chapter 6. Under a distribution-related integration system that denies refunds of imputation credits on corporate dividends, tax-exempt investors would have an incentive to invest in debt rather than equity. By imposing a tax on investment income, the taxation of debt and equity would be conformed, and tax-exempt entities would have an incentive to invest in dividend-paying stock to use the excess imputation credits against the tax due on other income. This structure would

encourage tax-exempt entities to hold a mixture of debt and equity, since the excess credits associated with corporate dividends could be used to offset the tax due on other kinds of investment income.

41. In theory, the policies which led Congress to enact IRC § 263A(f) would justify its retention for small business entities; however, given the capitalization threshold for application of IRC § 263A(f)(1)(B) (assets costing more than \$1 million or having long life or production period), retention of its complexity may not be justified for the few situations in which it would apply. In contrast, absent special rules to equate self-constructed and purchased assets, capitalization of interest for CBIT entities could undercut the CBIT revenue base by converting some nondeductible interest into basis eligible for cost recovery.

42. The rules of IRC § 265 would, however, be expanded to limit the deduction of expenses attributable to CBIT interest and dividend income. See Section 4.I.

43. A similar expansion of IRC § 265(a)(4) to cover regulated investment companies and other conduits which hold stock and debt of CBIT entities also will be required. See Section 4.H.

44. If A's lender were taxable, the disallowance of interest deductions to A would result in the collection of a double tax. However, the potential for tax arbitrage described in the text led us to adopt the disallowance solution.

45. As discussed in Section 4.E, the prototype computes the foreign tax credit limitation by calculating a branch's foreign source income taking into account the interest deduction allowed to the branch under foreign law. The alternative is to require allocation and apportionment of interest expense to the foreign source income as under current law. In that case, the provisions listed in the text would continue to be relevant for purposes of determining the foreign tax credit limitation.

46. For example, if the seller enjoys a reduced rate on capital gains, compared to a zero rate on CBIT interest, this tension will be reduced, but not eliminated. See also Chapter 8.

47. The Service's guidelines for ruling that a lessor is the owner of assets for tax purposes (and hence that the lessee's payments are rents) include rules governing (1) the length of the lease compared to the useful life of the property, (2) the residual value of the property at the end of the lease, (3) options to purchase or sell property at the end of the lease term, and (4) the lessor's equity investment in the property. See Rev. Proc. 75-21, 1975-1 C.B. 715. See also Rev. Proc. 75-28, 1975-1 C.B. 752, Rev. Proc. 76-30, 1976-2 C.B. 647, and Rev. Proc. 79-48, 1979-2 C.B. 529.

In theory, every leasing transaction has an interest component, because the lessee obtains current performance (the possession of the property) but makes deferred payments. In that sense, a lease is economically similar to an installment sale of the property. Compare Halperin (1986) (several different types of accelerated or deferred payments contain implicit loans); Mundstock (1991) (economic equivalence of loans and leases). The degree of similarity between the two, however, depends on several factors, including the term of the lease agreement and the rights retained by the lessor with respect to the property. The tax law historically has respected a broad range of leases, and we do not think it necessary to change that treatment in the move to CBIT, although it would be possible to consider CBIT treatment for certain rents and royalties.

48. That the courts' efforts in this area have led to inconsistent results is hardly surprising given the factual nature of each inquiry into who is the true owner of property that is the subject of complex contractual arrangements between parties. No case shows this inconsistency better than the Supreme Court's only examination of this area in the last 50 years, *Frank Lyon v. United States*, 435 U.S. 561 (1978), rev'g 536 F.2d 746 (8th Cir. 1976), rev'g 75-2 USTC ¶ 9545 (E.D. Ark. 1975). Based on all of the facts and circumstances, the trial court upheld the taxpayer's contention that it was the true owner of the building. The Court of Appeals, however, analogizing the rights of a property owner to a bundle of sticks, agreed with the government's argument that taxpayer "totes an empty bundle and that the term 'owner' for tax purposes cannot reasonably be attached to the empty wrapping taxpayer has retained." 536 F.2d at 751. The Supreme Court then undertook its own evaluation of the facts, and cited some two dozen facts to support its conclusion that the taxpayer was the tax owner of the building. Statutory standards might help the courts to reach more consistent results.

49. See IRC §§ 483, 1274. IRC § 7872 also should be retained in order to characterize properly the interest component of certain below-market loans.

50. It may be possible to simplify the current OID rules for CBIT debt, because neither the issuer nor the lender must currently accrue deductions or income. Thus, it may be sufficient to adopt rules that correctly identify the character of payments. Compare IRC § 483. Similar rules may be needed to distinguish dividend payments from redemption payments on preferred stock. See § 305(c). The treatment of capital gains under CBIT may, however, result in some retention of the current timing rules. If capital gains on CBIT debt are taxed, it may be appropriate to provide debtholders with an increase

in basis (with a corresponding debit to the issuer's EDA) to ensure that accrued discount on CBIT debt is not taxed as capital gains when the debt is sold. See Section 9.B.

51. Consideration might be given to providing Treasury with the option of issuing both taxable debt and tax-exempt debt.

52. See IRC § 103.

53. The exemption also may permit distributions to be taxed at a lower rate, if the beneficiary is in a lower tax bracket after retirement.

54. "CBIT income" refers to dividends and interest on CBIT debt and equity (and, if capital gains on CBIT debt and equity are exempt from tax under CBIT, capital gains on such assets). The two accounts would increase when the pension fund receives contributions, nonCBIT income, or CBIT income, and would decrease when the pension fund makes distributions to beneficiaries. If CBIT income were reinvested in nonCBIT assets, only the return on those assets would be added to the nonCBIT income account. If no compensatory tax is adopted, CBIT income would include only excludable CBIT interest and dividends.

Pension funds would, as under current law, also track nondeductible employee contributions, which are exempt from tax when distributed.

The transition to the new regime should be straightforward. Pension funds would calculate the sum of all previous contributions and investment earnings on the date of enactment of CBIT. Those earnings would go into the nonCBIT account, and any future CBIT earnings would go into the CBIT account.

55. Special rules may be needed to limit the allocation of EDA balances to preferred stock upon liquidation. For example, it may be inappropriate to allocate any EDA to preferred stock on which current, fully excludable dividends have been paid. In that case, the liquidation proceeds simply represent a return of capital.

56. IRC § 732 prevents a step-up in basis, however, thereby preserving a potential tax whenever the distributee partner disposes of the distributed asset.

57. Such exceptions might be patterned on existing IRC §§ 731-732 or prior IRC § 333, which was repealed in 1986.

58. See Treas. Reg. § 301.7701-2. In general, an organization that has associates and an objective to carry on business for joint profit is classified as a corporation rather than a partnership if it has more corporate characteristics than noncorporate characteristics. The corporate characteristics relevant to this determination are (1) continuity of life, (2) centralization of management, (3) limited liability for debts, and (4) free transferability of interests.

59. IRC § 7704.

60. IRC § 851 et seq. A RIC also may retain and pay tax on long-term capital gains, in which case shareholders must include such gains in their income and are credited with their share of corporate tax paid.

61. IRC § 856 et seq. REITs are allowed a dividends-paid deduction for distributions of both ordinary income and capital gains income, but are not allowed to impute retained capital gain income to shareholders.

62. IRC § 860A et seq.

63. See IRC § 1381 et seq. which generally apply to cooperatives. See also IRC § 501(c)(12) (certain cooperative telephone or electric companies); and IRC § 521 (farmers' cooperatives).

64. These changes also would apply to sole proprietorships not eligible for the small business exception.

65. IRC § 265(a)(4) should be expanded to cover CBIT investments of all three conduit entities. As discussed in the context of rules for savings and loan associations under CBIT, policymakers could consider imposing a withholding tax of 31 percent on distributions from RICs, REITs, and particularly REMICs to tax-exempt investors attributable to home mortgage interest to prevent unfair competition between these entities and savings and loan associations.

66. The patronage dividend mechanism is sufficiently flexible that it should permit the cooperative to shift income attributable

to the disallowance of interest deductions to patrons. In effect, the cooperative could substitute a patronage deduction for the interest deduction if patrons are generally in a tax bracket under 31 percent.

67. For example, consideration might be given to allowing banks to pay deductible (and includable) interest on a limited class of deposits. The possibility of such an option for savings and loan associations is discussed in the text below.

68. Unlike the alternative approach, this rule would require a provision defining the institutions eligible for its special rule; e.g., the special rule could apply to CBIT entities that earn at least 80 percent of their total income from interest and dividends.

69. The potential problems could be exacerbated if losses arising from nonapplication of IRC § 265(a) to financial institution operating expenses were allowed to generate net operating losses that could be used by other members of a consolidated group.

70. S&Ls may well argue that such a provision is necessary to preserve parity with REMICs and other entities which we recommend retain their conduit status. Since REMICs, for example, could market mortgage pass through instruments to tax-exempt institutions without imposition of an entity level tax of 31 percent, REMICs would clearly have an advantage in raising funds from the tax-exempt sector over S&Ls. As suggested earlier, an alternative solution to this result might be to impose a 31 percent withholding tax on REMIC distributions to tax-exempt organizations or impose such a tax directly on tax-exempt organizations receiving tax-exempt interest through a REMIC by treating such income as unrelated business taxable income. Under current law, interest paid on REMIC regular interests is tax free to tax-exempt investors and, in general, to foreign investors. A portion of the income on REMIC residual interests is subject to UBIT in the hands of tax-exempt organizations and is subject to 30 percent withholding tax when distributions are made to foreigners.

71. Under current law, insurance companies generally include in gross income premiums and investment income and deduct from gross income general business expenses and distributions to policyholders and beneficiaries. In addition, the companies are allowed to deduct the net increase in the amount of insurance reserves during the taxable year. If reserves decrease, the amount of the decrease is included in income. Over the life of any insurance policy, the net deduction for reserves is always zero (since the reduction in reserves as claims or benefits are paid generates items of income that offset the earlier deductions). Thus, the reserve deduction affects the timing of insurance company deductions for claims and benefits, but does not increase the ultimate deductions to more than the amount of claims and benefits actually paid.

Tax reserves are calculated on a discounted basis to reflect the time value of money. The deduction for the net increase in insurance reserves serves two purposes. First, it prevents that portion of premiums needed to fund future casualty or benefit payments from being taxed. Second, it provides for a deduction equal to the expected investment return on reserve funds. As a result of the combined deduction for reserves, claims and benefits, insurance companies are able to deduct currently the present value of anticipated future payments, instead of deducting those payments when made. The difference between the present value of future payments and nominal amount of those payments decreases over time, and each year a deduction is allowed to the extent of the decrease during the taxable year.

Insurance companies also make dividend payments to policyholders. Policyholder dividends consist of various components, one of which is an interest component. Dividends paid to policyholders are generally deductible from income and, among other things, provide a mechanism for life insurance companies to adjust effectively the amount of the reserve deduction for changes in the rate of investment return. Thus, the interest-like deduction available to insurance companies under current law is spread among deductions for the change in reserves, for claims and benefits paid, and for policyholder dividends paid. For a more complete discussion of the issues related to insurance company policyholder dividends, see U.S. Department of the Treasury, Report to the Congress on Life Insurance Company Taxation (1989) and U.S. Department of the Treasury, Report to Congress on Property and Casualty Insurance Taxation (1991).

72. CBIT would not alter current law rules which result in exclusion of much of the amount paid to policyholders in the form of claims, benefits, or policy dividends. Under current law, virtually all death benefit distributions payable under life insurance policies are fully excluded from gross income. Casualty claim payments are typically offset by loss (IRC § 165) or rollover (IRC § 1033) deductions allowed to the recipient. However, some other insurance company distributions are included in income. Business policyholders of casualty policies must generally include policyholder dividends in income, because they generally may deduct the related premiums. Individuals receiving policyholder dividends from either P&C or life policies or receiving policy surrender distributions from life policies generally are required to take those distributions into income only to the extent that they exceed the total of previous premium payments less previous distributions. As a result of these rules, very little of the investment income earned on cash value is included in taxable income at the individual level under current law.

PART III

Introduction

1. Under these conditions, any system of integration would result in the imposition of a single level of tax at a single tax rate, regardless of whether corporate earnings were distributed or retained. For example, assume that a corporation earns \$100, and all corporate and individual income is taxed at a flat rate of 34 percent. Under the shareholder allocation prototype, \$100 of income would be imputed to the shareholder, who would pay \$34 in tax. The tax due also would be \$34 under any of the three distribution-related integration systems. In each system, the corporation would pay \$34 of tax. Under the dividend exclusion prototype the corporation could distribute its \$66 of after-tax earnings tax-free to shareholders. Under the imputation credit system discussed in Chapter 11, when earnings were distributed, the shareholder would have a \$34 credit, which would exactly offset his tax liability. In a dividend deduction system, the corporation would have a \$100 deduction that would offset its tax liability in the year of distribution, and the shareholder would pay tax of \$34. Under CBIT, the earnings would be subject to \$34 of tax at the corporate level but would not be taxable upon distribution as interest or dividends to investors.
2. The equivalency analysis set forth in the preceding note does not take into account the possible additional burden created by taxing capital gains on corporate stock. See Chapter 8. Appendix C discusses the equivalence of distribution-related integration systems.

Chapter 5

1. Although no agreement exists on the precise specification of the standard accounting rules, there is sufficient conformity that most analysts are able to ascribe to an accepted list of preferential items. See, e.g., Budget of the United States Government, Fiscal Year 1992, Ch. XI, "Tax Expenditures."
2. See IRC § 312. Because corporate shareholders generally claim a dividends received deduction for both regular tax (IRC § 243) and minimum tax (IRC § 56(g)(4)(c)(ii)) purposes, preference income flows through to most corporate shareholders under current law.
3. See McLure (1979), pp. 131-32, and Polito (1989), pp. 1036-37 (both arguing that corporate preferences should be passed through to shareholders under a fully integrated tax system); and Kitchen (1987), p. 360 (defending the ability to pass preferences through under Canada's integrated tax system).
4. Congress has at times indicated a willingness to discriminate between corporate and noncorporate preferences. For example, IRC § 291 restricts the availability to corporations of certain preferences that are otherwise available to both corporate and noncorporate entities alike. See also IRC § 56(b), which specifies several AMT adjustments that apply only to taxpayers other than corporations, and IRC § 56(c) and (g), which specify adjustments that apply only to corporations.
5. See, e.g., the tax expenditure estimates presented in the Budget of the U.S. Government, cited in note 1. Although the approximately \$50 billion annual corporate tax expenditures noted in the 1992 Budget overstates the magnitude of revenue cost (primarily because behavioral adjustments are not considered in the tax expenditure estimates) this figure serves to illustrate the significant revenue impact that would result from extending preferences to shareholders.
6. As discussed in Chapter 13, a complete analysis of the economic effects of the integration prototypes should include an examination of the efficiency cost of the revenue offsets.
7. See Avi-Yonah (1990), pp. 199-202.
8. See Section 2.B. The same is true of an imputation credit system of distribution-related integration. Under such a system, extending preferences to shareholders can result in shareholders receiving tax credits that exceed the corporate level taxes paid. This occurs if the integration rules implicitly (and incorrectly) assume that the corporation has paid taxes on preference-related income, and if the corporation tax rate exceeds the individual tax rate. For example, such errors would occur if a shareholder imputation credit method required that a shareholder compute his credit as a fixed percentage of dividends received (if the percentage is based on the statutory rate of tax), gross up the dividend by the amount of the credit, apply his tax rate to the grossed-up dividend, and apply the credit to the resulting tax liability. This procedure would extend preferences to shareholders whenever the corporate and personal tax rates are equal, but it would provide greater subsidy for preferences if the corporate tax rate exceeds the shareholder tax rate.

9. If it were desired to extend some (but not all) preferences to shareholders, a distribution-related integration system could be structured to accomplish this result. Preferences in the form of tax credits could be passed through simply by treating such credits the same as taxes actually paid. The relative ease of passing such credits through in an integrated system should encourage policymakers so to structure any tax preferences that it desired to pass through to shareholders. Exemption preferences also could be passed through, but, in an imputation credit system, that would require additional accounts at the corporate level and separate treatment at the shareholder level. Deferral preferences create the most substantial mechanical problems if passed through to shareholders. See also Section 3.E.

10. A compensatory tax ensures that full corporate level tax has been paid on distributed income by assessing a "toll charge" on the corporation with respect to each distribution of preference income. Section 11.B and Appendix C examine different types of compensatory tax systems. To determine the amount of the toll charge, corporations would maintain an account of corporate tax paid or of fully-taxed income to determine the amounts of fully-taxed and of preference income. A "stacking" rule could then be applied to determine the extent to which distributed earnings were made from the corporation's fully-taxed or preference income. The stacking rule most favorable to taxpayers is to treat corporate distributions as paid first from fully-taxed income and then from preference income. Thus, if the corporation has sufficient fully-taxed income to apply to distributions, the corporation and its shareholders will suffer no adverse consequences from a decision not to extend preferences to shareholders. Chapter 11 contains a discussion of stacking alternatives and their economic effects. The principal alternative is a pro rata stacking rule, which would treat distributions as containing a proportionate share of the corporation's retained preference income.

If the compensatory tax rate is set equal to the corporate tax rate, the effect is to recapture corporate tax preferences. In that case, if a corporation distributes only fully-taxed income (determined under stacking rules), no additional tax liability results. For distributions in excess of fully-taxed income, each dollar of tax-exempt preference income is subject to the full corporate tax rate, and the full amount of tax paid is available as a shareholder credit. If the shareholder credit is fully refundable, the tax system collects no additional net taxes from a compensatory tax. If the credit is not fully refundable, then the tax system collects an additional tax on preferences distributed to shareholders who have insufficient tax liability to absorb the credit or who are tax-exempt.

If the compensatory tax is set at a rate below the corporate tax rate, distributions in excess of fully-taxed income result in additional corporate level tax liability on preference income, but at less than a dollar-for-dollar rate. This achieves a result somewhat analogous to the current alternative minimum tax, because distributed preference income bears tax at a rate lower than the corporate tax rate. Setting the compensatory tax at a rate lower than the corporate tax rate differs from an alternative minimum tax: the compensatory tax is triggered only on distributions, while the current alternative minimum tax applies regardless of whether funds are retained or distributed.

A third alternative sets the compensatory tax rate equal to the shareholder rate rather than the corporate rate. This approach, adopted in the U.K. imputation system, effectively taxes the corporation at the shareholder rate on distributed preference income and allows shareholders a credit at the same rate. For shareholders who pay tax at that shareholder rate, the compensatory tax acts as a withholding tax on funds distributed to shareholders. If the shareholder credit is not refundable and cannot be carried forward, the compensatory tax creates an additional tax burden on distributed preference income for shareholders whose tax rate is less than the statutory rate. Only refundability of tax credits will eliminate such consequences for tax-exempt shareholders.

Section 11.B examines the treatment of preference income distributed to tax-exempt shareholders under both a compensatory tax and a credit limitation approach.

11. See Section 11.B for a discussion of the different methods for limiting the shareholder credit to corporate level tax actually paid. This method requires the corporation to maintain an account of corporate taxes paid. In a dividend exclusion system, the amount of taxes paid is converted into a corresponding amount of fully-taxed income. The account would be increased by corporate tax paid and the amount of credits from dividends received from other corporations and decreased by the amount of credits attached to distributions made to shareholders (or the fully-taxed income equivalents). As with the compensatory tax, a stacking rule is necessary to determine the extent to which distributions are made out of fully-taxed income. Shareholder credits with respect to distributions would thus be allowed only to the extent the corporation's account was sufficient to fund the credits. Distributions considered made out of preference income would not carry imputation credits and, thus, would be subject to tax at the shareholder tax rate, as under present law.

12. See Section 11.B.

13. See Section 2.B. If integration were extended to retained earnings through a dividend reinvestment mechanism, a decision not to extend corporate level tax preferences to shareholders could readily be implemented by restricting the dividend

reinvestment option to fully-taxed retained earnings. This could be accomplished by limiting the dividend reinvestment option to the balance in the corporation's EDA, in the dividend exclusion and CBIT prototypes, or the SCA, in the imputation credit prototype. See Chapter 9.

14. See Section 4.D.

15. See Section 3.E.

Chapter 6

1. In some cases, the Code also permits deductibility of donors' contributions as charitable contributions (IRC § 170), while contributions to pension funds are generally deductible as business expenses (IRC § 404).

2. This is true only when individuals' tax rates are constant over their working life and in retirement. If tax rates during retirement are lower, current law treatment of pension savings is even more valuable.

3. Income from an exempt organization's investments in a publicly traded partnership is subject to UBIT, regardless of whether the partnership's business is unrelated to the entity's exempt purpose.

4. As Chapter 5 notes, most preference items confer tax deferral rather than complete exemption. Corporate income sheltered from tax by a deferral preference can be distributed to a tax-exempt shareholder without shareholder level tax, preserving the value of tax deferral until the preference "turns around" and additional tax is imposed at the corporate level. Corporate preference income distributed as interest to tax-exempt debtholders receives even more favorable treatment: not only is the income exempt from tax at both the corporate and shareholder level, but the interest deduction may be available to offset otherwise taxable income. This benefit is not available for all preference income. IRC § 265, for example, disallows deductions for interest and other expenses attributable to tax-exempt bond interest.

5. In 1989, tax-exempt entities were allocated \$1.6 billion in income from partnerships, or approximately 2 percent of the total amount allocable to all partners. Of the tax-exempts' share, an estimated \$260 million was trade or business income that could have been subject to UBIT. The remainder consisted of rents, royalties, interest, dividends, and other forms of income not subject to UBIT.

6. Depending on the integration system adopted, there could still be an advantage in distributing corporate preference income to tax-exempt shareholders. For example, under a shareholder credit limitation system, preference income would be exempt from tax at the corporate level and would be exempt from tax at the investor level if distributed to a tax-exempt shareholder. Retained preference income, realized in the form of capital gains on stock, also would be exempt from tax in the hands of a tax-exempt shareholder. A compensatory tax, discussed in Section 11.B, would impose a corporate level tax on distributed preference income, but would not change the treatment of retained preference income.

7. A dividend exclusion system would not provide equivalent treatment of debt and equity held by tax-exempt investors unless interest also were nondeductible at the corporate level and excludable by the recipient. This regime is CBIT; see Chapter 4.

8. See Sections 11.E and 12.A, respectively. A dividend deduction system without withholding would equalize the treatment of debt and equity investments by tax-exempt investors. Corporations would be able to deduct dividends paid, as they now deduct interest, and neither type of income would be taxable to the tax-exempt investor. This result could be changed by denying the deduction (or the benefit of the zero rate) for dividends paid to such tax-exempt shareholders, but such an approach would require corporations to track the identities and tax status of shareholders. Coupling a nonrefundable "withholding" tax with a dividend deduction could achieve results similar to a nonrefundable credit under an imputation credit method of integration.

9. The United Kingdom refunds the imputation credit to tax-exempt investors. However, while the U.K.'s imputation credit is fully refundable to all domestic shareholders, including tax-exempt shareholders, the U.K. has a partial distribution-related integration system, so earnings distributed to a tax-exempt shareholder still bear a tax equal to the excess of the corporate rate over the credit rate. See Appendix B. Tax-exempt organizations own approximately 40 percent of the outstanding stock of U.K. companies.

10. An effort to provide tax-free treatment for corporate income allocated to tax-exempt or tax-favored investors under CBIT would raise major problems. For income distributed in the form of interest and dividends, the relative advantage of such investors could be maintained by providing refunds of corporate tax paid with respect to funds distributed. For undistributed

income, however, eliminating the corporate level tax would require allocating undistributed income to the shareholders—exactly the type of administrative complexity that occurs under a shareholder allocation system and that the CBIT approach to integration seeks to avoid.

11. A dividend deduction proposal passed by the House of Representatives in 1985 would have made a portion of dividends received by certain tax-exempt organizations subject to UBIT. See H.R. 3838, 99th Cong., 1st Session, § 311 (1985) and H. Rept. No. 426, 99th Cong., 1st Sess. (1985), p.240.

12. For example, under an imputation credit system of distribution-related integration, providing full shareholder imputation credits on dividend income to tax-exempt investors would allow them to invest in a mix of equity and debt so the credits could be used to offset the tax on other investment income. This approach is similar to Australia's system for tax-exempt investors, adopted shortly after enactment of a shareholder credit limitation integration system. Allowing the credit to offset other investment income also discourages streaming of franked dividends to taxable investors and unfranked dividends to tax-exempt investors.

For example, assume a tax-exempt entity earns \$100, of which \$25 is dividend income and \$75 is interest income. Assume, in addition, that the dividend carries an imputation credit for corporate tax paid at a 31 percent rate and that the tax-exempt entity is subject to tax on all investment income at a 12 percent rate. The net dividend of \$25 would be treated as a gross dividend of \$36.23, with a tax credit of \$11.23. The tax-exempt entity would have a tax liability (before credits) of \$13.35 ($.12 \times 111.23$), which would be offset in part by the \$11.23 credit. The net tax due would be \$2.12.

13. If credits are nonrefundable, the revenue neutral rates are as follows: 8.4 percent for shareholder allocation, 7.6 percent for the imputation credit prototype, 7.2 percent for CBIT with no taxation of capital gains, and 6.1 percent for CBIT with current law capital gains taxation.

Chapter 7

1. Unlike many other countries, the United States also taxes the worldwide income of all U.S. citizens and U.S. corporations, whether or not they are residents of the United States.

2. Some or all of the U.S. shareholders of a foreign corporation may, however, be subject to current U.S. tax on all or a portion of the corporation's income if it earns income which is either passive, e.g., interest, dividends, royalties, and similar income or particularly mobile or holds assets that produce such income. See, e.g., IRC §§ 951, 1293.

3. Thus, for example, if a foreign subsidiary of a U.S. company earns \$100 abroad, pays \$40 in foreign corporate level taxes, and remits \$27 in dividends to its U.S. parent (\$30, net of a \$3 withholding tax imposed by the foreign country), the parent must report \$50 in foreign source dividend income (\$27 plus \$3 plus 50 percent of \$40), and can claim a credit (subject to the appropriate limitations) for direct foreign taxes of \$3 and indirect foreign taxes of \$20.

4. Merely acquiring U.S. stock and debt securities does not constitute a U.S. trade or business.

5. See, e.g., Bergsten, Horst, and Moran (1978) and Caves (1983). In the public economics literature, studies by Musgrave (1969), Horst (1980), and Giovannini (1989) have attempted to compare the relative efficiency of capital export and capital import neutrality under various stylized assumptions. See also the overview in JCS-6-91 (1991).

6. See "Savings and Investment" in Section 1.B.

7. Setting tax rates independently implies that countries take policies of their trading partners as given, and misestimate effects of their own policies. See, e.g., Gordon (1983). In particular, analyses of capital export neutrality often assume that foreign countries' tax rates are independent of the resident country's tax rates. The source country may, of course, take into account that most investment from abroad originates from countries that grant a worldwide credit for foreign taxes paid. The source country may, therefore, be able to increase taxes on foreign investment without reducing capital inflows because foreign governments, not investors, would absorb the tax. In effect, a policy of capital export neutrality may lead to a transfer from the resident country's treasury to that of the source country.

8. The foreign tax credit tends to promote capital export neutrality, because it eliminates an investor's U.S. tax liability to the extent of foreign taxes paid, but requires the investor to pay a residual U.S. tax if the U.S. tax rate is higher than the foreign tax rate. In this situation, the investor is neutral between domestic and foreign investment, because the investor bears

the same tax burden in either case. For additional discussion, see Hines and Hubbard (1990) and JCS-6-91 (1991). As explained in the text, however, the foreign tax credit does not always have this effect.

9. The indirect credit thus provides equal treatment for foreign direct investment by U.S. corporations, whether through a foreign subsidiary or a foreign branch operation.

10. This conclusion turns on accepting, as we do in Chapter 13, the traditional view of dividends. See Section 13.B. For additional discussion of these issues, see Hines and Hubbard (1990) and the studies cited therein.

11. The statutory exemption for portfolio interest reflects the difficulty of taxing highly mobile debt capital. The exemption for capital gains represents an incentive to foreign persons to invest in U.S. capital markets and a concession to the administrative difficulties of determining gain and collecting tax where the income is not physically paid from U.S. sources.

12. Treaties also suggest another explanation for the nondiscrimination rule—to protect the bargain agreed to by the parties. Treaties limit withholding rates but generally do not impose direct limitations on a source country's right to tax business profits. This creates some risk that the source country may alter the bargain, without directly affecting withholding rates, by changing the way that business profits are taxed to foreign investors. The nondiscrimination rule indirectly prevents this by requiring that changes in the taxation of business profits burden domestic and foreign capital equally.

13. The shareholder allocation prototype treats foreign taxes by statute like U.S. taxes, but we do not recommend adoption of that prototype.

14. The following examples illustrate the tension between a policy of avoiding additional taxation of foreign source profits and a policy of collecting one level of U.S. tax on profits from all sources. Assume that a U.S. individual owns 100 percent of a domestic corporation that in turn owns 100 percent of a foreign corporation. The U.S. corporate rate is 34 percent, the individual rate is 31 percent, and the United States has adopted a dividend exclusion system. The foreign corporation earns \$100 of foreign profits in the relevant taxable year and pays foreign taxes of \$25. The foreign subsidiary later distributes the after-tax income to its domestic parent, which distributes the dividend (net of any U.S. tax) to its sole individual shareholder. If the domestic parent is required to include \$100 of profits in income for the taxable year of the distribution but is given a tax credit of \$25 against its U.S. tax liability, and the individual is allowed to exclude the dividend altogether, then the aggregate level of tax of the foreign profits will be no greater than if the profits were from domestic sources. No additional taxation will exist. Compared to current law, exempting the dividend in the hands of the individual shareholder will significantly reduce the United States' portion of the aggregate tax burden borne by the foreign profits. The United States' portion of the total tax paid will only be \$9 out of \$34, or 26 percent of the total, compared to the United States' portion under current law: \$29 out of \$54, or 54 percent of the total.

If, in contrast, the tax regime provides a credit for the \$25 of foreign taxes paid by the subsidiary to the domestic parent but requires the individual shareholder to pay tax upon the appropriate portion of the subsequent distribution by the parent under the dividend exclusion prototype, then the foreign profits will bear an additional amount of tax relative to a similar amount of domestic profits. The domestic corporation will owe \$9 of additional tax upon receipt of the distribution from the foreign shareholder, and the individual shareholder will owe a tax of \$15 upon the subsequent distribution of a grossed-up dividend of \$49. The foreign profits will have been subject to aggregate foreign and U.S. taxation of \$49, in comparison with aggregate taxation of \$34 for similar profits from domestic sources. Under this approach, the United States' portion of the total taxes paid for such income will be \$24 out of \$49, or 49 percent of the total. However, the total tax burden on the earnings decreases to \$49 from current law's \$54, because there is only one level of U.S. residual tax.

15. This problem would be even more severe if shareholder credits in a shareholder allocation or imputation credit system were actually refundable, rather than simply available to offset tax liability on other income.

16. See Sections 2.C and 11.D.

17. See Section 4.D.

18. See Section 3.J.

19. For domestic corporations owned by foreign shareholders, the first level of tax is the normal domestic corporate tax and the second level is the 30 percent withholding tax on dividends. For a U.S. branch of a foreign corporation, the first level is the corporate tax on the branch's U.S. business income and the second level is the branch profits tax under IRC § 884(a).

20. Other countries with integrated tax systems, as a rule, have not extended benefits of integration to U.S. shareholders except as a result of tax treaties. However, the U.S. treaties with the U.K., Germany, and France extend some benefits of integration to U.S. shareholders in certain cases. On the other hand, Australia generally extends the benefits of integration to foreign shareholders by statute. See Appendix B.

21. The following example illustrates the problem in the context of an imputation credit system that refunds imputation credits to foreign shareholders. The issues would be the same in a dividend exclusion system that refunded corporate tax to foreign shareholders. Assume, for example, that two domestic corporations each earn an annual pre-tax profit of \$100. Corporation A has one shareholder, a U.S. resident individual. Corporation B also has one shareholder, a nonresident alien individual who resides in a country that has a tax treaty with the United States. The tax treaty limits the U.S. dividend withholding rate to 15 percent for portfolio investors (including the shareholder of corporation B) and contains a standard prohibition against discrimination based on capital ownership. Assume also a 34 percent corporate tax rate, a 31 percent individual tax rate and that corporate taxes are credited to shareholders at the 31 percent individual rate.

If neither corporation distributes earnings, each pays a tax of \$34 on its \$100 profit. No discrimination exists between the two corporations, and the withholding rules are not implicated. If, instead, each corporation distributes one-half of profits, the domestic shareholder receives a cash distribution of \$33, an imputation credit of \$14.83, and a grossed-up dividend, i.e., including credit of \$47.83. See Section 11.B. The domestic shareholder will have a tax liability with respect to the gross distribution of \$14.83, which will be exactly offset by the imputation credit. Thus, for corporation A both distributed and retained earnings are taxed at a 34 percent rate.

There is a significantly different result for corporation B. The foreign shareholder receives a cash dividend of \$33. If he also receives an imputation credit of \$14.83, his gross dividend will be \$47.83. The withholding tax on this distribution will be \$7.17, entitling him to a refund of \$7.66. In this case, undistributed profits are taxed at 34 percent, but distributed profits are taxed at 18.7 percent (\$50 of pre-tax income that bears \$17 – \$7.66 of tax).

22. In the past, countries with nonintegrated tax systems, including the United States, have responded that this argument is highly stylized, that it ignores the economic reality that profits distributed to foreign shareholders bear a higher level of tax than profits distributed to domestic shareholders, and that such an integration regime is discriminatory. As noted in the text, this response has generally been rejected by countries with integrated systems, although the United States has had some success in negotiating partial integration benefits for its shareholders.

23. See Section 2.A.

24. This would not be true in an integration system that imposed both a nonrefundable compensatory tax and a withholding tax on dividends. A nonrefundable compensatory tax combined with a withholding tax would subject distributed preference income to two levels of tax, rather than the one level of tax imposed under current law. (Note that, if a compensatory tax were adopted in CBIT, the current withholding tax on dividends would be repealed.) See Section 4.E.

25. See Section 3.I.

26. See Section 6.D, which describes such an approach for tax-exempt entities. Such an approach would minimize portfolio shifts by foreign shareholders and would provide an opportunity for achieving greater parity between debt and equity investments in U.S. corporations by foreign investors.

Chapter 8

1. Presumably, if shareholders were not taxed on gains, they would not be allowed losses on stock sales.

2. As described in Section 13.B, we accept the traditional view of dividends, under which the value of \$1 of retained earnings is \$1 as long as the managements of corporations maximize firm value. Under the new view, also described in that section, distributions to shareholders in the form of dividends are unavoidable. For a dividend paying corporation in this view, an incremental dollar of retained earnings raises share value by less than \$1.

3. The value of stock in a corporation that has retained earnings may include the value to a prospective purchaser of the resulting capital loss that will be realized when the stock is resold after the earnings are distributed, although the value of this loss to a purchaser depends on the purchaser's marginal tax rate and ability to use capital losses, and the amount of time the purchaser expects to elapse before the earnings are distributed and it dispose of the stock.

Assume, for example, that a dividend exclusion system is adopted and that the corporate and shareholder tax rates both are 34 percent. A corporation earns \$100 of fully-taxed income in year one and pays \$34 in tax, so it has retained earnings of \$66 and an EDA balance of \$66. How much should a prospective purchaser pay for all the stock? The answer is that the purchase price of the stock will vary between \$66 and \$100, depending on the tax attributes of the purchaser and the expected timing of the distribution of the \$66 of retained earnings and the purchaser's resale of the stock.

The after-tax value of the retained earnings to any purchaser is \$66. In addition, if the corporation distributes all of its earnings, the shareholder will realize a capital loss upon disposition equal to the amount paid for the stock. (The amount realized on the disposition would be zero, assuming the corporation has no assets after the distribution.) In theory, the value of the capital loss may be as great as \$34 (and thus, a purchaser would be willing to pay \$100) if: (1) the distribution of the earnings and the disposition of the stock are expected to occur very shortly after the purchase of the stock, (2) the purchaser expects to have sufficient capital gains against which to use the capital loss, (3) the purchaser expects to face a 34 percent marginal tax rate, and (4) the distribution does not reduce the basis of the shares.

The value of the capital loss may be much less. The value of the capital loss will be less if the shareholder does not dispose of the stock immediately, cannot use the capital loss immediately, or is subject to tax at a marginal rate of less than 34 percent. If, for example, the capital loss is worth zero, the purchaser would pay only \$66 for the stock.

4. Depending on marginal tax rates, the tax system may collect as little as no tax or as much as two full levels of tax on corporate earnings. If the corporate tax rate does not exceed the individual rate, the tax system may collect virtually no tax on corporate earnings if, for example, a seller of stock is tax-exempt and a purchaser is taxable. In that case, the seller will not pay tax on capital gains attributable to fully-taxed retained earnings, but, after the earnings are distributed, the taxable purchaser can sell his stock and realize a capital loss. That loss may be valuable enough to offset tax collected on the earnings at the corporate level. On the other hand, the tax system may collect two full levels of tax if, for example, a seller of stock is taxable and a purchaser is tax-exempt. In that case, the initial shareholder's capital gain is taxed in full, but the offsetting capital loss creates no tax benefit to the purchaser. Current law in some cases limits the availability of a capital loss following a distribution. See, e.g., IRC § 1059 (basis reduction for extraordinary dividends).

5. The analysis in the text oversimplifies this issue to illustrate the general point. The analysis can be complicated if preferences are subsequently distributed or if the preference is a deferral or tax credit rather than an exclusion of income.

6. This could be accomplished by increasing inside basis in a manner similar to the treatment of electing partnerships under IRC § 754 and electing purchasers of corporate stock under IRC § 338. Applying such a rule to small acquisitions of stock (particularly where there is frequent public trading) would be administratively impossible; however, using a dividend reinvestment plan could provide some relief. See Chapter 9.

7. Halperin and Steuerle (1988) indicate that total capital gains in the economy over time are approximately equal to gains attributable to inflation plus retained earnings. Their research indicates that the real gains in value in one sector, e.g., land in the 1970s, tend to be offset by real losses in another sector, e.g., corporate stock in the 1970s. According to Halperin and Steuerle, from 1948 to 1985 the total change in economywide net worth equals the sum of (1) average net investment of 12.3 percent of net national product (NNP), (2) average inflationary gains in value of 16.1 percent of NNP, and (3) average real gains in value of -2.6 percent of NNP. See also Steuerle (1991). If total capital gains are attributable only to inflationary increase in asset values and retained earnings, the case for reduced taxation of nominal capital gains on corporate stock is much stronger.

8. See IRC §§ 705 and 1367. Treas. Reg. § 1.1502-32 provides a comprehensive set of basis adjustments for C corporations that are members of a consolidated group.

9. In cases where expected increases in future earnings that are reflected in the price of equity never materialize, an equity holder may realize a gain that never creates a corresponding amount of income to be taxed under CBIT at the entity level. In that case, however, the purchaser of the equity interest will realize a corresponding loss, and disallowing both the gain and the loss achieves a roughly accurate solution.

Example. A purchases Corp. X stock for \$100, when Corp. X is expected to earn \$1,000 per year. One year later, Corp. X announces a new product line that is expected to increase its earnings to \$1,500 per year. A sells his stock to B for \$150. Six months later, one of Corp. X's competitors introduces a superior product. Corp. X's expected future earnings decline to \$1,000 per year. B then sells his stock for \$100.

Without taking into account the time value of money, the marginal tax rates of the two investors, or capital loss limitations, A's \$50 gain is offset by B's \$50 loss.

10. A complete exemption also may create an incentive to restructure transactions. For example, because investor level gains on a sale of stock would be exempt but entity level gains on a sale of assets would not, there would be a considerable incentive to structure acquisitions of corporations with appreciated assets as stock sales rather than asset sales. This is similar to the bias that exists under current law, under which sales of stock result in only one level of tax, while sales of assets, which typically either are preceded by a liquidating distribution of assets or followed by a liquidating distribution of sales proceeds, generally result in two levels of tax.

11. Proposals made in other contexts, e.g., a mandatory IRC § 338 election, might be considered. Current law permits certain purchasers of 80 percent or more of a corporation's stock to elect to treat a stock purchase as an asset purchase. A mandatory IRC § 338 election, adapted for CBIT, would require recognition of gain at the entity level if a certain percentage of the equity of a CBIT entity changes hands. A mandatory IRC § 338 election may be more palatable in an integrated system than under current law, because any gain realized would be subject to only one level of tax. Gain would be taxed solely at the entity level, and no additional investor level tax would be due.

Another possible approach would tax capital gains realized on the sale by a CBIT entity of its equity interest in another CBIT entity, e.g., a corporation's sale of the stock of a subsidiary. For the reasons discussed above, taxing capital gains on CBIT equity realized by a CBIT entity would tend to impose a second level of tax on earnings. Taxing entity level capital gains on CBIT equity also would create disparities between equity investments held directly by individuals and those held through other entities, e.g., affiliated groups of corporations. On the other hand, extending the exemption for capital gains on CBIT equity would multiply the potential for deferral of entity level tax. Without special rules limiting tax-free contributions of assets to subsidiaries or partnerships, CBIT entities would be able to structure some sales of assets as sales of CBIT equity.

12. Auerbach (1990) discusses alternative means of retrospective capital gains taxation that approximate accrual-equivalent capital gains taxation.

13. The text focuses on the different sources of capital gains for traditional forms of equity and debt. The sources of capital gains for hybrid instruments may reflect both equity-type and debt-type gains. For example, fixed rate, nonconvertible, cumulative preferred stock of a creditworthy company may react to interest rate changes in much the same way as debt.

14. The credit quality of debt may change because of changes in the underlying value of the firm. For example, debt issued by a manufacturing firm might rise in value because the demand for the firm's product rises unexpectedly, thereby increasing the likelihood that the firm will pay off the debt in a timely manner. In essence, the debt is more valuable because the firm has become more valuable. The rise in value represents a capital gain to the debtholder. Such a gain is analogous to the gain an equity holder would realize from the same event, and the deferral concerns are the same.

15. An unexpected fall in the market interest rate, for example, could generate a capital gain to the holder of long-term, fixed rate, noncallable debt. The value of the debt would rise until the debt's interest payments would provide a new investor with a return equal to the market interest rate.

Example. A noncallable perpetuity is a debt instrument that never matures. If the interest rate at issuance is 10 percent, a \$100 perpetuity would pay \$10 of interest per year. If the market rate of interest drops unexpectedly to 5 percent, the value of the perpetuity would double to \$200, so its \$10 annual interest payment would represent a 5 percent rate of return on the value of the debt. If the debt holder sold the perpetuity, he would realize a capital gain equal to the \$100 increase in value.

The effect of changes in interest rates is less pronounced for short-term bonds because there is a shorter period over which off-market interest payments will be received and because the present value of the prepayment of principal is a more significant component of price. For example, if the bond in the example above were scheduled to mature in one year, an unexpected drop in interest rates would cause the bond to increase in value only to \$104.76 ($\$110/1.05$), rather than to \$200 as with the perpetuity. However, a change in market interest rates creates an equal and offsetting gain or loss to the borrower. A decline in the market interest rate increases the amount the borrower must pay to eliminate his debt. If the borrower repurchased the debt in the example for \$200, he would recognize the loss in the form of a \$100 deduction. See Treas. Reg. § 1.163-4(c). If market interest rates increased, the borrower could repurchase his debt for less than its issue price and would realize income from the cancellation of indebtedness. See Treas. Reg. § 1.61-12(c).

Interest rate changes also can affect the value of equity. For example, an increase in interest rates may decrease the value of common stock to the extent that stock price reflects the discounted present value of future cash flows on the stock because the higher interest rate also will decrease the discounted present value of future cash flows from corporate assets. An increase

in interest rates also may create an offsetting increase in the value of common stock if a corporation has outstanding low-rate noncallable debt.

16. Thus, if CBIT included a compensatory tax and gains on CBIT equity were exempt, considerations of simplicity may support exempting gains and denying losses on CBIT debt (to both borrowers and lenders) as well. Although gains and losses on debt that are attributable to changes in interest rates represent real accretions to wealth (or real reductions in wealth) to borrowers and lenders, distinguishing between gains and losses on debt arising from changes in the value of the firm and those arising from changes in interest rates would be virtually impossible. Further, a change in interest rates creates no net gain in the tax system, because the lender's gain or loss is offset by the borrower's loss or gain. To the extent that debt holders and equity holders face the same tax rate and would pursue the same realization strategy, the Treasury would collect the same tax revenue if such gains and losses were included in taxable income as it would if such gains and losses were ignored. This conclusion is weakened if differences in tax rates and differences in the timing of realization are taken into account. Excluding all gains and losses on debt could create a net loss of tax revenue to the system in some cases, e.g., if interest rates increase and the lender is tax-exempt and the borrower is taxable. Strengthening the case for exempting such gains and losses is the observation that they are most important for long-term, fixed rate debt with call restrictions. Long-term, fixed rate debt has become less important in recent years. For nonfinancial corporations, the ratio of long-term debt (corporate bonds, mortgages, and tax-exempt bond) to total credit market debt has fallen from 71.6 percent in 1962 to 56.4 percent in 1990. See *Flow of Funds Accounts* (1991). To the extent that even long-term debt has more flexible interest rate adjustment than in the past, long-term fixed rate debt is even less important than the above calculation would suggest.

17. See IRC § 302. A redemption also may qualify for sale treatment if it terminates a shareholder's interest in the corporation or is made to a noncorporate shareholder in a partial liquidation.

18. The analysis in the text generally applies to individual shareholders. Corporate shareholders, which are entitled to a dividends received deduction (DRD), may favor dividends over share repurchases even under current law. A corporation entitled to a 100 percent DRD would always prefer a dividend, which would be entirely tax-free and would preserve share basis to offset later gains. A corporation entitled to a 70 or 80 percent DRD might prefer dividends in some cases.

The problems raised by share repurchases under the classical system are discussed at length in the American Law Institute (1989), which recommends adopting "a minimum tax on distributions" of 28 percent (the maximum rate applicable to individual taxpayers at the time) on the gross amount of any nondividend distribution to ensure that the second level of tax is collected. See Section 12.C.

19. Thus, a shareholder with a basis of \$150 in his stock would pay the same amount of tax on a \$200 distribution and a \$200 payment in full redemption of his stock. In each case, the \$200 payment would result in \$50 of capital gain.

The rules determining stock basis should be reexamined under shareholder allocation. Although each share of stock has traditionally been viewed as having a separate basis, an aggregate basis approach may be more suitable under shareholder allocation, as under the partnership rules. For example, if aggregation is not permitted and a shareholder holds both low basis shares and high basis shares, a pro rata distribution might result in recognition of gain on the low basis shares, while an equivalent amount paid in full redemption of only a portion of the stock might be tax-free because the shareholder could choose to surrender only high basis shares.

20. A DRIP would reduce the bias against share repurchases out of taxable income. DRIPs are discussed in Chapter 9.

21. Some have contended that the best approach would recharacterize a share repurchase as a pro rata dividend, followed by sales of shares among shareholders to reflect the fact that, after a share repurchase, some shareholders have cash and others have an increased proportionate interest in the corporation. All shareholders would pay tax on ordinary dividend income and would add that amount to share basis. Selling shareholders would recognize gain or loss measured by the difference between the amount realized on the sale and their basis in the shares. See Chirelstein (1969). Abandoning the realization requirement to tax nontendering shareholders would create additional complexity and administrative difficulties. Indeed, since integration reduces the tax incentives for share repurchases over dividends in comparison to current law, a change in that policy does not seem appropriate or necessary. Moreover, allocating the EDA balance among all shareholders would require income allocations as complex as those required in the shareholder allocation prototype. See Chapter 3.

22. Attempting to treat third-party sales of shares as dividends that would be excludable to the extent of the issuing corporation's EDA balance would entail information reporting (by brokers to the issuing corporations and by issuing corporations to selling shareholders and the IRS) to an unprecedented degree. Such a system would be highly impractical and undesirable.

23. Rules similar to those in IRC § 302 would be retained. Because corporations, for example, may have an incentive to use redemptions of tax-exempt shareholders' stock in a dividend exclusion system, it might become necessary to reduce EDA balances in proportion to shares redeemed.

24. Example. A corporation owns an asset worth \$100 and its sole shareholder has a basis of \$100 in her stock. The value of the asset declines to \$60, and the shareholder sells her stock for \$60, realizing a \$40 capital loss. If the corporation then sells the asset for \$60, it too will realize a capital loss.

A shareholder level loss that mirrors an unused net operating loss at the corporate level is similar to a shareholder level loss attributable to unrealized depreciation.

Example. The facts are the same as in the preceding example, except that the corporation sells the asset before the shareholder sells her stock. The corporation has no taxable income (and no EDA balance), so that the \$40 loss represents an NOL carryforward available to offset future income. The shareholder sells her stock for \$60 and realizes a \$40 capital loss.

25. Under current law, capital losses of individuals are allowed only to the extent of capital gains plus \$3,000 of ordinary income. See IRC § 1211(b). It would be possible to allow capital losses on corporate stock only to offset capital gains on corporate stock (plus \$3,000 of ordinary income) and generally match loss and gain duplication to reduce loss duplication. See also IRC §§ 269 and 382-84; Treas. Reg. §§ 1.1502-21 and -22.

Chapter 9

1. A system of basis adjustments for retained earnings is inherent in the shareholder allocation prototype. See Chapter 3. A DRIP also may be appropriate in the imputation credit prototype described in Chapter 11. Section 11.I discusses special considerations in adopting a DRIP in the imputation credit prototype. A DRIP would be unnecessary under CBIT if gains and losses are not taxed to investors, because basis in such investments would be irrelevant.

2. This would not be true in the case of a dividend deduction system, discussed in Chapter 12. Under such a system, deemed dividends would be taxable to shareholders but would give rise to a corporate level deduction. Thus, at minimum, a DRIP in a dividend deduction system would require shareholder consent, as under current law. While we do not address the issue further, we question whether a DRIP should be allowed in a dividend deduction system. Rate arbitrage might occur if a corporation and its shareholders can elect a current corporate level deduction in return for a shareholder level tax.

3. For example, under the dividend exclusion prototype, a shareholder must meet a 45 day holding period in order to exclude dividends received. See Section 2.B.

4. For example, dividend stripping generally results in basis reduction under current law, and the same rules may be appropriate in the context of a DRIP. Basis allocation rules also might be used.

Example. The facts are the same as in Example 1, except that the fair market value of X shares at the time of the DRIP distribution is \$10 per share. Under these circumstances, the basis of both Lot A and Lot B shares will exceed fair market value under either allocation method. In these circumstances, basis sufficient to bring the basis of all shares up to fair market value should be so allocated. The balance should be allocated to all shares, pro rata.

5. The EDA would continue to be available to pay excludable dividends (or interest, in CBIT) on any class of stock (or debt, in CBIT). In theory, it would be possible to maintain a separate EDA, as well as a deemed dividend account, for each class of stock. However, such an approach would require unacceptably complex allocations of the EDA among classes of stock, similar to the allocations of corporate income required under the shareholder allocation prototype. See Chapter 3.

6. We rejected three alternative rules. First, the stacking rule could treat cash distributions first as a return of capital to the extent of previous deemed dividends. The rule recommended in the text is more favorable than this rule for any corporation with a remaining EDA balance, because shareholders would generally prefer excludable dividends to basis reduction. Second, the stacking rule could follow current law and treat cash distributions as a return of capital only after a corporation's earnings and profits are exhausted. Deemed dividends that had been declared would reduce earnings and profits by the amount of the deemed dividend and cash distributions would be tax free to the shareholder to the extent treated as payments out of the remaining EDA. This rule would be consistent with the current treatment of corporate dividends and with the notion that shareholders recover capital only after recovering earnings. Under this rule, however, a corporation that had used the DRIP to eliminate its EDA balance but had additional earnings and profits attributable to retained preference income would be

required to pay taxable dividends before it could treat distributions as a return of capital. While corporate shareholders entitled to a DRD might prefer taxable dividends to basis reduction, we believe that the rule in the text is more favorable to taxpayers in most cases. Finally, cash distributions might be treated entirely as dividends and no earnings and profits account or account of deemed dividends would be kept. The advantage of the third alternative is that corporations would not need to keep an account of deemed dividends. This approach, however, may discourage use of DRIPs.

7. We would not permit DRIPs for debt in CBIT because interest is generally paid in cash as it accrues. As Section 4.G discusses, CBIT would generally retain OID or imputed interest rules to distinguish payments of interest from payments of principal. CBIT would not, however, retain the current rules governing the timing of imputed interest income.

This approach raises the question of how accrual, e.g., zero-coupon, and payment-in-kind bonds would be treated. Consideration should be given to adopting rules that would prevent accrued discount (which, like interest, is not taxable to a debtholder when received) from being taxed as capital gain if the debt instrument is sold before the discount is paid. One approach would be to maintain the current OID timing rules. Accrued discount would increase a debtholder's basis (but would not be includable in income) and would decrease the issuer's EDA (but would not be deductible). Similar issues are presented by discount preferred stock. See IRC § 305(c).

8. Mechanically, a mandatory DRIP would operate like the elective DRIP, except that a corporation would be required to reduce its EDA to zero at the end of each year through deemed or actual distributions. A mandatory DRIP might cause restrictions on the forms of equity eligible for DRIP distributions to be more desirable.

Chapter 10

1. Auerbach (1990) presents an overview of issues relating to gains and losses during the transition to integration.
2. As indicated in Chapter 13, we believe the best empirical evidence supports the traditional view of dividends, which holds that the existing two-tier corporate tax has not been fully capitalized into share values. Accordingly, we believe that integration may create some transition gains to owners of corporate stock but that such gains will not be as great as those anticipated by advocates of the new view.
3. The second and third transition concerns described in the text are sometimes referred to as carryover problems.
4. See Graetz (1977).
5. See Section 2.B and Section 4.D, respectively.
6. The stacking order rules for distributions from the EDA (see Sections 2.B and 4.D) may prolong the deferral of the tax on the retained earnings, however.
7. The American Law Institute Reporter's Study Draft (1989) on corporate tax reform contains a deduction for dividends paid that would apply only to new equity. The proposals avoid the complexity of tracking new and old equity instruments by limiting the deduction to the product of a specified rate and capital contributed after the date of enactment of the proposals, less extraordinary distributions. American Law Institute (1989). See Section 12.C.
8. The current rules governing the conversion of a C corporation, i.e., a corporation taxed under the classical system, to one of the various passthrough entities suggest the difficulties and complexities that would be involved in attempting to isolate old equity from new equity. These rules, which include the rules that apply to C corporations that convert to a partnership, an S corporation, or a RIC or REIT are concerned in varying degrees with preventing corporate income attributable to preconversion years from escaping the two-tier tax. None provides a particularly satisfying approach to dealing with the transition to an integrated corporate system.

For example, an approach modeled on the existing rules for taxing C corporations that convert to partnerships would treat the corporation as though it had distributed all its assets to its shareholders in a liquidating distribution in which built-in gain or loss with respect to the assets is realized at the corporate level and built-in gain or loss with respect to the stock is realized at the shareholder level. The shareholders would then be treated as recontributing the assets to the corporation. This mark-to-market approach would tax all the built-in gain or loss with respect to assets at the corporate level and all the built-in gain or loss with respect to stock at the investor level. (Alternatively, an approach modeled on the existing rules for taxing C corporations that convert to passthrough status as a RIC or REIT would confine the mark-to-market approach to the corporate level, with shareholders taking a carryover basis in their stock. See Notice 88-19, 1988-1 C.B. 486.) Although

the mark-to-market approach would eliminate any long-range transition effects from the change to an integrated corporate system, the substantial and immediate tax cost, together with the administrative burden that would ensue from the need to value all corporate assets, makes this approach unacceptable.

A transitional approach also could be modeled on the existing rules for taxing C corporations that convert to S corporation status. Current law does not treat the conversion as a taxable event. However, S corporation shareholders are taxable on distributions from earnings and profits accumulated in C corporation years to the extent the S corporation's distributions exceed its cumulative taxable income. IRC § 1368. In addition, IRC § 1374 provides that if the S corporation recognizes gain on an asset held at the time of the conversion within a 10 year period following the conversion, the gain is subject to a corporate level tax. The total amount of gain subject to corporate level tax cannot exceed the net built-in gain inherent in the corporation's assets at the time of the conversion. IRC § 1374(c)(2). Certain items of income and deduction that are attributable to periods before the conversion but have not yet been recognized are taken into account in computing the corporation's built-in gain. IRC § 1374(d)(5). This approach avoids the immediate tax cost associated with the partnership conversion model but does not avoid the valuation problem. It is administratively more burdensome than the partnership conversion model because the corporation has to make valuations on an asset-by-asset basis and monitor assets held at the time of the conversion (as well as income and deduction items attributable to pre-conversion periods) for a 10 year period. In addition, this approach distributes the tax burden of the transition to integration in an unequal manner because it allows those corporations with wasting assets or assets on which gain can be deferred beyond the end of the 10 year period to escape corporate level tax on the gain.

9. The choice between limiting integration to newly contributed equity and extending it to all equity reflects assumptions about the extent that investor level taxes affect corporate dividend decisions and share prices. If dividend payments are unavoidable and shareholders do not place an intrinsic value on dividends relative to retained earnings, the classical system does not create any bias against dividend distributions, and investor level taxes on dividends are already capitalized into share values. This is the new view of dividend distributions. See Section 13.B. If that view is correct, then applying integration to dividends from accumulated as well as newly contributed equity would not encourage dividends and would confer a transition gain to holders of existing equity, the price of which would increase. As discussed in Chapter 13, however, we reject the new view. Accordingly, we believe that extending integration to existing equity, particularly under a phase-in, would not confer unacceptable transition gains, and that retaining the classical system for existing equity would maintain the tax bias against dividends for such equity.

10. The Department of the Treasury recommended a phase-in approach in its 1984 proposal to provide relief from the double taxation of corporate income. That proposal generally would have allowed corporations a deduction equal to 50 percent of dividends paid to their shareholders and also would have reduced the corporate dividends received deduction from 75 percent to 50 percent. The proposed 6 year phase-in rule would have allowed a 25 percent dividends paid deduction in the first year that would have increased by 5 percentage points in each of the next 5 calendar years. Similarly, the dividends received deduction would have been 75 percent in the first year, with a 5 percentage points decrease in the deduction for each of the next five calendar years. See Treasury I, Vol. 2, pp. 136-137, 140.

11. The imputation credit prototype described in Chapter 11 could be phased in. The imputation credit prototype contemplates additions to the SCA and associated shareholder level credits by reference to the maximum tax rate applicable to shareholders, currently a 31 percent rate. Where the corporate tax rate is less than the maximum shareholder rate, it would be appropriate to base shareholder credit account and imputation credit amounts on the lower corporate tax rate. This level of integration might be phased in two alternative ways. First, a phase-in rate might be set as a percentage of the maximum shareholder rate to accomplish a smooth phase-in of integration. For example, a 5 year phase-in could base the shareholder credit account additions and allowable shareholder credits on a rate equal to 20 percent of 31 percent (6.20 percent) in the first year, 40 percent of 31 percent (12.40 percent) in the second year and so on. Alternatively, the imputation credit prototype might be phased in by linking imputation credits to a shareholder tax rate less than the maximum individual rate. For example, SCAs and imputation credits might be based on the 15 percent individual rate for a several years before moving to the 31 percent rate. If only partial distribution-related integration were contemplated, this system could be used indefinitely. Such a system would be similar to the United Kingdom's imputation system. See Appendix B.

12. See generally Graetz (1977).

13. Most corporate debt may be called without premium after a period of time, typically 5 to 7 years. Debt instruments typically permit the debt to be called earlier upon payment of a redemption premium. A CBIT phase-in is likely to significantly mitigate the increase in the cost of borrowing because corporations would be able to call their debt in substantial part before the disallowance of the interest deduction is fully phased in.

14. See Section 4.G.

15. If an accrual method taxpayer accrues but does not pay interest before the CBIT phase-in begins, then pays the previously accrued interest in a CBIT transition year, this approach assures that either holder level tax (in the form of the portion of dividends and interest includable in the income of shareholders or debtholders) or compensatory tax is paid on such interest.

16. The formula for transition years' additions to the EDA would be:

$$\text{Additions to EDA} = p \left[\frac{\text{U.S. tax paid for taxable year}}{.31} - \text{U.S. tax paid for taxable year} \right] \\ + p(\text{dividends and interest received from CBIT entities}) + p(\text{allowable interest deduction})$$

where p is the transition percentage.

17. As Section 4.D discusses, payments of interest and dividends reduce the EDA in the order in which they are made. These examples assume, for purposes of illustration, that interest payments are made first and thus reduce the EDA first.

PART IV

Introduction

1. Australia, Denmark, Finland, France, Germany, Ireland, Italy, New Zealand, and the United Kingdom have all adopted imputation credit systems. See Appendix B for a discussion of certain of these countries' systems.
2. Differences among dividend exclusion, dividend deduction and imputation credit systems of integration are due to differences in tax rates applicable to different shareholders or types of income. See Appendix C.

Chapter 11

1. Individual shareholders subject to rates less than 31 percent would be allowed to use the credits against tax on other income. See Section 11.E.
2. The grossed-up dividend is the cash dividend received by the shareholder divided by one minus the maximum individual tax rate (cash dividend/ $1 - .31$).
3. Additional restrictions on the amount of the credit would be imposed to prevent streaming of credits to taxable shareholders, and consideration could be given to requiring corporations to frank dividends with credits at the full 31 percent rate as long as there is a balance in the SCA. See Section 11.F.
4. See also note 48, below.
5. A compensatory tax may take either of two forms. First, it might apply only to distributions of earnings that have not been taxed at the full corporate rate. This requires a corporation to determine the amount of corporate tax deemed to have been paid with respect to each distribution and to pay additional tax to the extent that earnings used to make the distribution have not been subject to tax at the full corporate rate. The French and German systems follow this model. See Appendix B.

Alternatively, the compensatory tax might be imposed on all distributions, regardless of the amount of corporate tax previously paid, with the compensatory tax allowed as a credit against regular corporate tax. Under such an "advance tax" system, a corporation is not required to determine explicitly the amount of tax deemed paid on a particular distribution. In an advance tax system in which the shareholder credit is computed using a corporate tax rate of 34 percent, a corporation is required to pay a compensatory tax on all dividends equal to 51.5 percent of the dividend ($.34/.66$). The corporation would be entitled to credit this tax against its regular corporate tax liability. Shareholders would be entitled to a credit equal to 51.5 percent of the amount of any cash distribution, and the credit would be included in income together with the cash distribution. The 51.5 percent rate applied to net cash dividends is used in lieu of applying the 34 percent corporate rate to a grossed up amount; 51.5 percent of a \$66 cash dividend (\$34) equals 34 percent of \$100, the \$66 cash dividend grossed up at the 34 percent rate ($\$66/.66$). A corporation's ability to credit the compensatory tax against its regular corporate tax liability means that the compensatory tax results in additional tax liability only to the extent that distributions exceed the amount of fully-taxed earnings between the two regimes. The United Kingdom's Advance Corporation Tax (ACT) system represents an example of the second type of compensatory tax.

The principal substantive difference is that the advance tax system implicitly treats distributions as made first out of fully-taxed income, while a compensatory tax can, in theory, be combined with any stacking rule. In practice, most existing compensatory tax systems, such as those in France and Germany stack distributions first against fully-taxed income. While they differ mechanically, the two alternatives have similar economic impact on corporations subject to the compensatory tax.

6. If a compensatory tax is set at the corporate tax rate and is refundable to shareholders so it acts solely as a withholding tax, all distributed income is taxed only once, at shareholder rates. Although the tax is collected at the corporate level, rather than at the shareholder level, no net separate corporate level tax is imposed. The compensatory tax, however, serves to ensure payment of the shareholder level tax as preference or shielded foreign source income is distributed. The refund of imputation credits associated with distributions means that the net amount of tax borne by the distribution will be determined solely by the shareholder's tax rate and taxable or tax-exempt status.

7. Timing preferences, as well as exclusion preferences, would increase the corporate level cost of dividends in a compensatory tax system. A compensatory tax requires current payment of tax on distributed preference income, thus removing the tax deferral created by timing preferences. Consider a firm with \$100 in economic income in year one and \$100 worth of timing preferences. Suppose further that in year two its economic income is zero (but tax is due on the \$100 deferred from the year before) and that the firm distributes all of its income in year one. With a compensatory tax, the firm has to pay \$34 in year one; there is no mainstream tax to which the credit can be applied. Therefore, it carries over the \$34 credit to year two, so that in year two its tax liability is zero. In contrast, under a credit limitation system, no tax is paid in year one, but \$34 is paid in year two. Thus, if the firm's economic income is distributed as it is earned, the present value of timing preferences to the firm under the credit limitation scheme is greater than under the compensatory tax scheme. On the other hand, taxable shareholders would receive credits in year one in a compensatory tax regime that they would not receive in a credit limitation system. The overall effect, therefore, would depend on the relationship of the compensatory tax rate to that of the shareholders.

8. The imputation credit prototype, like the dividend exclusion prototype, is not expected to change significantly corporations' provision for income tax expense or the determination of taxes currently payable or payable at a future date for financial accounting purposes. Note 1 in Chapter 4 discusses the possible effect of a compensatory tax on corporate financial reporting.

9. Mechanically, one can determine which distributions are made out of fully-taxed income either by tracing taxable and preference income or by tracking taxes paid. A tracing-of-income approach requires the corporation to maintain different accounts for earnings and profits that have been taxed at different rates, including different accounts for income earned in different years, if tax rates have changed from year to year. We consistently recommend tracking taxes paid rather than tracing taxable income. See Section 2.B, Section 4.D, and Section 12.A. Tracking taxable income is significantly more complicated than tracking taxes paid and does not seem to offer any offsetting advantages. Australia's imputation credit system tracks taxes paid. The French and German imputation credit systems illustrate the complexity of tracking income. See Appendix B.

10. The following example compares three alternative stacking rules. The example assumes that the corporation pays tax at either 34 percent (nonpreference income) or 0 percent (preference income) and that corporate taxes paid are credited at the 31 percent shareholder rate.

	Alternative Stacking Rules		
	Stack	Stack	Pro Rata
	Preferences	Preferences	
	Last	First	Stacking
Economic Income	100	100	100
Preference Income	10	10	10
Taxable Income	90	90	90
Tax (@34%)	30.6	30.6	30.6
Preference Income Available for Distribution	10	10	10
Nonpreference Income Available for Distribution	59.4	59.4	59.4
Cash Distribution	50	50	50
Tax Deemed Paid on Distribution	22.46	17.97	20.22

The "stack preferences last" approach treats each dollar distributed as coming first from nonpreference income. The \$50 distributed is less than the amount of nonpreference income available for distribution, thus, the distribution is deemed to be entirely nonpreference income. The "stack preferences first" approach treats each dollar distributed as coming first from preference income (taxed at zero percent) and then from nonpreference income. Thus, the first \$10 distributed is deemed

to have borne no tax. The pro rata stacking approach treats each dollar as from preference and nonpreference income in the same proportion as the corporation's after-tax preference and nonpreference income. The pro rata approach thus treats each dollar distributed in the example as having borne tax at an effective rate of 30.6 percent $(90/100 \times 34\%) + (10/100 \times 0\%)$. The indirect foreign tax credit allowed under IRC § 902 to certain U.S. corporate shareholders uses a pro rata stacking rule to determine the amount of foreign taxes associated with distributions from foreign corporations to related U.S. corporations.

11. The ACT in effect stacks distributions first against fully-taxed income. For example, assume that the corporate rate is 33 percent and the credit rate is 25 percent, and that a corporation earns \$100 of fully-taxed income and \$100 of preference income in a year. If the corporation distributes \$100, it will pay ACT of \$33.33 $(.25 \times \$100/.75)$. It will owe mainstream tax for the year of \$33 and will be permitted to credit \$25 of ACT against the mainstream tax. Thus, its tax liability for the year will be \$8. The effect is the same as if the corporation had first paid \$33 of mainstream tax and then paid a \$133.33 grossed-up distribution, deemed to be composed of \$100 of fully-taxed income and \$33.33 of preference income. Compensatory tax of \$8.33 $(.25 \times \$33.33)$ would be due on the distribution. In both cases, the total tax paid is \$41.33.

In contrast, the French and German systems explicitly adopt stacking rules that stack preferences last. The German system uses an "available net equity" account to track taxable and preference income. Available net equity is divided into separate "EK" baskets, consisting of income taxed at various rates. The balances in EK 50, EK 36 and EK 0 represent income taxed at the statutory retained earnings rate, the statutory distribution rate and at a zero rate, respectively. However, the corporation's income may actually be subject to rates other than those for which corresponding EK categories exist. The German system converts each category of income subject to tax at some other rate into equivalent amounts of EK 36 and either EK 50 or EK 0, as appropriate.

The following equation converts pre-tax income subject to tax at some non-EK rate into equivalent amounts of pre-tax income subject to tax at the distribution rate (36 percent) and either the statutory rate (50 percent) or the zero rate: $.36X + (.5 \text{ or } 0) \times (Y - X) = T$, where Y equals the total amount of pre-tax income (known), X equals pre-tax income subject to the distribution rate, $(Y - X)$ equals pre-tax income subject to either the statutory rate or the zero rate, and T equals the amount of tax paid with respect to Y (known). Because X and $(Y - X)$ must be positive, the effective tax rate, T/Y , determines whether the equation must contain the statutory rate or the zero rate (and whether the residual amount of income is converted into EK 50 or EK 0). The following equations convert the pre-tax amounts, X and $(Y - X)$, into their after-tax EK amounts:

$$\begin{aligned} \text{EK 36} &= (1 - .36) \times X \\ \text{EK 50 (If } T/Y > .36) &= (1 - .50) \times (Y - X) \\ \text{EK 0 (If } T/Y < .36) &= Y - X \end{aligned}$$

French corporations are required to segregate fully-taxed income from income potentially subject to the compensatory tax or precompte mobilier for tax accounting purposes. In general, dividends eligible for the imputation credit or avoir fiscal are deemed to be distributed first out of current fully-taxed income, and then out of fully-taxed retained income of each of the immediately preceding 5 years. Once fully-taxed income for this 5 year period has been exhausted, a corporation may choose to allocate a dividend distribution to (1) dividends received from foreign subsidiaries, (2) the long-term capital gains reserve, or (3) other miscellaneous preference income, in any order. France thus allows stacking of dividends last against preference income.

Appendix B discusses these systems in more detail.

12. The formula set forth in the text is based on the formula used to determine the EDA in the dividend exclusion and CBIT prototypes. Multiplying the EDA formula by $(1/.69 - 1)$ converts after-tax income at the 34 percent corporate rate into imputation credits at the 31 percent maximum shareholder rate.

13. If the 34 percent corporate rate were the credit rate, the credit in the example in the text would equal \$17 and the 31 percent shareholder would have an excess credit of \$2.17 to offset other tax liability.

14. This is the method used, for example, by New Zealand. See Appendix B, Section B.5.

15. In general, the treatment of the adjustment as a current year item should extend only to determining the SCA balance. Interest on deficiencies or overpayments should be calculated as under present law. Under a compensatory tax, if liability is adjusted upward, the corporation would either be allowed to use accumulated excess compensatory tax to satisfy the liability or, if there is no excess, would be required to pay additional tax. If a corporation's prior year tax liability is adjusted downward, it would either increase the balance in its excess compensatory tax account, or to the extent it did not use the prior year tax liability to avoid compensatory tax on distributions, it would receive a refund. The corporation would not receive a refund of the corporate tax payment where it has been used to avoid compensatory tax because this corporate tax

payment has been claimed as a credit by shareholders. If a refund were allowed, shareholders would have been able to claim a credit for taxes that the corporation, after allowance of the refund, did not actually pay.

16. The contrary approach, which would treat audit adjustments as an adjustment to the SCA in the taxable year to which the adjustment relates, is complicated and burdensome. Under that approach, a corporation that receives a refund of corporate tax paid may have reported to shareholders credits in excess of its adjusted balance in the SCA. An unanticipated reduction would occur in the SCA for the year in question, which the corporation would have to satisfy by reducing its remaining SCA in that year, or, if there were no remaining SCA, by paying tax equal to the deficit SCA balance (together, possibly, with imposition of penalty or interest).

17. Allowing a loss to be carried back to obtain a refund of some or all of the taxes used to frank a dividend may be appropriate in theory, particularly if the corporation's shareholders are the same at the time of the dividend and the loss, but would be difficult to implement in practice. For purposes of determining shareholder level consequences, the franked dividend could be recharacterized retroactively as a return of capital or a distribution of preference income, depending upon whether the corporation had sufficient retained preferences income at the time of the dividend. If the distribution constituted a return of capital, no shareholder level tax would be due, but basis in the stock would be reduced by the amount of the distribution (which would not be grossed up for the credit). If the distribution were paid out of preference income, the amount of shareholder level tax would be computed only on the amount of the distribution (which also would not be grossed up for the credit). Requiring retroactive adjustments in shareholders' basis or tax liability would be impractical to administer, however, especially if shares of a corporation are widely held.

The argument that tax refunds should be limited to the SCA balance is weakened somewhat because, under the credit limitation system without full refundability, amounts withdrawn from the SCA to frank past dividends may not actually have been used by shareholders. Shareholders cannot obtain refunds of imputation credits, and thus tax-exempt, foreign and some low-bracket shareholders may not enjoy the benefit of some imputation credits. In contrast, in a system with full refundability of imputation credits, all SCA amounts used to frank dividends would be fully used by shareholders. While there is thus some theoretical justification for allowing refunds in excess of the SCA to the extent that the imputation credits were not fully used, it would be impractical to trace the use of the imputation credits by shareholders.

18. Current law contains limitations on the ability of taxpayers to accelerate the recognition of losses or to increase the amount of loss recognized for tax purposes to an amount exceeding the loss incurred economically. Such limitations include limitations on the deductibility of investment interest, passive activity losses, and amounts in excess of the amount the taxpayer has at risk with respect to an activity. Under present law, these limitations either do not apply to C corporations or apply only to C corporations that are personal service corporations or closely held corporations (essentially defined as corporations more than 50 percent of the stock of which is held by or for five or fewer individuals).

By eliminating or reducing substantially the tax disadvantages of incorporation, distribution-related integration may encourage the use of corporations to avoid these rules. Because distribution-related integration removes the double tax on distributed corporate earnings, taxpayers may view corporations as attractive vehicles for engaging in activities designed to accelerate or increase tax losses. For example, individuals might use passive activity losses by contributing a loss-producing passive activity and an income-producing active business to the same corporation. The deferral benefit achieved by this structure would continue until the earnings sheltered by the preference were distributed. Distributed income would be fully taxable to taxable shareholders, although it would be tax-exempt in the hands of exempt shareholders. In addition, the income generated when the preference reverses would be subject to only one level of tax. Thus, it may be appropriate to extend some of or all the loss limitation rules described above to C corporations if, after distribution-related integration is adopted, experience shows that taxpayers are using C corporations to avoid those rules.

19. A dividends received exclusion (DRE) would be as effective as a DRD in preventing multiple taxation of corporate dividends. The two could, however, produce different technical effects increases where Code limits or classifies taxpayers based on receipts or income. For example, dividends are taken into account under IRC § 448(b)(3), which limits the availability of cash method accounting for certain taxpayers with annual gross receipts in excess of \$5 million. See Treas. Reg. § 1.448-1T(f)(2)(iv). By contrast, dividends are excluded under IRC § 263A(b)(2)(B), which limits capitalization of cost requirements for certain taxpayers whose annual gross receipts do not exceed \$10 million. See Treas. Reg. § 1.263A-1T(d)(2)(iv)(B). Regardless of the general approach, however, special adjustments may be provided wherever appropriate. See, e.g., IRC § 170(b)(2)(B) (corporate charitable deductions are limited to 10 percent of taxable income determined without regard to the DRD). During any period of transition to integration, the current law DRD could be increased in stages from 70 percent to 100 percent as the percentage of integration increases. During periods when there is less than 100 percent integration, a 100 percent DRE would be inappropriate and also would require appropriate phase-in.

20. If all dividends were either fully unfranked or completely franked, it would be relatively easy to retain the current 70 or 80 percent DRD. The mechanics would be similar to those discussed in Section 2.B in the context of the dividend exclusion system. Partially franked dividends would create significant complexity, however. To determine its DRD a corporation eligible for only a 70 or 80 percent DRD would have to separate a partially franked dividend into a fully franked portion and a completely unfranked portion.

Example. A corporation that has a zero SCA balance owns 5 percent (by vote and value) of the stock of a second corporation and has no other assets. The second corporation pays a cash dividend of \$166, which carries an imputation credit of \$29.65.

The recipient corporation must convert the partially franked dividend into fully franked and unfranked components. A \$29.65 imputation credit would fully frank a cash dividend of \$66. Thus, the unfranked dividend is \$100 (\$166 – \$66). After taking into account the 70 percent DRD, the corporation must pay tax of \$10.20 on \$30 of income.

Using the formula in Section 11.B, the corporation would add \$38.55 (\$29.65 for the credits received on the franked portion plus \$8.90 with respect to the \$10.20 of tax paid on the unfranked portion) to its SCA. If the corporation then distributed all its remaining cash to shareholders, it would distribute \$155.80 of cash (\$166 – \$10.20) and attach an imputation credit of \$38.55. Assuming a 31 percent shareholder rate, shareholders would pay tax, after claiming imputation credits, of \$21.70 (((\$194.35 gross dividend × .31) – \$38.55). This represents shareholder tax at the 31 percent rate on the remaining \$70 of preference income not taxed in the hands of either corporation.

21. The alternative would tax the recipient corporation on the dividend and permit the tax to be offset by any imputation credit attached to the dividend. The imputation credit and any additional corporate taxes paid on the dividend would increase the recipient's SCA. This alternative rule would eliminate tax preferences upon the initial distribution of preference income, whether the distribution was made to a corporate or an individual shareholder.

22. A compensatory tax system might suggest a different result. Once the decision is made to tax distributed preference income to the distributing corporation, the rationale for extending preferences while the distributed income is in corporate solution may not be compelling. See Section 4.D. As noted in the text, however, some countries with compensatory tax systems (notably the United Kingdom) forgo the compensatory tax for certain intercorporate dividends.

23. See H. Rept. No. 426, 99th Cong., 1st Sess. (1985), p. 302; S. Rept. No. 313, 99th Cong., 2nd Sess. (1986), p. 515.

24. If, unlike the prototype recommended here, the SCA were based on tracing taxable income, difficulties with respect to the AMT would arise in determining the amount of tax that has been paid with respect to a particular distribution by a corporation that has paid AMT. However, under the tracking-tax-paid approach, adding minimum taxes to the SCA can be done directly. As indicated in note 26, the amount added to the SCA would be adjusted to reflect the maximum 31 percent rate at the shareholder level. Indeed, the need to allow imputation credits with respect to corporate AMT is an important reason for preferring the tracking-of-taxes-paid approach to a tracing-of-taxable-income approach under the credit limitation system.

25. The corporate AMT also seems appropriate under a compensatory tax. While a compensatory tax would prevent the passthrough of preferences to shareholders, it would not ensure that corporations pay some level of tax on retained income.

Imputation credits attached to a dividend represent tax prepaid at the corporate level and thus should be allowed for purposes of the individual AMT.

Example. A shareholder with a 31 percent marginal rate has \$100 of AMT preference income, a \$100 gross dividend, and a \$31 imputation credit. Her AMTI is thus \$200. She should owe only \$17 in AMT (\$48 of tax less the \$31 imputation credit). Mechanically, this can be accomplished by computing her regular tax for AMT purposes as zero (\$31 of tax less \$31 imputation credit), but allowing the full imputation credit in computing tentative minimum tax. Thus, her tentative minimum tax is \$17 (\$48 – \$31) and her AMT is \$17 (\$17 – 0).

Similarly, we recommend that excludable dividends not be viewed as preference income for individual AMT purposes under the dividend exclusion and CBIT prototypes. See Section 2.E and Section 4.D.

26. Although the AMT rate is 20 percent, compared with the maximum shareholder rate of 31 percent, corporate AMT payments are not added dollar-for-dollar to the SCA but instead, like regular tax, are reduced to reflect the difference between the corporate and shareholder rates. This rule is necessary because corporate AMT payments give rise to an equal AMT credit that offsets regular corporate tax at the 34 percent rate.

Example. A corporation invests \$100 in an asset that will produce \$100 per year for 2 years. As a deferral preference, the corporation is entitled to expense the asset in the first year.

Year	Cash flow	Taxable income	AMT	Regular tax before credit	AMT credit	Tax due	Cummulative SCA
1	100	0	20	n/a	n/a	20	17.44
2	100	100	n/a	34	20	14	29.65

At the end of year two, the corporation has an SCA of \$29.65 and \$66 of retained earnings. The corporation distributes \$66 to shareholders, and no additional tax is due. If the AMT were instead added to the SCA dollar-for-dollar, the corporation would have an SCA of \$32.21 and excess credits of \$2.56.

27. Mechanically, the limitation on additions to the SCA allows distributions by the U.S. corporation out of earnings attributable to dividends from the foreign corporation to be treated in the same manner as distributions out of earnings attributable to preference income from U.S. sources.

28. IRC § 901.

29. Section 2.C discusses a shareholder level exclusion of foreign source income.

30. Continuing to tax income distributed to shareholders but preserving the benefit of preferences for tax-exempt shareholders under a compensatory tax system would require making imputation credits attributable to the compensatory tax fully refundable to tax-exempt shareholders. If policymakers were to choose to tax preference and foreign income as well as nonpreference income received by tax-exempt shareholders, a compensatory tax should be adopted with nonrefundability of credits to tax-exempt shareholders. This result cannot be accomplished under a credit limitation system without a compensatory tax. Such a compensatory tax system might be limited to preference income, but this would require separate tracking of foreign source income, which could continue to be paid free of U.S. tax to tax-exempt entities. Alternatively, if, contrary to the recommendations here, one chooses to tax neither preference nor nonpreference income distributed to tax-exempt shareholders, credits should be made refundable to tax-exempt shareholders; a system of refundable credits could be provided with either a compensatory tax or a credit limitation system. Refundability, however, would cause significant revenue loss.

31. See also Section 6.D for a discussion of an alternative approach under an integrated system that could be designed to maintain the overall level of tax revenues collected on corporate capital supplied by tax-exempt entities and achieve greater neutrality between the tax burden on their debt and equity capital.

32. Assume, for example, that a U.S. corporation with 1,000 shares outstanding of a single class of stock and an SCA balance of \$2,000 makes a distribution of \$10 per share and designates \$2 per share as the applicable imputation credit with respect to each share. One hundred of the corporation's shares are owned by a foreign person subject to U.S. withholding tax at a rate of 15 percent under an applicable tax treaty. The foreign shareholder will be subject to U.S. withholding tax of \$150 on the distribution of \$1,000 (100 shares × \$10 distribution × 15 percent withholding tax). The corporation will reduce its SCA by \$2,000, although the foreign shareholder cannot offset the imputation credit against the U.S. withholding tax.

33. Consideration might be given to allowing a shareholder to carryforward unused imputation credits for some period of time, such as 5 years. Such a carryforward would add complexity, but should serve to enable virtually all shareholders subject to original tax rates below 31 percent and those currently in a tax-loss position to use any excess credits.

34. If imputation credits were fully refundable to all taxpayers, corporations and their shareholders would have no tax incentive to develop strategies for directing the credit to particular taxpayers. Because fully refundable credits would be equally valuable to all taxpayers, taxpayers would be indifferent to the form of a distribution, e.g., a \$69 dividend carrying a \$31 credit versus a \$100 dividend carrying \$0 credit or \$100 of interest or other income such as rent or wages. However, in accord with the recommendations of Chapters 6 and 7, this prototype does not permit refunds of credits to tax-exempt or foreign shareholders. Credits thus would be available only to offset tax liability the taxpayer would otherwise owe on the dividends or other income. As a result, certain taxpayers, e.g., tax-exempt and foreign shareholders, would not be indifferent between receiving a dividend carrying a credit and a higher cash dividend distribution because to them the credit would not be the equivalent of cash.

If the alternative tax on investment income, described in Section 6.D, were adopted, imputation credits would be used by tax-exempt entities to reduce or eliminate that tax and the incentives for streaming would be reduced.

35. One difference is that the imputation credit prototype allows low-bracket shareholders to use excess credits to offset tax on other income.

36. New Zealand requires a corporation generally to frank all dividends paid during a year to the same extent even if the dividends relate to different classes of stock. A corporation may change its franking ratio during a year only if an officer of the corporation declares that the change is not "part of an arrangement to obtain a tax advantage" and the corporation notifies the tax authorities of the change.

Australia has adopted several rules to prevent a corporation from underfranking a dividend. These rules require the corporation (1) to take into account all dividends that are paid on the same day, that have been declared but not yet paid, or that the corporation is committed to pay later in the same year (a "committed future dividend"), e.g., dividends on preferred stock, in allocating franking credits to a given dividend, (2) to frank a dividend that was a committed future dividend at the time of payment of an earlier dividend at least to the same extent as the earlier dividend, and (3) to frank a dividend at least to the same extent as any other dividend paid on the same day. These rules, however, do not prevent a corporation from franking an earlier dividend at one rate and franking a later dividend at a lower rate if the corporation is not committed to pay the later dividend or the later dividend is paid in the next year.

Additional anti-abuse rules might be adopted as necessary. See Appendix B for a discussion of anti-streaming rules adopted by certain of our trading partners.

37. The implementation of distribution-related integration may require certain adjustments to the treatment of qualifying reorganizations to reflect the shareholder credit system. One issue is whether the current law treatment of "boot" (money or property other than stock or securities in a corporate party to the reorganization) is appropriate under distribution-related integration. Under current law, a shareholder receiving boot in a reorganization recognizes gain equal to the lesser of the gain realized and the amount of boot received. If the receipt of boot has the effect of a dividend, gain recognized is taxed as a dividend to the extent of the shareholder's ratable share of the corporation's earnings and profits. Dividend equivalency is tested by treating a target shareholder as receiving only stock of the acquiring corporation and the acquiring corporation as then redeeming an amount of the shareholder's stock equal to the amount of boot received.

The current treatment of boot raises problems under distribution-related integration because of the rule that limits the amount of boot that is taxable to the amount of the recipient's realized gain. Under distribution-related integration, this would allow the distribution of preference income to high-basis shareholders without shareholder level tax. It also would allow the distribution of fully-taxed income to high-basis shareholders without a reduction in the SCA, so amounts in the SCA subsequently could be used to frank distributions of preference income. This is similar to the issue created by share repurchases. If policymakers adopt special rules for share repurchases, similar rules may be appropriate for boot. See Chapter 8.

38. Assume, for example, that a corporation has two active businesses, each generating a mix of taxable and preference income. If the corporation could isolate each of the businesses in a separate corporation but leave the entire SCA balance in one corporation, shares of the corporation without any SCA balance could be distributed to tax-exempt shareholders, and shares of the corporation with the SCA balance could be retained by taxable shareholders.

39. In April 1990, Representative Vander Jagt introduced legislation that essentially adopts this approach. H.R. 4457, 101st Cong., 2d. Sess. (1990). The Vander Jagt bill would allow a tax credit to a shareholder or bondholder equal to the "gross-up amount" included in the holder's income. A recipient of a cash dividend or interest payment from a C corporation would include the gross-up amount, as well the cash received, in income. However, the amount of the credit would be limited to a portion of the taxpayer's tax that equals the ratio of his interest and dividend income to his total income. A corporation would be required to attach credits to a payment of interest or dividends representing the same proportion of the corporation's post-1989 taxes as the ratio of the amount of the net dividend or interest payments bears to post-1990 undistributed earnings and profits. No deduction would be allowed for interest or original discount paid or accrued by a C corporation. See also note 1 in Chapter 4.

The ALI Reporter's recent integration memoranda also adopt such an approach. See American Law Institute, Reporter's Memorandum No. 3 (1991).

40. A bondholder credit system could be adopted either while retaining the current deduction for interest paid by corporations or in a system denying deductions for either interest or dividends at the corporate level. Retaining the deductibility of interest would require imposing a withholding tax on interest payments and allowing recipients a credit for such withholding. The following example shows the calculation of the imputation credit with and without an interest deduction.

Example. For simplicity, this example assumes that the corporate rate is 31 percent. A corporation earns \$100 of taxable income and agrees to pay \$50 of after-tax interest. If no interest deduction is allowed, the corporation would pay tax of \$31 and would add \$31 to its taxes paid account. The taxes paid account would represent available imputation credits for both interest and dividends. The corporation could attach an imputation credit of up to \$22.46 to the interest payment. The \$8.54 remaining in its taxes paid account would fully frank its remaining after-tax earnings of \$19.

If an interest deduction is allowed but a withholding tax on interest is imposed, the corporation would have to pay gross interest of \$72.46. Net of the 31 percent withholding tax (\$22.46), the interest payment would be \$50. Taking into account the \$72.46 interest deduction, the corporation would have taxable income of \$27.54 and would owe tax of \$8.54. Thus, the total tax paid would be \$31 (\$22.46 + \$8.54). The corporation's SCA balance, which would be available only to frank dividend payments, would be sufficient to frank a dividend of its remaining after-tax earnings of \$19.

41. Therefore, CBIT might be viewed, to some extent, as substituting taxation of the payor for taxation of the recipients. To illustrate the concept of substitute taxation, assume a manufacturer borrows \$100 for one year and agrees to pay \$10 of interest to the lender. Assume both the manufacturer and the lender have a 31 percent marginal tax rate. The manufacturer plans to use the \$100 to produce a product that will provide a return sufficient to pay \$110 to the lender at the end of the year. At the end of the year, the manufacturer sells the product for \$115. Under current law, the manufacturer's taxable income is derived by deducting from its \$115 of gross sales \$100 for wages, materials, and other costs of producing the product, and \$10 for interest expense. The manufacturer would be liable for tax of \$1.55 ($\$5 \times .31$), and would use the remaining \$113.45 ($\$115 - \1.55) to repay the \$100 principal on the loan and the \$10 interest, leaving an after-tax return of \$3.45. The lender would pay \$3.10 of tax on its interest income ($\$10 \times .31$) and would receive an after-tax return of \$6.90.

Under CBIT, the lender need only be paid \$6.90 in interest. The manufacturer's taxable income would be determined by deducting from gross sales the \$100 for wages, materials, and other production costs. Thus, the manufacturer would have taxable income of \$15 ($\$115 - \100) and would pay \$4.65 of tax ($\$15 \times .31$). The manufacturer would then use the \$110.35 in after-tax gross receipts ($\$115 - \4.65) to pay \$100 in principal on the loan and \$6.90 in interest to the lender. The lender would not include the \$6.90 of interest it received in its taxable income, because the tax on that income was by the manufacturer. The manufacturer's after-tax return would be \$3.45 ($\$110.35 - \106.90), and the lender's after-tax return would be \$6.90. Compared to current law, the manufacturer's \$4.65 CBIT liability can be viewed as including the same \$1.55 of income tax on the manufacturer, and an additional tax of \$3.10 on the lender's interest income; CBIT substitutes an additional \$3.10 of tax on the borrower for the income tax that current law would impose on the lender.

42. The fact that the imputation credit system taxes income at the shareholder's or lender's rate creates other differences between the two models. For example, no small business exception would be needed. The bondholder credit system, like an imputation credit system, also provides greater flexibility to change policy recommendations in the future. For example, relief could be provided to tax-exempt and foreign investors simply by permitting full or partial refunds of imputation credits. Compare Section 4.F. As with the imputation credit system, however, this flexibility is earned at the cost of substantial complexity.

43. It may be appropriate to retain the withholding tax for unfranked dividends and interest payments. The issue is the same as the treatment of taxable dividends and interest payments if no compensatory tax is imposed under CBIT. See Section 4.E.

44. Example. A corporation earns \$100 of taxable income, pays tax of \$34, and adds \$29.65 to its SCA. See Section 11.B for a discussion of how the SCA balance is calculated. The corporation could elect to pay deemed dividends of up to \$66 ($(\$29.65 / .31 - \$29.65) = \66). If the corporation declared a deemed dividend of \$66, shareholders would include \$95.65 in income and would be entitled to imputation credits of \$29.65. Share basis would increase by \$66.

45. Excess credits could be used to offset other tax liability, but would not be refundable, as with imputation credits attached to a cash dividend.

46. See Section 9.A for a discussion of the allocation of basis among shares.

47. The prototype also adopts a holding period requirement and extends certain other rules of current law. See Section 11.F. Those rules would apply to deemed dividends as well as to cash dividends.

48. The rule described in the text would not prevent a corporation from adopting a dividend policy under which it pays unfranked cash dividends. It would, however, prevent a corporation from both paying partially franked or unfranked dividends and using the elective DRIP. Neither of the two common reasons that might lead a corporation to pay partially franked or unfranked dividends arise in circumstances in which a DRIP would be useful. First, a corporation might want to distribute cash but have an insufficient SCA balance to frank all dividends fully. In that case, however, the SCA balance will be completely exhausted by the cash distributions, and the corporation will neither need nor be able to use the DRIP. Second, the corporation might want to retain an SCA balance to frank future distributions. If the corporation intends to retain an SCA balance for future use, however, it would not use the DRIP to reduce its SCA balance.

Chapter 12

1. See Treasury I, Vol 2, pp. 136-37, 140; and The President's 1985 Proposals, pp. 122-26. A partial or full deduction for dividends paid is often expressed in terms of a split rate system, in which distributed earnings face a lower tax rate than retained earnings. With a full dividend deduction, a split rate system results in a zero corporate tax rate for distributed earnings. With partial dividend deductibility, the effective rate of deduction is $(t_c - t_d)/t_c$, where t_c and t_d are, respectively, the tax rate on retained earnings (the corporate rate) and distributed earnings.

2. Although a dividend deduction could avoid extending integration benefits to tax-exempt and foreign shareholders by imposing non-refundable, corporate level withholding, such a system replicates the imputation credit discussed in Chapter 11. For example, the imputation credit prototype could be duplicated by withholding at a 34 percent rate and allowing credits at a 31 percent rate. The two systems may have different nontax consequences. See American Law Institute, Reporter's Memorandum No. 1 (1990), pp. 45-47.

3. See Section 13.H.

4. Compare Institute for Fiscal Studies (1991) and the Reporter's Study Draft proposals discussed in Sections 12.B and 12.C, which avoid this problem by imputing a deduction on equity capital rather than tracking actual dividend payments.

5. See Section 2.B. This account would restrict the dividends paid deduction to the amount of income that otherwise would have been taxed fully at the corporate level. For example, if a corporation paid tax of \$34 under current law it should be allowed a dividend deduction of up to \$100—the pre-tax earnings, not the after-tax amount of \$66 added to the EDA. The difference occurs because the dividend deduction system operates on a pre-tax basis whereas the dividend exclusion system operates on an after-tax basis. Presumably, the corporate AMT be retained and the interaction between dividend deductions available for regular tax purposes and for AMT purposes would have to be addressed.

6. The following examples illustrate how such results would occur, absent a limitation mechanism similar to the EDA.

Example 1. A corporation earns \$100 of tax-exempt bond interest income in one year. The corporation has no additional earnings in the next year and distributes the \$100 of exempt income it earned in the first year. The corporation has a dividend deduction of \$100, creating a net operating loss that can be carried forward to shelter \$100 of future retained taxable income from tax.

Example 2. A corporation earns \$100 of foreign source income and pays foreign taxes of \$34 in one year. After the foreign tax credit, it pays no U.S. tax. In the second year, the corporation has no additional earnings but distributes \$66. The corporation has a dividend deduction of \$66, which creates a \$66 net operating loss that can be carried forward to shelter \$66 of future taxable earnings.

7. An alternative approach, suggested in The President's 1985 Proposals, would require the distributing corporation to report to shareholders the portion of the dividend deducted. The deducted portion would be fully taxable to the corporate shareholder. The nondeducted portion would be eligible for a 100 percent dividends received deduction. Thus a corporate shareholder would be entitled to a 100 percent dividend received deduction with respect to dividends received in excess of the distributing corporation's previously taxed earnings. This approach would preserve preferences until distributed out of corporate solution.

8. See Chapter 9, note 2.

9. See Institute for Fiscal Studies (1991) and the description in Gammie (1991).
10. While the proposal would reduce tax-induced distortions in corporate financing decisions, if capital gains from retained earnings were to receive very favorable tax treatment at the investor level the IFS proposal would tend to encourage retention.
11. Shareholders funds are defined as:
- (1) shareholders' funds for the previous period, plus
 - (2) any new equity contributed, plus
 - (3) the AFCE allowance for the previous period, plus
 - (4) the taxable profits for the previous period, less
 - (5) the tax paid on those profits, less
 - (6) dividends and distributions to shareholders and capital repaid.

A new corporation would have shareholders' funds for the initial period equal to the value of the equity capital contributed by shareholders. Additional rules would be needed to determine an existing corporation's shareholders' funds on the date of introduction of AFCE.

12. The following example illustrates the difference between intercorporate equity and debt investments under the proposal. If Corporation A uses \$100 raised from new equity to buy shares in Corporation B, shareholders' funds are \$0 for A and \$100 for B. If, on the other hand, A raised \$70 from equity and \$30 from debt to buy shares in B, A would have shareholders' funds of -\$30. The negative AFCE allowance would reduce the interest deductible on the \$30 of debt against A's profits.

13. See American Law Institute, Reporter's Study Draft (1989).

14. According to the Reporter's Study Draft new equity capital includes "all amounts paid in for stock or as shareholder contributions to capital after the date of this proposal." The critical distinction is between "accumulated" and "contributed" equity. Earnings on new "contributed" capital become "accumulated" capital, do not increase the QCC, and, therefore, do not qualify for a dividend deduction. The intent is to treat contributed equity capital in a manner consistent with new borrowing. That is, if the allowable rate for deduction were 7 percent, an increase in contributed equity of \$1 million would generate \$70,000 in dividend deductions. Earnings on the \$1 million invested would not qualify for a dividend deduction.

15. An important difference between the IFS and Reporter's Study Draft proposals is that the former grants dividend relief to both accumulated and new equity, while the latter grants relief only to new equity. The Reporter's Study Draft distinguishes between accumulated and contributed equity. An allowable dividend deduction is computed as the product of new contributed equity and the allowable rate.

16. As a consequence, low-bracket investors would be subject to a lower tax burden on dividends than on nondividend distributions.

17. The four Reporter's Study Draft proposals include coordinating rules to ensure that any particular transaction is subject to no more than one of these rules. For example, the MTD is imposed only to the extent that a distribution does not trigger interest disallowance or a reduction in the capital base for the dividends paid deduction. The MTD also does not apply to the purchase of stock as a portfolio investment. A distribution does not trigger interest disallowance to the extent that it reduces the capital base for the dividends paid deduction.

18. See Chapter 10 and Section 13.B.

PART V

Chapter 13

1. See, e.g., Shoven and Whalley (1972), Shoven (1976), Ballard, Fullerton, Shoven, and Whalley (1985), and Fullerton, Henderson, and Mackie (1987).

2. See Gravelle and Kotlikoff (1989).

3. Whether these distortions in fact create significant efficiency costs depends on the response of business enterprises to the tax bias against incorporation. Gordon and MacKie-Mason (1991), analyzing data on individual business enterprises, find that changes in organizational form (between C and S corporations, and between S corporations, partnerships, and proprietorships) are sensitive to changes in tax rates and other tax policy incentives.
4. For example, some potential investments that benefit from corporate organization on account of liquidity of corporate securities or access to capital markets will not be undertaken even if they earn more (before taxes) than comparable investments in the noncorporate sector. Publicly traded partnerships, including master limited partnerships with units traded on organized exchanges, can have the liquidity of publicly traded corporations without the corporate taxes if they limit their investments to certain types of activities, principally real estate and natural resources. REITs, REMICs, and RICs avoid a second level of tax provided they satisfy certain restrictions on assets and business activities. Alternatively, businesses may elect S corporation status. This allows them to retain some of the benefits of incorporation, but at the expense of conforming to certain restrictions. For example, S corporations have limitations on the number of investors they can have and the type of stock they can issue. See IRC § 1361(b).
5. In addition to corporate domestic income as a percentage of net national product, mentioned earlier, Figure 13.2 shows gross domestic product of all corporations and nonfinancial corporations, relative to gross domestic product; and gross domestic product of nonfinancial corporations relative to GNP, from 1950 to 1990.
6. Compare the declines in 1989 and 1990 in corporate profits relative to net national product (Figure 13.1) and in total income in the corporate sector relative to net national product, gross domestic product and gross national product (Figure 13.2) with the stability in income of proprietorships and partnerships relative to net national product (Figure 13.1).
7. S corporation income here is measured consistent with pre-1987 figures.
8. In the Midsession Review of the Budget (1990), estimated corporate receipts were decreased by approximately \$7.5 billion to reflect revisions of the 1986 Act's effect on corporate income taxes and the greater than anticipated use of Subchapter S filings by corporations.
9. A bias would remain, however, if business tax preferences and losses that reduce the effective tax rate on noncorporate income did not pass through corporations to their shareholders.
10. A common rule of thumb is that the accrual-equivalent tax rate on capital gains is about one-fourth the statutory rate. See Poterba, "Tax policy and corporate saving" (1987) and the references therein. This adjustment captures reductions attributable to deferral and to the fact that the basis of inherited property is stepped up to fair market value (eliminating the tax on capital gains accrued before the holder's death).
11. For example, in the late 1970s, marginal tax rates on individuals were as high as 70 percent for unearned income, while the top marginal rate on corporate income was 46 percent and there was a 60 percent exclusion for long-term capital gains. This created an incentive in some cases to shift income into corporations, because the combination of the corporate tax rate and the effective capital gains rate was lower than the individual tax rate on the same amount of income. See Feldstein and Slemrod (1978). This was particularly likely to be true for corporations with income low enough to take advantage of the graduated corporate rate structure.
12. In comparing corporate and noncorporate investments, however, the degree of bias may be reduced by the existence of accelerated depreciation allowances. The relative importance of those allowances depends upon the marginal business level tax rate facing the corporate or noncorporate enterprise. In the case of the debt-equity choice, the focus is on a corporation contemplating the best method to finance that portion of net investment that is not being funded by the government through a policy of accelerated writeoffs. The existence of accelerated allowances is immaterial to that choice.
13. In certain special cases, however, debt may not enjoy a tax advantage over equity. Consider, for example, a corporation whose tax liability is determined under the AMT. That corporation faces a 20 percent corporate income tax rate. Thus, if the accrual-equivalent capital gains rate were sufficiently low relative to the shareholder tax rate on interest income, equity might be the tax preferred form of financing for the minimum tax corporation.

Because statutory corporate tax rates are graduated, a corporation with taxable income under \$75,000 also would face a relative low (15 to 25 percent) corporate tax rate. For such a corporation, equity is less tax-disadvantaged than for corporations with larger profits that face the 34 percent statutory tax rate. In addition, a corporation with a substantial net operating loss can be thought of as having a low corporate tax rate and, therefore, as deriving little benefit from debt as opposed to equity financing.

14. The idea that debt can improve managerial incentives is at the core of Jensen's (1986) "free cash flow" theory, a prominent explanation of the increase in debt financing. Jensen contends that managers, if given the leeway, will take advantage of the inability of suppliers of funds to ascertain whether the firm is investing efficiently. Managers may squander cash flow by investing for their own benefit in projects with negative present value. An arrangement in which outside lenders hold debt and managers hold the residual claims minimizes this misuse of cash flow. Higher productivity (and, hence, shareholder profitability) could result from better managerial incentives. Some studies providing empirical evidence in support of this proposition are reviewed in Bernanke (1989).

This theory is subject to challenge, however. While debt financing is one way to mitigate the problem Jensen describes, it may not be the best option. If the objective is to make managers bear more residual risk, other means could be used (including incentive-based management compensation or reform of the oversight role, which in principle is exercised by boards of directors). Tax considerations have likely played a role. If taxes have contributed to increased debt, then high debt levels may not be the most efficient way to operate the firm.

15. This is true to the extent that debt is costly to renegotiate. See Gertler and Hubbard (1990). The idea is that managers should be made residual claimants only on the component of profits they can influence: the firm specific component. For example, managers should not be punished if the business does poorly during a recession but no worse on average than its competitors.

16. See Warshawsky (1991).

17. Looking at changes in debt to asset ratios in the "upper tail" (the ninetieth percentile corporations) reveals that some firms are close to having negative net worth on a market-value basis.

18. See Bernanke and Campbell (1988), Bernanke, Campbell, and Whited (1990), and Warshawsky (1991).

19. The empirical evidence on the effect of taxes on corporate borrowing decisions is mixed. Studies by Ang and Peterson (1986), Long and Malitz (1985), Bradley, Jarrell, and Kim (1984), and Marsh (1982), for example, fail to find plausible or significant tax effects. Other studies, in contrast, find significant relationships between tax policy variables and corporate borrowing. See, e.g., Auerbach (1985), Bartholdy, Fisher, and Mintz (1985), MacKie-Mason (1990), and Masulis (1983). At least two studies have directly estimated the responsiveness of corporate debt financing to changes in the tax advantage of debt. Nadeau (1988) estimates that a 1 percent increase in the tax advantage of debt relative to equity will cause a 0.2 percent increase in the fraction of external funds obtained by issuing debt. Rangazas and Abdullah (1987) estimate that a 1 percent increase in the tax advantage of debt relative to equity will cause a 0.12 percent increase in the debt to value ratio in the short run, and a 0.4 percent increase in the debt to value ratio in the long run.

20. This argument is made formally in Gertler and Hubbard (1991).

21. Some financial economists have maintained that tax parameters are irrelevant for dividend payout decisions, arguing that share prices of dividend paying firms are set by investors who face equivalent (typically zero) tax burdens on dividends and capital gains. See, e.g., Miller and Scholes (1978).

22. See, e.g., Bhattacharya (1979) and Miller and Rock (1985).

23. The new view (sometimes described as the "tax capitalization" or "trapped equity" approach) is developed in King (1977), Auerbach (1979), and Bradford (1981). See also the survey in Poterba and Summers (1985).

24. A temporary change in the dividend tax rate would change both dividend payments and investment incentives because of intertemporal substitution.

25. Again, investment incentives are only affected by transitory changes in investor level dividend tax rates.

26. Under the new view, other tax factors such as the corporate tax rate and capital cost recovery allowances affect the corporation's dividend distributions and the investment policy. To understand why, under the new view, permanent dividend taxes do not affect investment incentives, one must recognize that this view assumes that retained earnings provide the funds for marginal corporate equity financed investment. Consider, for example, a corporation that wants to invest \$1 of capital by retaining an additional dollar of earnings. To retain the dollar, the corporation must reduce dividends by \$1. At a 20 percent marginal individual income tax rate, the \$1 of dividends foregone represents \$0.80 net of the personal level tax on dividends, so \$0.80 represents the cost of the investment in terms of dividends foregone. In the following period, suppose the investment earns a 6.4 percent pre-tax return, leaving \$0.043 to distribute to the shareholders after paying corporate tax

at a 34 percent marginal corporate income tax rate ($0.043 = 0.064 \times (1 - 0.34)$). Upon distribution, the shareholder receives a net dividend of \$0.034, after paying the 20 percent tax on the dividend distribution ($0.034 = 0.043 \times (1 - 0.20)$).

In determining investment incentives, however, it is the return to the shareholder relative to the cost of the investment that is relevant. In our example, the investment costs the shareholder only \$0.80 in terms of foregone dividends, since that is how much she would have had to invest if the \$1 had been distributed to her rather than reinvested within the corporation. Consequently, the rate of return relevant for determining whether the investment should be undertaken is 3.4 percent divided by 80 percent (4.3 percent), the pre-dividend tax return. Because the cost of the investment is always reduced by the dividend tax in exactly the same proportion that the return from the investment is reduced by the dividend tax, the dividend tax does not affect investment decisions under the new view.

The new view does assume, however, that share appreciation on investments financed by retained earnings is subject to capital gains tax. The effective accrual tax rate on capital gains does affect investment incentives, even under the new view. To see why, assume that the effective accrual tax rate on capital gains is 6 percent. When the corporation retains a dollar, the investor owes capital gains tax of $\$0.06 * q$, where q gives the share appreciation caused by \$1 of retained earnings. We assume that the firm pays dividends, so that q must equal 0.851 ($0.851 = (1 - 0.2)/(1 - 0.06)$) to insure that shareholders are just indifferent between dividends and retained earnings. Thus, the shareholder pays capital gains tax of \$0.051, thereby sacrificing a total of \$0.851 in after-tax income to make the investment of one dollar. In the next year, the investment pays a dividend of \$0.043, of which the investor keeps \$0.034 after paying taxes at a 20 percent rate. To measure the investor's after-tax rate of return, we must adjust for the fact that only \$0.851 was sacrificed rather than \$1. As a result, the investor earns a 4 percent rate of return ($0.04 = 0.034/0.851$) after taxes. Note, however, that since the investment yields 4.3 percent before investor level taxes, the investor level tax rate is simply the 6 percent effective tax rate on capital gains ($0.04 = 0.043 * (1 - 0.06)$). Thus, the capital gains tax, but not the dividend tax, reduces the investor's incentives under the new view.

27. Under the new view, managers are assumed to maximize shareholder value, and corporations can be described as "immature" (with desired investment spending exceeding internal funds) or "mature" (with internal funds exceeding desired investment spending). Immature firms use their available internal funds from retained earnings, then seek more costly external finance. They would never pay dividends and issue new shares at the same time. Investors in mature firms must be indifferent at the margin between receiving a dollar in dividends or receiving a capital gain on the reinvested dollar. If the value of an additional dollar of investment in the firms is denoted by q , the investor must be indifferent between receiving a dividend of \$1—valued at $1 - m$, where m is the investor level tax on dividends—and a capital gain of q dollars—valued at $q(1 - z)$, where z is the investor level accrual-equivalent tax rate on capital gains. Hence, $1 - m = q(1 - z)$, so that $q = (1 - m)/(1 - z) < 1$. Under certain assumptions, q is related to the ratio of the market value of the firm to the replacement cost of the firm's capital stock. Hence, the dividend tax is capitalized in share values (i.e., decreasing m would increase q and the value of the firm).

28. Under the traditional view, dividends offer nontax benefits to shareholders, so that tax-disfavored dividends are not a cheaper source of funds for the firm than external finance. Using the notation of the previous note, $q = 1$, and investor level dividend taxes are not capitalized in share values.

29. See Poterba, "Tax policy and corporate saving" (1987). The Tax Reform Act of 1986 is assumed in the analyses discussed in this chapter to have increased the payout ratio from the 0.61 value reported by Poterba to 0.73 under current law.

30. Statistical analysis is difficult because it is often difficult to isolate changes in tax rates on income from dividends that occur independently of changes in tax rates on nondividend income (which would affect the required return on corporate equity, share values, profits, and dividends in equilibrium).

31. Brittain (1966) analyzes data on U.S. corporations from 1920 through 1960. For the corporate sector as a whole, he finds that in the short run (first year) a 1 percent increase in dividend tax rates would reduce the dividend payout ratio by 0.18 to 0.42 percent. As corporations gradually adjust to the new tax system, they respond more fully, and in the long run the behavioral responses are larger, ranging from 0.61 to 1.02 percent. Brittain concludes that the dividend tax rate explains dividend payout better than any of a variety of measures of the tax penalty on dividends relative to capital gains.

Feldstein (1970) examines the dividend payment behavior of British firms from 1953 through 1964, and finds that payout decisions were sensitive to the tax penalty on dividends relative to capital gains. Feldstein finds that in the short run (first year) a 1 percent increase in the tax penalty on dividends relative to capital gains (measured as the opportunity cost of retentions in terms of foregone dividends) will reduce the dividend payout ratio by between 0.27 percent and 0.68 percent. In the long run, Feldstein's estimates are close to 1.0.

King (1971, 1972) examines data on British corporations from 1949 through 1967. He finds behavioral responses that are lower than Feldstein's by about one-half. However, Feldstein (1972) countered that King's estimates are biased downward because of data problems, and maintains that the true response is closer to his own original estimates than to King's estimates.

Poterba and Summers (1985) also examine data on British firms, using information through 1983. They find that dividends are very sensitive to the tax penalty variable. They estimate that a 1 percent increase in dividend tax rates would reduce dividend payout rates by 0.18 to 0.54 percent in the short run and by 1.03 to 2.6 percent in the long run.

Poterba, "Tax policy and corporate saving" (1987) provides estimates based on data for the United States for the period 1948 through 1986. Poterba estimates short-term responses in the dividend payout ratio with respect to the dividend tax penalty ranging from 0.61 to 0.78 percent. In the long run, Poterba's elasticities range from 1.56 to 4.00 percent.

Another type of evidence comes from studies of changes in asset prices in response to taxes. Such studies attempt to test whether investor level dividend taxes are capitalized in share prices. Poterba and Summers (1985) studied the reaction of prices of British stocks to the announcement in 1970 that an integrated tax system would replace the double taxation of dividends. They found no significant increase in stock prices, suggesting that dividend taxes were not capitalized into share values.

32. This estimated sensitivity, in principle, could reflect investors' perceptions that dividend tax changes are temporary. Even in the new view, a temporary decrease in dividend tax rates would increase dividend payout. Poterba and Summers (1985) argue, however, that empirical evidence is consistent with an effect on payout of "permanent" dividend tax changes.

33. See Shoven (1987) and Poterba, "Tax policy and corporate saving" (1987).

34. The calculations follow Poterba (1987), and are based on tabulations of the COMPUSTAT Industrial and Research files.

35. In different contexts, see Lintner (1956), Easterbrook (1984), Jensen (1986), Gertler and Hubbard (1991).

36. See the discussion in Fazzari, Hubbard, and Petersen (1988) and Hubbard (1990).

37. Empirical evidence in support of the proposition that capital income taxes affect investment is more conclusive than for the case of saving. Modern theoretical models of business fixed investment build on early work by Jorgenson (1963), which demonstrated a link between capital spending and the cost of capital, which in turn depends in part on tax rates. Initial empirical evidence by Hall and Jorgenson (1967) bolstered this view. Criticism of the Hall-Jorgenson approach by Eisner and Nadiri (1968) and Eisner (1969) (see also later work by Chirinko and Eisner, 1983) centered on the Hall-Jorgenson approach of combining output and cost of capital effects in a single term. In this work by Eisner and others, the cost of capital effect in isolation was small. A significant effect of taxes on investment spending has been demonstrated in recent models using a range of underlying theoretical approaches. See, for example, Summers (1981), Feldstein (1982), Feldstein and Jun (1987), Fazzari, Hubbard, and Petersen (1988), and Auerbach and Hassett (1990, 1991).

38. See Shoven and Whalley (1984) for a discussion of computable general equilibrium models.

39. The assumptions underlying the models were made to conform to each other whenever possible. Common assumptions include inflation rates (3.5 percent), asset holding periods (seven years), share of capital gains excluded from tax through step up in basis at death (two-thirds), historical dividend-payout ratios (two-thirds of the real return), and historical debt shares (40 percent for corporations, 34 percent for noncorporate enterprises, and 38 percent for owner occupied housing). Each model generally characterizes the production technologies in a particular industry in a similar way, and where possible the models assume consistent behavioral responses of dividend-payout ratios and debt to equity ratios to changes in taxes. Only Federal taxes on capital income are taken into account in measuring investment incentives.

40. By taxing distributions out of tax-favored or foreign-taxed income, a compensatory tax can significantly offset the efficiency gains otherwise resulting from integration. In particular, had a compensatory tax been incorporated into the CBIT prototype (rather than the investor level tax actually recommended), the decision to retain, rather than distribute, current earnings would be as distorted by tax considerations as under current law.

41. The analysis of corporate borrowing in the model is based on Nadeau (1988). He estimates an elasticity of the fraction of total external financing in the form of debt to the difference between the real rate of return required on equity and the real interest rate of 0.224. The representation of corporate borrowing in the model is consistent with an elasticity of the debt

to asset ratio with respect to the tax advantage of debt of 0.3. Nadeau measures the tax advantage of debt as $1 - [(1 - t_e)(1 - t_d)/(1 - t_a)]$, where t_d is the tax rate on debtholders, t_e is the corporate tax rate, and t_a is the effective tax rate on the real return to equity (including the benefit from the preferential treatment of capital gains). Rangazas and Abdullah (1987) have estimated that this elasticity is about 0.4 in the long run, somewhat larger than the behavioral response assumed in the model used in this Report.

42. The gain to shareholders from a dollar distributed as a dividend relative to an additional dollar of retained earnings is given by $(1 - m)/(1 - z)$, where m is the tax rate on dividends and z is the accrual-equivalent tax rate on capital gains. The model assumes an elasticity of the dividend payout ratio with respect to this measure of relative after-tax values of approximately unity. This estimate is conservative. For example, Poterba (1987) estimated the long-run elasticity to be in the range from 1.6 to 4.0, while Feldstein (1970) estimated long-run elasticities ranging from 0.85 to 1.33.

43. In all calculations, noncorporate business is assumed to be financed using 34 percent debt, and owner-occupied housing using 38 percent debt. These calculations are based on information from Balance Sheets for the U.S. Economy, Board of Governors of the Federal Reserve System, various issues.

44. In fact, because nominal interest payments are deductible, the effective marginal tax rate on debt-financed investments is negative in these calculations.

45. These calculations assume that retentions are never distributed. Thus, they may overstate the difference between the taxation of dividends and retentions. This assumption is probably appropriate for the calculations below, however, since incentive effects in these calculations are based on a marginal expansion of the capital stock. Retained earnings used to finance such an expansion would be retained indefinitely.

46. In the scaled-tax-rate calculations, and compared to current law, all prototypes reduce slightly the overall average cost of capital for the economy, and encourage additional savings and investment. The small reduction in the overall average cost of capital is caused by the reduction in the premium that corporate investments must earn to compensate investors for tax-induced corporate financial distortions. The direct tax cost of investment has, by assumption, remained fixed at its current law level. Since CBIT reduces financial distortions most significantly, it generates the largest reduction in the overall average cost of capital. This effect is not the focus of the present analysis, however.

47. The incidence of the corporate income tax is discussed in detail in Section 13.G.

48. Mackie (1991) describes the technical details of the model outlined in this section. The model is based upon Fullerton and Henderson (1989).

49. See, e.g., Gordon and Malkiel (1981), Fullerton and Gordon (1983), and Gertler and Hubbard (1990).

50. Even though in the scaled-tax-rate calculations the integration prototypes may leave constant the effective tax rate on investment, they still might encourage capital formation by reducing tax-induced distortions in corporate financial policy. Although small in an absolute sense, this effect may be large relative to the other gains brought on by the integration prototypes. Nonetheless, the static, single period calculations reported in the tables do not incorporate such an effect.

51. We use a modified version of the Mutual Production Model introduced by Gravelle and Kotlikoff (1989).

52. Corporate financial behavior in the MPM is based on CES functional forms with an elasticity of dividend payout ratio with respect to the tax penalty on dividends relative to capital gains equal to -3.0, and an elasticity of the leverage ratio with respect to the tax advantage of debt relative to equity equal to 0.3. Thus, the financial behavior in the MPM is consistent with, but not identical to, that assumed in the augmented Harberger model described earlier. For technical details of the MPM, see Gravelle (1991).

53. As statutory tax rates rise to make the distribution-related prototype revenue neutral, the tax advantage of debt relative to equity also rises because the higher tax rates increase (1) the value of deducting nominal interest, and (2) the tax rate on purely inflationary capital gains. At the set of tax rates needed for revenue neutrality, these two effects, combined with a relatively large distortion in dividend policy, are sufficient to counteract the effect of the dividend exclusion or credit. As a result, relative to current law the tax benefit to debt rises, and corporations actually increase slightly their use of debt.

54. The portfolio allocation model is described in Galper, Lucke, and Toder (1988).

55. Households hold debt and corporate equity, directly and indirectly, through certain pension holdings. The household allocations of debt and corporate equity in Table 13.9 reflect direct holdings. Pension holdings of debt and corporate equity are shown separately.

56. Household wealth includes small net holdings of foreign equity. As a result, total wealth slightly exceeds the value of total physical capital, so shares can differ between the top and middle panels of Table 13.9.

57. Though not shown, the PA model also simulates changes in portfolio shares across income groups. The shareholder allocation, imputation credit, and CBIT prototypes shift stock ownership from high-income to low-income groups; the dividend exclusion prototype shifts stock holdings to higher-income groups. In all cases, the shifts are quantitatively small. Larger cross-household shifts in taxable debt accompany the prototypes, especially CBIT. Broadly speaking, all of the prototypes reduce the share of total debt held by low-income groups, while raising the share held by middle- and high-income groups.

58. Note that this can result simply because existing businesses in the noncorporate sector decide to incorporate. It does not necessarily imply a change in ownership of assets.

59. Both the augmented Harberger model (AH) and MPM simulations suggest that each integration prototype would improve economic welfare. The models also suggest possible gains at both real and financial margins. Nonetheless, there are substantial differences between these two models' results. Perhaps most noticeably, the MPM produces much larger shifts in physical capital and in economic welfare than does the AH model. There are some key differences in the models' predictions about corporate financial policy, real capital shifts, and welfare changes, as described below.

Changes in corporate financial policy. For a given prototype and financing mechanism, the two models predict very similar changes in the corporate dividend payout ratio. In the lump-sum calculations, furthermore, the two models predict fairly similar changes in the corporate leverage ratio. In contrast, with the scaled-tax-rate replacement mechanism, the two models predict somewhat different changes in the corporate leverage ratio, especially under the two distribution-related prototypes. Such differences can be traced to the fact that the two models (1) start with somewhat different statutory rates, (2) use slightly different behavioral responses in estimating corporate financial behavior, and (iii) have different equal-tax-yield requirements.

Changes in capital allocation. The MPM generally produces larger shifts in physical capital than does the AH model. This difference reflects in part the MPM's greater scope for substitutability between corporate and noncorporate resources. The greater substitutability stems from two sources: (1) a much larger implied substitution elasticity between corporate and noncorporate business in each industry; and (2) a corporate-noncorporate choice in the provision of rental housing that is not considered in the AH model.

Changes in welfare from improved consumption. The MPM predicts larger gains from improved consumption choices. This difference is due principally to the MPM's greater shifts in capital (and other resources) discussed above. The greater substitution between the corporate and noncorporate form in the MPM means that, because investors are quite sensitive to tax differences, current law does more to distort the allocation of real resources in that model than in the AH model. Consequently, relieving the tax distortion produces a larger gain in the MPM than in the AH model.

Changes in welfare from corporate financial policy. The MPM generally produces larger changes in welfare from changes in corporate debt and dividend policy. Some differences between the models' welfare results reflect differences in the predicted changes in the leverage and dividend payout ratios, as discussed above. In addition, for each prototype the MPM has a larger fraction of the economy's stock of capital allocated to the corporate sector under current law than does the AH model. Thus, the same per unit financial distortion would produce a larger absolute (i.e., dollar) loss in the MPM than in the AH model.

60. Our gains also are on the same order of magnitude as those estimated for the 1986 Act. See, e.g., Fullerton, Henderson, and Mackie (1987).

61. See Harberger (1966), Shoven (1976), and Fullerton, et al. (1981).

62. See Fullerton (1984).

63. See Fullerton and Henderson (1989).

64. Others also have emphasized the role of debt finance and capital gains taxes in reducing the size of the corporate tax wedge, and so reducing the efficiency cost of the corporate tax system. See, e.g., Gordon and Malkiel (1981) and Stiglitz (1973).

65. The important differences are three. First, in this Report, only Federal income taxes distort investment decisions, while in Fullerton and Henderson, state and local income and property taxes also act to distort investment decisions. (All other things constant, this would tend to make the welfare gains from integration in Fullerton and Henderson larger than those in this Report.) Second, Fullerton and Henderson's calculations are based on the new view of dividend taxes while this Report uses the traditional view. (All else constant, this would tend to make the welfare gains from integration in Fullerton and Henderson smaller than those in this Report.) Finally, in this Report the model has been augmented to account for tax-induced financial distortions. (This would tend to make the welfare gains from integration, even those due to real resource allocation alone, smaller in Fullerton and Henderson than those in this Report.)

66. Fullerton and Gordon (1983), for example, estimate that eliminating the tax incentive for corporate debt would generate gains equivalent to about 0.8 percent of consumption, while Gordon and Malkiel (1981) estimate that it would generate gains of about 0.4 percent consumption.

67. Neither Gravelle (1989) nor Fullerton, Henderson and Mackie (1987) considered the welfare costs of distortions of corporate financial decisions.

68. Harberger (1977 and 1980) argues that evidence on rates of return on capital is consistent with capital mobility. On the other hand, Feldstein and Horioka (1980) found that domestic saving and investment rates moved too closely together in the 1960s and 1970s to be consistent with capital mobility. Feldstein and Horioka reasoned that if capital were perfectly mobile internationally, national savings rates should be independent of national investment rates. Capital would flow to wherever it received the highest return, and so returns would be equalized globally. Therefore, if saving increased in a country, rather than reducing interest rates below the global interest rate and thereby increasing investment at home, the additional saving would flow abroad. However, examining data from OECD countries, they found that, over long periods, national saving and investment rates were highly correlated. In a regression of national investment rates on national saving rates, the estimated coefficient on saving was statistically significant and close to unity. They interpreted this to mean there was very little international capital mobility, so that a one dollar increment to national saving produced almost a one dollar increment to national investment.

Since Feldstein and Horioka, there has been a series of papers examining the saving-investment relationship in time series and cross-section studies, generally with the intent of overturning their result. The result has, however, until recently, held up remarkably well for data from many countries over a long period. Recently, however, studies by Feldstein and Bacchetta (1989) and Frankel (1990) indicate that the close correlation between saving and investment may have broken down during the 1980s. Using data from the OECD countries, Feldstein and Bacchetta found that the coefficient on saving in a saving-investment regression is markedly lower for the 1980-1986 period than for prior years. Frankel used a long time series of U.S. data and found that the relationship between saving and investment held up well before 1980, but for the 1980-1987 period the estimated coefficient on saving is relatively small and statistically insignificant.

Several authors have pointed out that national savings and investment rates are both endogenous variables. Hence if there are exogenous variables that are correlated with both saving and investment, one could find a significant correlation between the two even in the presence of perfect capital mobility. See, e.g., Obstfeld (1986), Summers (1986), and Frankel (1986). Feldstein and Bacchetta (1989) rejected most of these explanations.

More recently, researchers have studied impacts of domestic capital market imperfections on capital flows. For example, Gertler and Rogoff (1990) present a model in which capital is perfectly mobile internationally, but capital market imperfections can lead domestic saving to be correlated with domestic physical investment. In their model, there is a domestic sector consisting of risky projects. There also is an international market for a riskless asset which yields a world rate of return. Foreigners can invest funds directly in the risky domestic projects, but because of asymmetric information they do not know how much of their funds are actually used in the project and how much reinvested in the international capital market. The probability of the project's success depends on how much money is actually invested in it. There is underinvestment of foreign funds in the risky domestic sector, but foreign investment increases with increased domestic investment in the risky sector. If saving increases, thereby increasing investment of domestic funds in the risky sector, foreigners will be willing to contribute more funds too. This may cause saving and investment to be correlated. While this model is stylized, it does point out that international mobility of capital in one market (for low-risk assets) need not imply that returns are equated internationally in markets for risky assets.

69. Most of the empirical evidence pertains to debt securities. When looking at securities (as opposed to saving and investment rates), the appropriate test is whether returns are equalized across national boundaries. To implement this test, one needs to define (and measure) the relevant returns that should be equalized. This is not always easy.

Mishkin, "Are Real Interest Rates Equal Across Countries" (1984), Mishkin, "The Real Interest Rate" (1984), and Mark (1985) found evidence against real interest parity. In a less direct test, Barro and Sala-i-Martin (1990) estimated a system of country real interest rate and investment equations derived from a macroeconomic model. They found some evidence that global factors, e.g., global stock returns, are more important in determining a country's real interest rate than country specific factors. Of course, real interest parity may not hold even in the presence of perfect capital mobility if there is an expected change in the real exchange rate or an exchange rate risk premium. A test for capital mobility that allows for the existence of expected changes in the exchange rate or exchange rate risk premia is whether covered interest parity holds. Frankel and MacArthur (1988) and Frankel (1990) present evidence that covered interest differentials have narrowed over time, and that they are currently small for major industrial countries.

The covered interest differential measures only the extent of institutional barriers and market imperfections that impede capital flows. It does not measure the substitutability of domestic and foreign assets in investors' portfolios. The uncovered interest differential is a better indicator of capital mobility capturing asset substitutability. The difference between the uncovered interest differential and the covered interest differential is the exchange rate risk premium, the size of which provides a measure of the substitutability of assets across currencies. Froot and Frankel (1989), Giovannini and Jorion (1987), and others have rejected uncovered interest parity, suggesting the presence of a risk premium. Frankel (1990) presents some evidence that much of these differences is accounted for by expected changes in real exchange rates rather than exchange rate risk premia.

To summarize, there appears to be substantial integration in asset markets for short-term debt. Of course, even if there is a high degree of capital mobility in these markets, imperfect substitution between these markets and other asset markets (for equity or long-term debt) could still be consistent with weak overall integration of capital markets.

Tests of equity market integration in the capital asset pricing model have generally rejected international integration. See, e.g., Stehle (1977) and Jorion and Schwartz (1986). This may be due in part to the sample period (which does not include much of the 1980s). French and Poterba (1991) stress informational problems as an explanation for imperfect international diversification in equity markets.

70. See Mutti and Grubert (1985) for details.

71. The model assumes not only that debt capital is more internationally mobile than equity capital, but also that debt is more important in cross-holdings of assets. In the model's calibration, 66 percent of foreign holdings of U.S. assets are in the form of debt, while 60 percent of U.S. holdings abroad are in the form of debt.

72. This is true even for shareholders that are tax-exempt institutions. Taxes borne by pension and life insurance funds reduce the incomes of their beneficiaries, and taxes falling on charitable and educational institutions reduce the services they can provide.

73. See, e.g., Harberger (1962), Shoven and Whalley (1972), Shoven (1976), Pechman (1987), and Gravelle and Kotlikoff (1989).

74. See Harberger (1962).

75. See Ebrill and Hartman (1982) and Gravelle and Kotlikoff (1989).

76. See, e.g., Stiglitz (1973). The risk of bankruptcy may constrain the use of debt to finance the marginal investment, and that risk plays an independent role in the effect of the corporate tax. See, e.g., Gordon and Malkiel (1981).

77. See, e.g., Harberger (1983), Mutti and Grubert (1985), and Pechman (1987).

78. See Young (1988), Murthy (1989), and Gravelle (1991).

79. This possibility seems likely for the United States since the corporate tax is not a residence-based tax. American multinationals pay taxes on repatriated income to the United States in excess of foreign taxes paid. The U.S. corporate tax, in fact, is both residence-based and source-based, since taxes on earnings retained and reinvested abroad can be deferred.

80. Other assumptions have sometimes been used by other analysts. While Pechman (1987) allocated the corporate income tax to all capital income, Pechman and Okner (1974) and Pechman (1985) used five different assumptions to allocate the corporate income tax: (1) to dividends, (2) to property income in general, (3) half to dividends and half to property income in general, (4) one-half to dividends, one-fourth to consumption, and one-fourth to employee compensation, and (5) half to property income in general and half to consumption. In its original (1987) study of tax burdens and in the (1988) update, the Congressional Budget Office allocated the corporate tax burden in two ways: (1) entirely to capital income and (2) half to capital income and half to labor income. The Joint Committee on Taxation has not attempted to allocate the burden of corporate income tax to individuals.

The assumptions correspond to those conventionally employed in contemporary analyses of the distributional implications of tax changes. Early analyses by the Department of the Treasury in the 1930s and 1940s allocated the burden of the corporate income tax by income class on the basis of dividends or stockholdings. More recently, Department of the Treasury analyses of the distribution by income class of federal income taxes have consistently allocated the burden of the corporate tax to owners of capital. In *Blueprints*, the corporate income tax was allocated on the basis of total capital income. Similarly, in constructing Family Economic Income, the Department of the Treasury has allocated the corporate tax to families on the basis of their total capital income.

81. The tax rates reflect the burden of the corporate tax borne by foreign investors and tax-exempt institutions, other than pensions, through their ownership of U.S. capital. The portion of the corporate tax falling on assets owned by pension funds is allocated to the individuals with rights to the pension reserves.

82. Family economic income is constructed by adding to adjusted gross income: unreported and underreported income; IRA and Keogh deductions; nontaxable transfer payments such as Social Security and AFDC; employer-provided fringe benefits; inside buildup on pensions, life insurance, and IRA and Keogh accounts; tax-exempt interest; and imputed rent on owner-occupied housing. Capital gains are computed on an accrual basis, adjusted for inflation to the extent reliable data allow. Inflationary losses of lenders are subtracted and gains of borrowers are added. The economic incomes of all members of a family unit are summed to produce the family economic income used in the distributional analysis.

83. The rate of inflation is assumed to be 3.5 percent per annum.

84. The revenue estimates have assumed an average excludability rate of 56 percent, implying that 56 percent of the distributions of corporations will be excluded from income have tax credits attached that can be used by the recipient of the distribution to offset taxes. This rate consists of a base rate of 51 percent and an additional 5 percent representing carryovers of excess amounts in Earnings Distribution Accounts from prior years to exclude dividends in the current year.

The low average excludability rate is accounted for by the fact that many corporations that distributed income to shareholders have paid no (or little) tax on that income. That is, much of the income distributed represents preference or foreign source income not taxed at the corporate level. Moreover, many corporations whose income is taxed more fully have low dividend payout ratios. The assumed excludability rate of 56 percent is based on Department of the Treasury calculations.

85. The EDA is calculated as taxes after credits multiplied by $(1 - t_c)/t_c$, where t_c is the corporate tax rate, to gross up the amount of income available to pay excludable dividends. For example, for income of \$100 and taxes paid of \$34, \$66 is available to pay dividends. The EDA also is \$66 $[(0.66/0.34) \times \$34]$.

86. Thus, individuals cannot exclude dividends from foreign source income except to the extent that U.S. tax is paid.

APPENDICES

Appendix A

1. Treas. Reg. § 301.7701-2(a)(1). Two characteristics, associates and an objective to carry on business and divide the profits, are common to partnerships and corporations and are therefore not material in distinguishing between partnerships and corporations.

2. IRC § 7704.

3. IRC § 851 et seq.

4. IRC § 856 et seq.
5. IRC § 860A et seq.
6. Exceptions include: (1) interest on purported debt that is properly viewed as equity (see, e.g., IRC § 163(e)(5)), (2) interest on debt used to finance certain tax-favored income (see, e.g., § 265(a)(2)), and (3) interest that must be capitalized because the debt relates to the production of future income (see, e.g., IRC § 263A(f)).
7. The Code treats a distribution as a dividend to the extent of current and accumulated earnings and profits of the distributing corporation. Distributions that exceed earnings and profits are treated as a tax-free return of basis to the extent of the shareholder's basis in the stock. To the extent that the distributions exceed basis, they are generally treated as capital gains. IRC § 301(c).
8. Capital gains of individuals are subject to a maximum tax rate of 28 percent. IRC § 1(h).
9. A domestic corporation also is entitled to a dividends received deduction (in the percentage specified in IRC § 243) for the U.S. source portion of dividends received from a foreign corporation that is at least 10 percent owned by the U.S. corporation. The deduction is 100 percent for a wholly owned subsidiary whose income is all effectively connected with a U.S. trade or business. IRC § 245.
10. IRC § 385(b).
11. The data reflect corporate taxes at both the central government and local levels. Comparisons of corporate tax receipts for central governments only would be misleading because some countries have much greater corporate taxation at the local level than others. Organisation for Economic Co-operation and Development (1991), Table 13, p. 78.

Appendix B

1. We believe that the descriptions that follow are complete as of December 1991. They are based in part on secondary sources. We are grateful to those government officials, academics, and practitioners who gave us their comments.
2. The amount of the imputation credit is $[F/(1 - .39)] \times .39$, where F equals the amount of the distribution from the franking account.
3. The amount added to the franking account each year is $(61/39 \times T) + D$, where T is the total Australian tax paid by the corporation in the relevant period and D is the amount of franked dividends received from other resident corporations that period.
4. For example, an individual shareholder owns a share with a paid-up value of AU\$1.00 and a market value of AU\$2.50. The shareholder's basis in the share is AU\$2.00. The corporation buys the share (and has taxable income sufficient to frank fully all dividends paid that year). If the buyback is off-market, then the difference between AU\$2.50 (amount paid) and AU\$1.00 (paid up value) is a dividend (AU\$1.50). That part of the purchase price not treated as a dividend (the paid up value of AU\$1.00) is consideration received in the sale. Thus, the shareholder also has a capital loss of AU\$1.00 (AU\$1.00 paid up value minus AU\$2.00 basis). If the buyback is instead on-market, the total purchase price (AU\$2.50) is consideration in the sale, and the shareholder has a capital gain of AU\$0.50 (AU\$2.50 minus AU\$2.00 basis). The corporation, however, must debit its franking account by AU\$1.50, the amount that would have been a dividend if the purchase were off-market.
5. The required franking amount equals: $CD \times [RFS / (TD + CFD + SDD)]$, where CD is the current dividend and RFS is the franking surplus. RFS is reduced by any unpaid dividends with an earlier reckoning day. (The reckoning day is normally the day that the dividend is paid, but sometimes dividends that are part of the same distribution are not paid on the same day. In that case the reckoning day is the day that the first of those dividends is paid.) TD is the total amount of dividends paid or to be paid on the same class of shares and under the same resolution as the current dividend. CFD is the amount of the committed future dividends (not in TD) at the beginning of the reckoning day for the current dividend. SDD (same day dividends) have the same reckoning day but are paid or to be paid under a different resolution or under the same resolution on a different class of shares.
6. Thus, the corporation pays a franking deficit tax equal to the franking deficit grossed-up at the corporate rate and then multiplied by that rate: $[FD / (1 - .39)] \times .39$, where FD equals the amount of the franking deficit.

7. Implementation of an accompanying foreign investment fund regime recently was postponed to July 1, 1992. This regime is similar in purpose, though not in details, to the U.S. PFIC rules of IRC §§ 1291-1297.

8. For example, if a shareholder receives a taxable dividend of \$100, he includes \$125 in income and receives a Federal tax credit of \$16.75. Assuming the provincial rate is 50 percent of the Federal liability, the \$16.75 Federal credit reduces provincial tax liability by \$8.38 ($\$16.75/2$). The total tax saved as a result of the credit is \$25.13.

9. The following table illustrates the Canadian system with respect to the business income of a Canadian corporation. (This analysis does not deal with the investment income of a Canadian private corporation, which is subject to a somewhat different regime.) The table assumes, for purposes of the provincial tax, that the dividend paying corporation is both resident in, and doing business in, Ontario, and that the individual Canadian shareholder also is resident in Ontario. Three cases are shown: a normal Canadian corporation, subject to a 28 percent Federal tax plus a 3 percent surtax and a 15.5 percent Ontario tax; a Canadian manufacturing company, subject to a 23 percent Federal tax plus a 3 percent surtax and a 14.5 percent Ontario tax; and a small business corporation subject to a 12 percent Federal tax on its business income (not exceeding \$200,000 per year) plus a 3 percent surtax and a 10 percent Ontario tax. The shareholder is assumed to be subject to Federal income tax at the top rate of 29 percent (before credit) plus a 5 percent surtax, and an Ontario tax equal to 53 percent of the Federal tax (after shareholder credit). For simplicity, these rates do not reflect the Federal and provincial surtax on high-income individuals.

	Normal Corporation	Manufacturing Corporation	Small Business Corporation
Net income of Canadian corporation	100.00	100.00	100.00
Federal tax	28.00	23.00	12.00
Federal surtax (3%)	0.84	0.84	0.84
Ontario tax	15.50	14.50	10.00
Total Federal and provincial tax	44.34	38.34	22.84
Maximum distribution to shareholder	55.66	61.66	77.16
25 percent gross-up	13.92	15.42	19.29
Taxable income of shareholder	69.58	77.08	96.45
Federal pre-shareholder credit income tax	20.18	22.35	22.97
Dividend received credit (67% of gross-up)	9.28	10.28	12.86
Federal tax after shareholder credit	10.90	12.07	15.11
Federal surtax (5%)	0.55	0.60	0.76
Ontario tax (53% of pre-surtax, post-credit, Federal tax)	5.78	6.40	8.01
Total Federal and provincial shareholder tax	17.23	19.07	23.88
Total value of credit to shareholder (Federal credit plus .53% of Federal credit)	14.20	15.73	19.68
Value of credit as a percentage of gross-up	102.0%	102.0%	102.0%
Credit as a percentage of Federal and provincial corporate tax	32.0%	41.0%	86.2%

10. These amounts are indexed for inflation.

11. Assume, for example, that a regular corporation earns \$25 of preference income and \$100 of taxable income. Assume, in addition, that a regular corporation is subject to Federal tax at a net rate of 28 percent (i.e., after the provincial abatement) and that a shareholder is subject to Federal tax at a rate of 29 percent (both assumptions disregard surtaxes). Taking into account only Federal tax, the corporation pays \$28 of tax. When net income of \$97 is distributed, the shareholder includes \$121.25 in income ($\97×125 percent), has tax liability of \$35.16 and is entitled to a credit of \$16.25, reducing shareholder tax to \$18.91. The total Federal tax burden on \$125 of economic income is thus \$46.91 ($\$28 + \18.91), or 47 percent. Thus, the income has been taxed at a rate greater than either the shareholder or the corporate rate. If, on the other hand, the corporation had earned \$125 of preference income and \$100 of taxable income, the total Federal tax burden on \$225 of economic income would be \$46.91, or 21 percent.

12. Special rules apply with respect to dividends on redeemable preference shares.

13. When the *avoir fiscal* was enacted in 1965, the French corporate tax rate on distributed (and retained) profits was 50 percent. The 50 percent *avoir fiscal* percentage was chosen in order to provide shareholders with a partial imputation credit equal to 50 percent of the taxes actually paid by a corporation on distributed profits. When the corporate tax rate was reduced to 42 percent in 1988, however, the *avoir fiscal* percentage also was not reduced to preserve the 50 percent relationship between the *avoir fiscal* and actual corporate tax payments. Instead, the *avoir fiscal* percentage was maintained at 50 percent as a means of introducing a greater degree of integration. As a result, the *avoir fiscal* represented a greater percentage (69 percent) of actual corporate tax payments on distributed profits. With the further reduction of the tax rate on distributed profits to 34 percent for 1992, the *avoir fiscal* will represent almost the entire amount of corporate level tax paid on distributed profits.

14. Net operating losses generally may be carried forward for 5 years, although net operating losses attributable to depreciation may be carried forward indefinitely. If a net operating loss fully offsets taxable income in a carryover year, a dividend distribution out of carryover year income will incur the *precompte mobilier*. A corporation may elect, however, to spread a net operating loss carryover over the 5 year carryover period in order to leave some fully-taxed income in each year of the carryover period from which to make dividend distributions.

Alternatively, a corporation may elect to carry back over a 3 year period a tax credit calculated by applying to the amount of the loss the standard corporate tax rate in effect at the end of the loss year. The tax credit may be used to offset income tax liability on undistributed fully-taxed profits realized during the 3 year carryback period. Any excess credit remaining thereafter is refunded.

Net operating losses cannot be carried back to offset any portion of the prior years' income for which tax liability was satisfied using *avoir fiscal* or other tax credits.

15. Rather than separating income into fully-taxed and untaxed baskets, France effectively relies on the ability of French corporations to avoid the *precompte mobilier* out of retained earnings with respect to income taxed at rates less than 34 percent. For example, assume that a corporation has F1000 of gross income, F500 of which is taxable at 34 percent and F500 of which effectively is taxable at 19 percent, e.g., a dividend from a foreign corporation resident in a treaty country paid to a French nonparent corporation that is subject to a 15 percent foreign withholding tax. If the corporation distributes its entire after-tax income of F735, this amount will be subdivided into two parts: a dividend of F330, which has borne regular corporate tax, and a dividend of F405, which has not borne corporate tax. The *precompte mobilier* will be imposed on F405 at a rate of 50 percent, resulting in an additional tax liability of F202.50. Thus, the total tax liability of the corporation will be F467.50, and the corporation will be required to pay the additional F202.50 liability out of retained earnings.

As a practical matter, a corporation wishing to distribute tax-sheltered income will reduce the amount of its dividend so it can pay its *precompte mobilier* liability out of current after-tax income. In the above example, the corporation would pay a dividend of F600, equal to F330 (income that has borne regular 34 percent corporate tax) plus F270 (income that is subject to a *precompte mobilier* of 50 percent). The corporation's total tax liability would be F400, equal to F265 regular corporate tax plus F135 *precompte mobilier*.

16. The participation exemption results in an effective tax rate of (1) 2.55 percent on the gross amount of a dividend (including the amount of the *avoir fiscal*) received from a 10 percent-owned French subsidiary, and (2) 1.70 percent on the gross amount of a dividend (including the amount of a credit for foreign withholding tax) received from a 10 percent-owned subsidiary in a treaty country.

17. In some circumstances, a French company may elect to be taxed on all foreign branch income. In such cases, the *precompte mobilier* is not imposed upon distribution of the foreign branch income.

18. The purpose of the special rules is to avoid an effective tax surcharge that arose under pre-1990 law. Dividends received by a French holding company from a foreign subsidiary are exempt from French income tax in the hands of the holding company by virtue of the participation exemption. Prior to 1990, however, the foreign source dividend income was subject to the *precompte mobilier* upon redistribution by the holding company. Payment of the *precompte mobilier* by the holding company entitled the recipient to claim an *avoir fiscal* credit with respect to the redistribution. If the recipient was a French 10 percent shareholder of the holding company, however, the participation exemption would exempt the income again in the hands of the 10 percent shareholder. Thus, the *avoir fiscal* was not needed to offset income tax liability of the 10 percent shareholder with respect to the dividend income. Under pre-1990 law, moreover, the *avoir fiscal* could not be used to offset income tax liability of the 10 percent shareholder with respect to other types of income. Pre-1990 law did permit the 10

percent shareholder to use the avoir fiscal to offset any precompte mobilier liability that it might incur upon a subsequent distribution of preference income; if the 10 percent shareholder did not have sufficient preference income however, all or a portion of the avoir fiscal (which had been "paid for" by the French holding company) was lost.

19. The amount of the excess tax equals the amount distributed out of EK 50 (or EK 56), grossed-up to its pre-tax equivalent, and then multiplied by the difference between 50 percent (or 56 percent) and 36 percent (the distribution rate). Accordingly, if D equals distributions out of EK 50 (or EK 56), the corporation receives a refund of $D/.50 \times .14$ (or $D/.44 \times .20$). For example, if a corporation earns DM100 and pays tax of DM50, it will have DM50 in its EK 50 account. If it then redistributes DM50 out of EK 50, the corporation will receive a refund equal to DM14 ($DM50/.50 \times .14$).

20. The following table illustrates the application of the German split rate and imputation credit systems. For simplicity, the table ignores any surtaxes.

Income before taxes		DM100.00
Tentative corporate tax		DM50.00
Decrease in corporate tax on full distribution		DM14.00
Amount available for distribution		DM64.00
Withholding tax (25 percent)		DM16.00
Shareholder includes in income		DM100.00
Cash dividend	DM48.00	
Withholding tax credit	DM16.00	
Imputation credit	DM36.00	
	DM100.00	
Shareholder tax liability (53 percent rate)		DM53.00
Shareholder credit		DM52.00
Withholding tax credit	DM16.00	
Imputation credit	DM36.00	
	DM52.00	
Net amount due		DM1.00

21. The following equation converts pre-tax income subject to tax at some non-EK rate into equivalent amounts of pre-tax income subject to tax at the distribution rate (36 percent) and either the statutory rate (50 percent) or the zero rate: $.36X + (.5 \text{ or } 0) \times (Y - X) = T$, where Y equals the total amount of pre-tax income (known) subject to some non-EK rate, X equals pre-tax income subject to the distribution rate, $(Y - X)$ equals pre-tax income subject to either the statutory rate or zero rate, and T equals the amount of tax paid with respect to Y (known). Because X and $(Y - X)$ must be positive, the effective tax rate, T/Y , determines whether the equation must contain the statutory rate or zero rate (and whether the residual amount of income is ultimately converted into EK 50 or EK 0).

The following equations convert the pre-tax amounts, X and $(Y - X)$, into their after-tax EK amounts:

$$\begin{aligned} \text{EK 36} &= (1 - .36) \times X \\ \text{EK 50 (if } T/Y > .36) &= (1 - .50) \times (Y - X) \\ \text{EK 0 (if } T/Y < .36) &= Y - X \end{aligned}$$

22. Specifically, the calculation converts the DM100 into DM71.4 of income subject to the 36 percent distribution rate ($.36 + .5 \times (DM100 - X) = DM40$) and the remainder, DM28.6, into income subject to the 50 percent statutory rate ($DM100 - DM71.4 = DM28.6$). This translates into available net equity of DM45.7 in the EK 36 category ($.64 \times DM71.4$) and DM14.3 in the EK 50 category ($.50 \times DM28.6$).

23. Specifically, the calculation converts the DM100 into DM69.4 of income subject to the 36 percent distribution rate ($.36X = DM25$) and the remainder, DM30.6, into income subject to the zero rate ($DM100 - DM69.4 = DM30.6$). This translates into available net equity of DM44.4 in the EK 36 category ($.64 \times DM69.4$) and DM30.6 in the EK 0 category ($DM100 - DM69.4$).

24. The rules for carrybacks and carryforwards of net operating losses are designed to prevent the refund of an amount of tax that, by virtue of the imputation credit, has already been used to offset shareholder taxes. In summary, when a German corporation suffers a net operating loss for a year, it first enters the full amount of the loss as a negative adjustment to its

EK 02 account. The corporation may then carry back the loss for two years and (to the extent the loss is not absorbed in these years) may carry forward the loss indefinitely.

With respect to carrybacks, the loss may be deducted in the earlier year, and generate a refund, only to the extent of taxable income in that year less the sum of (1) any distributions in that year and (2) the distribution tax (36 percent) on such distributions. In effect, a carryback deduction is only allowed against taxable income if the tax on such income has not already been returned to shareholders by way of credit.

If the NOL is not absorbed through carrybacks, it is carried forward and deducted in later years. As the loss is deducted (and is thereby automatically reflected in the EK 50 account), it is credited against the original negative adjustment to the EK 02 account.

25. All German enterprises (including foreign corporations with permanent establishments in Germany) also are subject to the municipal "trade tax." This tax has both income tax and capital tax components. The basic trade tax rates are set by the Federal Government, but the local governments (which collect the tax) have considerable discretion to increase them. The income tax component is typically 15 percent. The trade tax is deductible in computing a corporation's normal tax liability. The trade tax is not taken into account in the examples in this summary.

26. Tax is always withheld on dividends at the statutory 25 percent rate at the time of distribution (except as noted below). Shareholders entitled to reduced withholding under a treaty must apply the German tax authorities for a refund of the excess withholding. This rule applies even to publicly traded shares.

Some treaties contain an anti-avoidance rule designed to discourage corporations from distributing profits to nonresident shareholders who reinvest these profits in the same corporation in order to gain the benefit of the lower distribution rate on what are, in effect, retained profits. Such distributions are subject to a higher withholding tax than normal distributions. (The 1954 U.S.-Germany treaty had such a provision, but it was unilaterally waived by Germany in 1981.)

27. The following example illustrates the treatment of foreign source income and foreign stockholders. Assume a German corporation has two foreign branches, the first in a treaty country (Country 1) and the second in a nontreaty country (Country 2). The corporation has DM100 of German profits, DM100 of Country 1 profits, and DM100 of Country 2 profits (all pre-tax). The German profits are taxed at the statutory rate of 50 percent. The Country 1 profits are taxed in Country 1 at a rate of 25 percent and are exempt in Germany (under the Business Profits and Double Taxation articles of the treaty). The Country 2 profits are taxed in Country 2 at a rate of 30 percent and are subject to tax in Germany, but the German tax is reduced by a foreign tax credit. During the next year (when the corporation has no profits anywhere), all of the prior year profits are distributed to a foreign shareholder (who enjoys no treaty benefits).

The German profits of DM100 produced equity of DM50 in the EK 50 account. When these profits are distributed, the corporation receives a refund of DM14, also distributed to the foreign shareholder. The distribution of DM64 is subject to 25 percent withholding of DM16. The foreign shareholder receives no imputation credit with respect to this distribution.

The Country 1 profits of DM100 produced equity of DM75 in the EK 01 account. When this equity is distributed, it is subject to the 36 percent distribution tax (DM27), but the tax is credited and refunded to the foreign shareholder. The entire distribution (DM75 - DM27 + DM27) is subject to 25 percent withholding (DM18.75).

The Country 2 profits of DM100 were reduced by DM30 of Country 2 tax, and then by an additional DM20 of German tax (at the statutory rate of 50 percent after the foreign tax credit). In allocating this income to EK accounts, the corporation is considered to have paid tax of DM20 on profits of DM70 (an overall tax rate of 28.6 percent). Specifically, the corporation is treated as having paid a 36 percent tax on DM55.6 and a 0 percent tax on DM14.4. This produced equity of DM35.6 in EK 36 ($55.6 - (55.6 \times 36\%)$) and DM14.4 in EK 01. When the profits are distributed, the distribution out of EK 36 is not subject to any further tax and produces a refunded credit of 36/64, or DM20. The distribution out of EK 01 is subject to the 36 percent distribution tax, which is refunded. This results in a distribution, including refunds, of DM70 ($DM35.6 + DM20 + DM14.4 - DM5.2 + DM5.2 = DM70$). The total distribution is subject to statutory withholding of 25 percent (DM17.5).

The treatment of pre-1977 profits is illustrated by the following. Assume the corporation in the above example had only DM100 of German profits, which were earned in 1976 and were subject to a tax of 56 percent at that time. The net profits of DM44 were placed in EK 03 in 1977, when the integration system was implemented. When these profits are distributed to a foreign shareholder in 1990, they are subject to a distribution tax of 36 percent (DM15.8), which is credited and refunded to the shareholder, producing a total distribution of DM44. This total distribution is subject to statutory withholding of 25 percent (DM11).

28. The following example illustrates the mechanics of New Zealand's credit system. A corporation earns income of NZ\$100, of which NZ\$60 is taxable, and the tax is NZ\$19.80 (at a 33 percent rate). The corporation distributes the remaining NZ\$81.20 to its shareholders. The payment of tax of NZ\$19.80 gives rise to a credit to the ICA in the same amount. The maximum amount of credits that can be allocated to the distribution is NZ\$33.99 ($\text{NZ\$}60 \times .33 / (1 - .33)$). However, the corporation only allocates a credit of NZ\$19.80 to the distribution to avoid having a negative ICA and incurring penalties. Not taking into account the refundable resident withholding tax, the shareholder would include NZ\$100 in income (the cash distribution plus the attached credits), and have tax liability of NZ\$33 and a credit of NZ\$19.80. As a result, the shareholder has additional tax liability of NZ\$13.20.

29. Until March 31, 1991, the CFC regime applied only to a transitional list of low-tax countries (the "black list" countries). As of April 1, 1991, the new regime applies in full to a CFC resident in any country other than Australia, the United States, the United Kingdom, Japan, France, Germany or Canada (the "grey list" countries). The CFC rules apply to investors in a CFC resident in a grey list country only if the CFC has taken advantage of overseas "specified tax preferences," and only if New Zealand tax exceeds the foreign tax that would be payable if the item were not a preference under that foreign country's tax laws. To date, there is only one scheduled specified tax preference, namely, any exemption from income tax for income derived from a business carried on outside the country.

30. The shareholder continuity rules do not apply to any corporation whose shares are listed on the New Zealand Stock Exchange.

31. The amount of the imputation credit is $[(D/(1-.25)) \times .25] = D/3$ where D equals the amount of net qualifying distributions.

32. The following example illustrates the mechanics of the imputation credit and ACT. The example assumes: (1) a corporate tax rate of 33 percent, (2) a basic personal rate of 25 percent, (3) that all shareholders are taxed at a marginal rate of 25 percent, and (4) that the corporation distributes to shareholders all after-tax (including ACT) earnings.

A.	Corporate income before preferences	£100.00
B.	Preference deductions or exclusions (e.g., accelerated cost recovery in excess of book depreciation)	40.00
C.	Corporate taxable income (A - B)	60.00
D.	Corporate tax (.33 × C)	19.50
E.	Cash distributions to shareholders ((A - F - I) or (A - [(.33 - .25) / 1.33]))	71.40
F.	ACT ($E \times .25 / (1 - .25)$)	23.80
G.	Limit on use of ACT (.25 × C)	15.00
H.	ACT applied against mainstream corporate tax (lesser of F and G)	15.00
I.	Net mainstream tax (D - H)	4.80
J.	Total tax paid by corporation (F + I)	28.60
K.	Retained earnings (A - E - J)	0.00
L.	Surplus ACT credit available for carryback or carryforward (F - H)	8.80
M.	Shareholder income (E + F)	95.20
N.	Shareholder tax (.25 × M)	23.80
O.	Shareholder tax net of imputation credit (N - F)	0.00
P.	Total corporate and shareholder tax paid (J + O)	28.60

If the shareholder in the example were instead a tax-exempt entity, the shareholder would be eligible for a refund of the entire imputation credit of £23.80. Accordingly, the total tax paid by the corporation and the shareholder would be £4.80, the net mainstream tax paid by the corporation.

33. An indirect foreign tax credit is allowed with respect to taxes paid by a foreign corporation to a U.K. corporation that owns at least 10 percent of the foreign corporation. A similar credit is allowed if the foreign corporation is a controlled foreign corporation the income of which is taxed currently to a U.K. shareholder.

34. Assume that a corporation earns £100 (of which £70 is U.K. source and £30 is foreign source income) and pays foreign tax of £9 on the foreign source income (at a 30 percent rate). The corporation's mainstream tax is £24, of which £23.10 is attributable to U.K. income ($.33 \times £70$) and £0.90 is attributable to foreign source income ($(.33 \times £30) - £9$). The corporation distributes £60 and pays ACT of £20. Under the general limit described in Section B.6.b, the corporation may apply the ACT of £20 against its mainstream tax on U.K.-source income only to the extent of 25 percent of £70, or £17.50. The corporation also may apply ACT against the £0.90 of U.K. mainstream tax payable on the foreign source income (the

lesser of the mainstream tax payable and 25 percent of £30 of foreign source income). Thus, the corporation offsets £18.40 (£17.50 + £0.90) of ACT against its mainstream tax liability of £24 and therefore must make an additional payment of £5.60. The corporation's total U.K. tax liability is £25.60.

35. The following example illustrates the difference in treatment of shareholders in countries with such treaties and shareholders in countries without such treaties.

Example. A corporation distributes a total of £300, consisting of £75 to each of the following: Shareholder A, a national of a nontreaty country, Shareholder B, a U.S. national owning less than 10 percent of the stock, Shareholder C, a U.K. resident, and Shareholder D, a U.S. national owning at least 10 percent of the stock. Shareholders A and C are subject to tax in the United Kingdom at a marginal rate of 40 percent, Shareholder B is subject only to the 15 percent withholding tax, and Shareholder D is subject only to the 5 percent withholding tax. The corporation pays ACT of £100 ($£300 \times .25 / (1 - .25)$), or £25 on each distribution.

Shareholder A is treated as receiving a distribution of only the £75 actually paid to him and is liable for tax of £30 ($.40 \times £75$). Shareholder A is treated as having paid tax of £18.75 ($.25 \times £75$) due to the ACT paid by the corporation. Thus, Shareholder A must pay an additional £12.25.

Shareholder B is treated as receiving a distribution of £100 and is liable for tax of £15 ($.15 \times £100$). Shareholder B is treated as having paid £25 (ACT paid on the distribution), and thus is entitled to a refund of £10.

Shareholder C also is treated as receiving a distribution of £100 and is liable for tax of £40. Shareholder C is treated as having paid £25, and thus must pay an additional £15.

Shareholder D is treated as receiving a distribution of £87.50 (£75 actually distributed plus one-half of the ACT) and is liable for tax of £4.38 ($.05 \times £87.50$). Shareholder D is treated as having paid £12.50 (one-half of the ACT), and thus is entitled to a refund of £8.13.

Appendix C

1. In that case, the credit would not only be nonrefundable but also would not be allowed to offset tax on other income of shareholders subject to tax at less than the maximum rate. The imputation credit prototype, described in Chapter 11, is a hybrid of these two approaches. It allows credits at the maximum shareholder rate but permits low-bracket shareholders to use excess credits against other tax liability.
2. The second to last column of the example that follows in the text illustrates that this approach will pass through preferences if the corporate and shareholder rates are identical.
3. Corporate tax credits could be passed through by treating credits as equivalent to corporate taxes paid. Corporate preferences that are exclusions from income could be passed through to shareholders by a separate accounting at the corporate level and exclusion at the shareholder level. Passing through deferral preferences, however, would be more difficult because some account would have to be taken of their reversal over time. The corporate AMT, for example, has a credit for AMT taxes against future regular income taxes. Alternatively, asset basis might be adjusted. Either of these approaches would be complicated at the shareholder level. See McLure (1979), pp. 95-99.
4. There may be an indirect benefit to tax-exempt shareholders if a dividend exclusion system results in increased stock prices.

GLOSSARY

AFCE: Allowance for Corporate Equity. See Section 12.B.

ACT: Advance Corporation Tax (United Kingdom). See Appendix B, Section B.6.

ALI: American Law Institute.

AMT: Alternative minimum tax. See Appendix A, Section A.1.

AMTI: Alternative minimum taxable income. See Appendix A, Section A.1.

Capital export neutrality: The principle that investors should pay equivalent taxes on capital income, regardless of the country in which the income is earned. See Section 7.B.

Capital import neutrality: The principle that all investments within a country should face the same tax burden, regardless of whether they are owned by a domestic or a foreign investor. See Section 7.B.

CBIT: Comprehensive Business Income Tax. See Chapter 4.

C corporation: A corporation taxed under the classical system as set forth in Subchapter C of the Internal Revenue Code. See Appendix A, Section A.1.

CGE model: Computable general equilibrium model. See Section 13.C.

Classical system: The two-tier corporate tax system, which taxes earnings on equity capital at both the corporate and shareholder level.

Code: The Internal Revenue Code of 1986, as amended.

DRD: Dividends received deduction. See Appendix A, Section A.1.

DRIP: Dividend reinvestment plan. See Chapter 9.

EDA: Excludable Distributions Account. See Sections 2.B and 4.B.

EK: Eigencapital (equity capital) (Germany). See Appendix B, Section B.4.

FEI: Family Economic Income. See Section 13.G.

GDP: Gross domestic product. The value of final goods and services produced by factors of production in the United States.

GNP: Gross national product. The value of final goods and services produced by U.S. owned factors of production, including factors that are actually used overseas.

ICA: Imputation Credit Account (New Zealand). See Appendix B, Section B.5.

Inbound investment: Investment by foreign persons in the United States. See Section 7.A.

IRS: Internal Revenue Service.

MPM: Mutual production model. See Section 13.F.

MTD: Minimum tax on distributions. See Section 12.C.

NNP: Net national product. GNP minus capital consumption (depreciation).

NOL: Net operating loss. See Appendix A, Section A.1.

OECD: Organisation for Economic Co-operation and Development

OID: Original issue discount. The OID rules govern the accrual of discount on debt. Discount is economically equivalent to interest.

Outbound investment: Investment by U.S. persons in foreign countries. See Section 7.A.

PA model: Portfolio allocation model. See Section 13.F.

REIT: Real estate investment trust. See Appendix A, Section A.1.

REMIC: Real estate mortgage investment conduit. See Appendix A, Section A.1.

RIC: Regulated investment company. See Appendix A, Section A.1.

R&D: Research and development.

S corporation: A corporation which bears no corporate tax and whose shareholders are taxed under the passthrough regime set forth in Subchapter S of the Internal Revenue Code. See Appendix A, Section A.1.

SCA: Shareholder Credit Account. See Section 11.B.

S&L: Savings and loan association.

Subchapter C: The portion of the Internal Revenue Code that governs the taxation of corporations under the classical system. See Appendix A, Section A.1.

UBIT: Unrelated business income tax. A tax-exempt entity is subject to UBIT on income derived from a business unrelated to the entity's exempt purpose and on certain passive income to the extent it is financed with debt.

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Production of a document of this size and complexity requires the assistance of a talented staff combining word-processing knowledge, editorial care, and infinite patience. For all this, we gratefully acknowledge the contributions of Rudie Slaughter, Ros Baker, Jacqueline Fritsch, and Peggy McConkey.

Finally, we thank our colleagues in the Treasury Department who reviewed our work and assisted us with their comments.

January 1992

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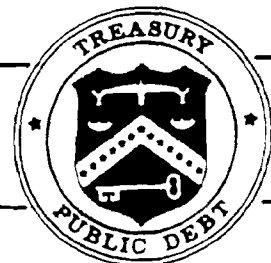
Jane Gravelle

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PUBLIC DEBT NEWS



Department of the Treasury • Bureau of the Public Debt • Washington, DC 20239

FOR RELEASE AT 3:00 PM
January 7, 1992

Contact: Peter Hollenbach
(202) 219-3302

PUBLIC DEBT ANNOUNCES ACTIVITY FOR SECURITIES IN THE STRIPS PROGRAM FOR DECEMBER 1992

Treasury's Bureau of the Public Debt announced activity figures for the month of December 1992, of securities within the Separate Trading of Registered Interest and Principal of Securities program. (STRIPS).

Dollar Amounts in Thousands

Principal Outstanding (Eligible Securities)	\$569,724,725
Held in Unstripped Form	\$436,579,960
Held in Stripped Form	\$133,144,765
Reconstituted in December	\$5,032,610

The accompanying table gives a breakdown of STRIPS activity by individual loan description. The balances in this table are subject to audit and subsequent revision. These monthly figures are included in Table VI of the Monthly Statement of the Public Debt, entitled "Holdings of Treasury Securities in Stripped Form." These can also be obtained through a recorded message on (202) 447-9873.

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TABLE VI—HOLDINGS OF TREASURY SECURITIES IN STRIPPED FORM, DECEMBER 31, 1991
(In thousands)

Loan Description	Maturity Date	Principal Amount Outstanding			Reconstituted This Month ¹
		Total	Portion Held in Unstripped Form	Portion Held in Stripped Form	
11-5/8% Note C-1994	11/15/94	\$6,658,554	\$5,082,554	\$1,576,000	- 0 -
11-1/4% Note A-1995	2/15/95	6,933,861	6,384,901	548,960	\$69,920
11-1/4% Note B-1995	5/15/95	7,127,086	5,529,008	1,598,080	53,600
10-1/2% Note C-1995	8/15/95	7,955,901	6,954,301	1,001,600	13,200
9-1/2% Note D-1995	11/15/95	7,318,550	6,002,950	1,315,600	151,600
8-7/8% Note A-1996	2/15/96	8,575,199	8,090,399	484,800	40,000
7-3/8% Note C-1996	5/15/96	20,085,643	19,858,443	227,200	16,000
7-1/4% Note D-1996	11/15/96	20,258,810	19,489,210	769,600	- 0 -
9-1/2% Note A-1997	5/15/97	9,921,237	9,626,437	294,800	- 0 -
8-5/8% Note B-1997	8/15/97	9,362,836	9,186,836	176,000	- 0 -
8-7/8% Note C-1997	11/15/97	9,808,329	9,371,529	436,800	- 0 -
8-1/8% Note A-1998	2/15/98	9,159,068	9,149,788	9,280	- 0 -
3% Note B-1998	5/15/98	9,165,387	9,128,387	37,000	- 0 -
3-1/4% Note C-1998	8/15/98	11,342,646	11,213,846	128,800	- 0 -
3-7/8% Note D-1998	11/15/98	9,902,875	9,576,475	326,400	- 0 -
3-7/8% Note A-1999	2/15/99	9,719,623	9,602,823	116,800	- 0 -
2-1/8% Note B-1999	5/15/99	10,047,103	9,119,103	928,000	41,600
5% Note C-1999	8/15/99	10,163,644	10,081,619	82,025	- 0 -
7-7/8% Note D-1999	11/15/99	10,773,960	10,769,160	4,800	3,200
9-1/2% Note A-2000	2/15/00	10,673,033	10,673,033	- 0 -	- 0 -
8-7/8% Note B-2000	5/15/00	10,498,230	10,334,630	161,600	46,400
8-3/4% Note C-2000	8/15/00	11,080,646	11,055,526	25,120	- 0 -
8-1/2% Note D-2000	11/15/00	11,519,682	11,374,482	145,200	- 0 -
7-3/4% Note A-2001	2/15/01	11,312,802	11,246,402	66,400	- 0 -
8% Note B-2001	5/15/01	12,398,083	12,398,083	- 0 -	- 0 -
7-7/8% Note C-2001	8/15/01	12,339,185	12,335,985	3,200	- 0 -
7-1/2% Note D-2001	11/15/01	12,762,549	12,762,549	- 0 -	- 0 -
11-5/8% Bond 2004	11/15/04	8,301,806	4,789,008	3,532,800	200,000
12% Bond 2005	5/15/05	4,260,758	2,080,058	2,180,700	189,050
10-3/4% Bond 2005	8/15/05	9,269,713	8,581,713	688,000	125,600
9-3/8% Bond 2006	2/15/06	4,755,916	4,755,916	- 0 -	- 0 -
11-3/4% Bond 2009-14	11/15/14	6,005,584	1,945,584	4,060,000	179,200
11-1/4% Bond 2015	2/15/15	12,687,799	2,111,959	10,555,840	104,000
10-5/8% Bond 2015	8/15/15	7,149,916	1,584,636	5,565,280	30,400
9-7/8% Bond 2015	11/15/15	6,899,859	2,168,659	4,731,200	118,400
9-1/4% Bond 2016	2/15/16	7,266,854	6,402,854	864,000	104,000
7-1/4% Bond 2016	5/15/16	18,823,551	17,297,151	1,526,400	100,000
7-1/2% Bond 2016	11/15/16	18,864,448	17,006,048	1,858,400	422,400
8-3/4% Bond 2017	5/15/17	18,194,169	6,250,489	11,943,680	664,000
8-7/8% Bond 2017	8/15/17	14,016,858	9,440,858	4,576,000	80,000
9-1/8% Bond 2018	5/15/18	8,708,639	2,350,239	6,358,400	148,800
9% Bond 2018	11/15/18	9,032,870	1,316,070	7,716,800	78,600
8-7/8% Bond 2019	2/15/19	19,250,798	6,490,798	12,760,000	350,400
8-1/8% Bond 2019	8/15/19	20,213,832	12,084,712	8,149,120	613,120
8-1/2% Bond 2020	2/15/20	10,228,868	3,892,868	6,336,000	117,600
8-3/4% Bond 2020	5/15/20	10,158,883	2,690,563	7,468,320	- 0 -
8-3/4% Bond 2020	8/15/20	21,418,606	6,467,886	14,950,720	242,560
7-7/8% Bond 2021	2/15/21	11,113,373	9,084,573	2,028,800	504,000
8-1/8% Bond 2021	5/15/21	11,958,888	7,226,408	4,732,480	224,960
8-1/8% Bond 2021	8/15/21	12,183,482	12,085,722	77,760	- 0 -
8% Bond 2021	11/15/21	12,136,733	12,136,733	- 0 -	- 0 -
Total		569,724,725	436,579,960	133,144,765	5,032,610

Effective May 1, 1987, securities held in stripped form were eligible for reconstitution to their unstripped form.

Note: On the 4th workday of each month a recording of Table VI will be available after 3:00 pm. The telephone number is (202) 447-9873. The balances in this table are subject to audit and subsequent adjustments.

TREASURY NEWS



Department of the Treasury • Washington, D.C. • Telephone 566-2041

FOR RELEASE AT 2:30 P.M.
January 7, 1992

CONTACT: Office of Financing
202-219-3350

TREASURY'S WEEKLY BILL OFFERING

The Department of the Treasury, by this public notice, invites tenders for two series of Treasury bills totaling approximately \$20,400 million, to be issued January 16, 1992. This offering will result in a paydown for the Treasury of about \$1,675 million, as the maturing bills are outstanding in the amount of \$22,069 million. Tenders will be received at Federal Reserve Banks and Branches and at the Bureau of the Public Debt, Washington, D. C. 20239-1500, Monday, January 13, 1992, prior to 12:00 noon for noncompetitive tenders and prior to 1:00 p.m., Eastern Standard time, for competitive tenders. The two series offered are as follows:

91-day bills (to maturity date) for approximately \$10,200 million, representing an additional amount of bills dated October 17, 1991 and to mature April 16, 1992 (CUSIP No. 912794 YJ 7), currently outstanding in the amount of \$ 11,291 million, the additional and original bills to be freely interchangeable.

182-day bills for approximately \$10,200 million, to be dated January 16, 1992 and to mature July 16, 1992 (CUSIP No. 912794 ZD 9).

The bills will be issued on a discount basis under competitive and noncompetitive bidding, and at maturity their par amount will be payable without interest. Both series of bills will be issued entirely in book-entry form in a minimum amount of \$10,000 and in any higher \$5,000 multiple, on the records either of the Federal Reserve Banks and Branches, or of the Department of the Treasury.

The bills will be issued for cash and in exchange for Treasury bills maturing January 16, 1992. In addition to the maturing 13-week and 26-week bills, there are \$11,803 million of maturing 52-week bills. The disposition of this latter amount was announced last week. Tenders from Federal Reserve Banks for their own account and as agents for foreign and international monetary authorities will be accepted at the weighted average bank discount rates of accepted competitive tenders. Additional amounts of the bills may be issued to Federal Reserve Banks, as agents for foreign and international monetary authorities, to the extent that the aggregate amount of tenders for such accounts exceeds the aggregate amount of maturing bills held by them. For purposes of determining such additional amounts, foreign and international monetary authorities are considered to hold \$802 million of the original 13-week and 26-week issues. Federal Reserve Banks currently hold \$932 million as agents for foreign and international monetary authorities, and \$7,885 million for their own account. These amounts represent the combined holdings of such accounts for the three issues of maturing bills. Tenders for bills to be maintained on the book-entry records of the Department of the Treasury should be submitted on Form PD 5176-1 (for 13-week series) or Form PD 5176-2 (for 26-week series).

TREASURY'S 13-, 26-, AND 52-WEEK BILL OFFERINGS, Page 2

Each tender must state the par amount of bills bid for, which must be a minimum of \$10,000. Tenders over \$10,000 must be in multiples of \$5,000. Competitive tenders must also show the yield desired, expressed on a bank discount rate basis with two decimals, e.g., 7.15%. Fractions may not be used. A single bidder, as defined in Treasury's single bidder guidelines, shall not submit noncompetitive tenders totaling more than \$1,000,000.

The following institutions may submit tenders for accounts of customers if the names of the customers and the amount for each customer are furnished: depository institutions, as described in Section 19(b)(1)(A), excluding those institutions described in subparagraph (vii), of the Federal Reserve Act (12 U.S.C. 461(b)); and government securities broker/dealers registered with the Securities and Exchange Commission that are registered or noticed as government securities broker/dealers pursuant to Section 15C(a)(1) of the Securities and Exchange Act of 1934, as amended by the Government Securities Act of 1986. Others are only permitted to submit tenders for their own account. Each tender must state the amount of any net long position in the bills being offered if such position is in excess of \$200 million. This information should reflect positions held as of one-half hour prior to the closing time for receipt of competitive tenders on the day of the auction. Such positions would include bills acquired through "when issued" trading, and futures and forward contracts as well as holdings of outstanding bills with the same CUSIP number as the new offering. Those who submit tenders for the accounts of customers must submit a separate tender for each customer whose net long position in the bill being offered exceeds \$200 million.

A noncompetitive bidder may not have entered into an agreement, nor make an agreement to purchase or sell or otherwise dispose of any noncompetitive awards of this issue being auctioned prior to the designated closing time for receipt of competitive tenders.

Tenders from bidders who are making payment by charge to a funds account at a Federal Reserve Bank and tenders from bidders who have an approved autocharge agreement on file at a Federal Reserve Bank will be received without deposit. Tenders from all others must be accompanied by full payment for the amount of bills applied for. A cash adjustment will be made on all accepted tenders, accompanied by payment in full, for the difference between the par payment submitted and the actual issue price as determined in the auction.

11/5/91

Public announcement will be made by the Department of the Treasury of the amount and yield range of accepted bids. Competitive bidders will be advised of the acceptance or rejection of their tenders. The Secretary of the Treasury expressly reserves the right to accept or reject any or all tenders, in whole or in part, and the Secretary's action shall be final. Subject to these reservations, noncompetitive tenders for each issue for \$1,000,000 or less without stated yield from any one bidder will be accepted in full at the weighted average bank discount rate (in two decimals) of accepted competitive bids for the respective issues. The calculation of purchase prices for accepted bids will be carried to three decimal places on the basis of price per hundred, e.g., 99.923, and the determinations of the Secretary of the Treasury shall be final.

Settlement for accepted tenders for bills to be maintained on the book-entry records of Federal Reserve Banks and Branches must be made or completed at the Federal Reserve Bank or Branch by the issue date, by a charge to a funds account or pursuant to an approved autocharge agreement, in cash or other immediately-available funds, or in definitive Treasury securities maturing on or before the settlement date but which are not overdue as defined in the general regulations governing United States securities. Cash adjustments will be made for differences between the par value of the maturing definitive securities accepted in exchange and the issue price of the new bills.

Department of the Treasury Circulars, Public Debt Series - Nos. 26-76, 27-76, and 2-86, as applicable, Treasury's single bidder guidelines, and this notice prescribe the terms of these Treasury bills and govern the conditions of their issue. Copies of the circulars, guidelines, and tender forms may be obtained from any Federal Reserve Bank or Branch, or from the Bureau of the Public Debt.

11/5/91

TREASURY NEWS



Department of the Treasury

Washington, D.C.

Telephone 566-2041

FOR IMMEDIATE RELEASE

Contact: Chris Hatcher
202-566-5252

THE HONORABLE JOHN ROBSON
DEPUTY SECRETARY OF THE TREASURY
REMARKS AT THE
FLETC AWARDS OF EXCELLENCE CEREMONY
JANUARY 8, 1992
CASH ROOM

It is an honor to be here with today's awardees. It also is a pleasure to be with the families and friends from the enforcement community joining us for this ceremony. I know all of you share in Treasury's pride for the men and women at the Federal Law Enforcement Training Center and around the nation who do the hard work of training our law enforcement officers.

First-rate law enforcement is a priority at the Treasury Department. We are actively engaged in efforts against illegal drugs, money laundering, telecommunications fraud and illegal weapons. And behind those efforts are the Customs Service, IRS, Secret Service, ATF, and FinCEN.

But there is another aspect of enforcement. In today's world of complex and sophisticated crime, officer training is critically important work. Officers and criminal investigators often must be chemists, accountants, marksmen and psychologists within the same week. Perhaps President Bush put it best in his proclamation of the first National Law Enforcement Training Week two years ago. He said:

"By equipping officers with the knowledge and skills they need, law enforcement training helps them to protect our homes, businesses and communities."

For 70 federal law enforcement agencies, along with others on the state, local and international level, FLETC has the formidable task of providing basic and advanced training -- making it the premier interagency training organization in the world. And the Center's success is due, in large part, to first-rate cooperation of agencies participating in FLETC, including those represented at this ceremony.

NB-1611

Today, we are here to recognize and honor a few outstanding people from agencies who share in the commitment to quality training for vigorous, fair and effective law enforcement. We are presenting the first Excellence in Law Enforcement Training Awards to highlight those individuals and organizations who have made exemplary contributions to their field.

These annual awards are granted in three areas: Individual Achievement; Organizational Achievement; and Lifetime Achievement. Those who receive the awards have displayed innovation, creativity, leadership and professional fortitude -- proving they have what it takes to make enforcement training effective.

To today's awardees, congratulations on a job well done. You have set a standard that will be hard to match for future award winners. And for those engaged in the continuous effort to deliver innovative enforcement training, good luck to you. You are doing something that touches the lives of all Americans.

Thank you.

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TREASURY NEWS



Department of the Treasury

Washington, D.C.

Telephone 566-2041

FOR IMMEDIATE RELEASE
January 8, 1992

Contact: Chris Hatcher
(202) 566-5252

DEPUTY TREASURY SECRETARY ROBSON PRESENTS AWARDS OF EXCELLENCE IN LAW ENFORCEMENT TRAINING

The first annual Awards of Excellence in Law Enforcement Training were presented by Deputy Secretary of the Treasury John E. Robson in a ceremony held today at the Department of the Treasury.

In presenting the awards, Deputy Secretary Robson said, "The American people must be safe from the terror of violent crime. The individuals honored today have dedicated themselves to making our neighborhoods safer by improving law enforcement training. We owe them a debt of gratitude and must continue to support vital crime prevention programs."

To underscore the critical role of law enforcement training in achieving these goals, the Federal Law Enforcement Training Center (FLETC), a bureau of the Treasury Department, has established three Awards of Excellence in Law Enforcement Training to recognize those individuals and organizations who make outstanding contributions to the law enforcement training profession. These national awards are granted annually in the categories of Individual Achievement, Organizational Achievement, and Lifetime Achievement.

"Quality training is the foundation upon which the successful law enforcement officer's career is built," said FLETC Director Charles F. Rinkevich. "As the nation's largest law enforcement training organization, it is appropriate that the FLETC sponsor these awards to recognize outstanding achievements by individuals and organizations in law enforcement training."

The 1991 recipient of the Individual Achievement Award is Ohio State Patrol Captain Robert F. Welsh for his "innovative leadership in the development of the Ohio State Patrol's React, Fire, Win training program." Also known as "Red Handle Gun," the program is a survival-oriented defensive firearms course which prepares officers to properly react when under fire. Welsh, a 25-year veteran of the Ohio State Patrol, is the author of a book on police officer survival and has taught his concepts to officers from the United States, Canada, and South America.

- more -

The Organizational Achievement Award was presented to the Police Training Bureau of the Metro-Dade Police Department of Miami for reducing violence between citizens and police officers. In cooperation with the Washington, DC-based Police Foundation, the Bureau conducted a Violence Reduction Study which analyzed records of police/citizen encounters resulting in violence or citizen dissatisfaction. From this study they developed a training program to teach officers defusing skills and techniques, tactical approach, and the hazards of reflexive responses. Accepting the award for the bureau were Major Richard Ward and Lieutenant Jerome Coney.

Norman C. Boehm, Executive Director of the California Commission on Peace Officer Standards and Training (POST), received the Lifetime Achievement Award for continuous leadership in the area of law enforcement training and standards. During his 12 years with the California POST, Boehm made many contributions to law enforcement training, both in California and the nation. Under his leadership, the California POST established the California Law Enforcement Command College, a two-year executive training and development program; the Supervisory Leadership Institute, an eight-month program to enhance the leadership abilities of first-line supervisors; and a computer-assisted, interactive videodisc training program.

The FLETC is an interagency training center serving 71 Federal law enforcement organizations. While the major training effort is providing basic training programs to federal police and investigative personnel, the FLETC also conducts many advanced training programs and assists state and local agencies in conducting specific training programs. Last year, more than 26,000 students were trained at the FLETC, either at its headquarters at Glynco, Georgia, or at one of its satellite training centers in Marana, Arizona and Artesia, New Mexico.

Doc 92-341

**Study on the Allocation of
Excess Pension Plan Assets
in the Case of Bridge Banks**



Department of the Treasury
January 1992



DEPARTMENT OF THE TREASURY
WASHINGTON

92-364

ASSISTANT SECRETARY

January 1992

The Honorable Dan Rostenkowski
Chairman
Committee on Ways and Means
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

Section 6067(b) of Public Law 100-647, the Technical and Miscellaneous Revenue Act of 1988, provides that the Secretary of the Treasury or his delegate, in consultation with the Federal Deposit Insurance Corporation, shall conduct a study with respect to the proper method of allocating excess pension assets in the case of a transaction described in section 414(1)(2)(G) of the Internal Revenue Code of 1986.

Pursuant to the directive, I hereby submit this "Study on the Allocation of Excess Pension Plan Assets in the Case of Bridge Banks".

I am sending a similar letter to Representative Bill Archer.

Sincerely,

A handwritten signature in cursive script that reads "Kenneth W. Gideon".

Kenneth W. Gideon
Assistant Secretary
(Tax Policy)

Enclosure

I. BACKGROUND

This report was prepared pursuant to a Congressional mandate set forth in section 6067(b) of the Technical and Miscellaneous Revenue Act of 1988 (TAMRA).

Section 2005(c) of TAMRA added section 414(l)(2) to the Internal Revenue Code of 1986 (the Code), generally requiring a specific allocation of excess pension plan assets in the case of a new defined benefit plan created through a spin-off transaction by an overfunded defined benefit pension plan. These excess asset allocation rules, however, do not apply to pension plans either created or affected by spin-off transactions if the new plan created by the spin-off is maintained by an employer outside of the controlled group of the original plan sponsor.

Section 6067(a) of TAMRA provided for a limited application of these excess asset allocation rules in the case of a bridge bank that receives assets and liabilities of an insured bank closed by bank regulators.¹ This rule becomes important if the bridge bank establishes a defined benefit pension plan that covers the former employees of the closed bank who are subsequently employed by the bridge bank. Section 6067(b) of TAMRA mandated a study by the Secretary of the Treasury, or his delegate, in consultation with the Federal Deposit Insurance Corporation (the FDIC),² as to the appropriate method of allocating pension plan assets in the case of a transaction described in section 6067(a) of TAMRA (a spin-off of a portion of a pension plan to a bridge bank).

The principal issue that arises under section 6067(a) of TAMRA is a basic conflict between federal pension policy and bank insurance policy that develops in the case of a pension plan sponsored by a bank holding company that owns a failing bank. Under pension principles, the plan sponsor of an overfunded defined benefit pension plan (in this case, the bank holding company) generally is entitled to any surplus assets in the pension plan remaining after the

¹ The asset allocation rules of section 414(l)(2) of the Code ordinarily would not apply in this case, because the bridge bank is not part of the same controlled group of corporations within the meaning of section 414(l)(2)(D)(v) (treated as the same employer under sections 414(b), 414(c), 414(m), or 414(o) of the Code) as the closed bank.

² Representatives of the FDIC have been consulted in connection with the preparation of this report and concur in its conclusions.

satisfaction of the liabilities under the plan. Bank insurance policy supports the view that the FDIC, as receiver of the closed bank (or any bank designated by the FDIC to take over assets and liabilities of the closed bank), is entitled to an equitable interest in the overfunding of the bank holding company's pension plan. Bankruptcy policy also must be considered, since the bank holding company may be under the protection of the bankruptcy court.

II. PENSION PLAN EXCESS ASSETS

Employers sponsoring defined benefit pension plans are required by the Employee Retirement Income Security Act of 1974 (ERISA) and the Code to establish separate trust funds to accumulate assets needed to pay future pensions. The amounts contributed to the trust established for the benefit of the employees are determined on the basis of actuarial assumptions that project future cash flow requirements from the trust fund and an actuarial method that establishes the contribution pattern over time that provides for the projected cash flow.

The goal of the actuarial method is to accumulate the exact amount of assets in the trust that are needed to pay the pensions of all current employees and retirees by the end of a specified period of time (the funding period). At any interim moment prior to the completion of the funding period there may be more or less assets accumulated in the trust fund than are needed to provide for the benefits that have accrued under the benefit formula as of that interim point of time.³ Typically, in the case of pension plans that base benefits on future salaries, the assets accumulated in the trust fund exceed the liabilities for accrued pensions (based on current compensation levels) that would be payable if the plan was terminated.⁴

³ Even after the close of the funding period, there may be more or less assets in the trust fund than needed to provide for future pensions as the actual experience of the trust fund diverges from the projections. For example, in the 1980s, higher than expected investment return resulted in many defined benefit plans becoming overfunded.

⁴ This occurs because the funding must be determined by assuming that the plan is ongoing. Consequently, the amount of contributions made to the trust fund must anticipate the effect that future salary increases will have on projected benefits. Such future salary increases would not matter if the plan was immediately terminated.

Under ERISA and the Code, when a defined benefit pension plan is terminated the surplus assets generally may be distributed to the employer (after satisfaction of all liabilities to plan participants and their beneficiaries).⁵ There are no specific requirements that the surplus assets that revert to the employer be allocated among the various members of the controlled group whose employees participate in the plan.⁶

Higher than expected investment returns on pension assets have been common in the last 10 years. This fact, coupled with a very competitive annuity market, has created the potential for employers to terminate their defined benefit plans and recover a substantial amount of surplus assets from their overfunded pension plans. In the peak year of 1985, 582 employers had large reversions totalling \$6.1 billion⁷ in surplus pension asset reversions.⁸ Although the reversion excise tax and generally lower market interest rates in subsequent years have reduced the financial incentive for these reversions, there remain many plans with substantial amounts of excess assets. 1990 data indicate that the total potential excess assets upon termination of all the overfunded defined benefit plans in the country exceed \$200 billion dollars.⁹

⁵ See section 4044(d) of ERISA and section 401(a)(2) of the Code. The plan provisions also must provide for the distribution of surplus assets to the employer.

⁶ There is, however, a requirement in section 4044(d) of ERISA that, in the case of a defined benefit plan that requires employee contributions, the employees who contributed are entitled to a share of the surplus.

⁷ 1990 Annual Report of the Pension Benefit Guaranty Corporation. Large reversions are defined as over \$1 million.

⁸ In response to this phenomenon, Congress added an excise tax of 10 percent on reversions of excess pension assets from terminated defined benefit plans in 1986. This rate was increased to 15 percent in 1988. 1990 legislation increased the rate to 20 percent, but applied a 50 percent rate unless the employer shared the surplus with the plan participants either through a benefit increase or by providing for some of the surplus to be transferred to a replacement plan. See section 4980 of the Code.

⁹ 1990 Annual Report of the Pension Benefit Guaranty Corporation.

Even if an employer does not choose to terminate the overfunded pension plan, the existence of the overfunding is advantageous for a plan sponsor because it maximizes the tax benefit associated with pension plan funding and reduces the need for additional contributions to provide future pensions. If the surplus is large enough, the employer may be able to provide for the employees' retirement benefits without making any additional contributions to the trust fund.

III. SPINOFFS OF PENSION PLANS

The employer sponsoring a pension plan can separate the plan into two or more separate plans. This transaction, known as a "spin-off", often is done in connection with a corporate divestiture—although there is no requirement that a plan spin-off accompany a divestiture. Prior to the enactment in TAMRA of section 414(l)(2) of the Code, the rules applicable to plan spin-offs were found in sections 401(a)(12) and 414(l) of the Code. In general, these sections required as a condition of tax qualification¹⁰ that each plan involved in a spin-off transaction provide each employee with a benefit (on a plan termination basis) after the spin-off equal to or greater than the benefit (also on a plan termination basis) the employees would have been entitled to before the spin-off.¹¹ However, there were no statutory provisions covering the allocation of the surplus (assets in excess of the liability for current accrued benefits) between the two plans.

¹⁰ The Code provides favorable tax treatment for certain trusts which are established to hold qualified pension plan assets and for the participants in those plans. The tax benefits include an exclusion of the amounts contributed on behalf of the employees from current income for both income and social security tax purposes and an exemption from tax for the earnings on the funds in the pension trust.

¹¹ In the case of a plan that had assets at least equal to the actuarial present value of accrued benefits, an employee's benefit on a plan termination basis is generally equal to the employee's accrued benefit based on the current level of salary and years of credited service. In such a case, the requirements of sections 401(a)(12) and 414(l) were satisfied, if, pursuant to the spin-off transaction, each piece of the former plan is allocated assets at least equal to the respective actuarial present values of accrued benefit liabilities.

TAMRA added section 414(l)(2) of the Code. The new section generally requires a plan that undergoes a spin-off transaction, and has total assets in excess of the minimum amount needed for each piece of the former plan to satisfy the requirements of section 401(a)(12), to allocate the excess assets among the resulting plans according to a specific formula.¹² Three exceptions were made to the generally applicable rule: plans that were transferred out of the controlled group, plans that were transferred out of multiple employer plans, and plans that were terminated as part of the spin-off transaction.

Among the reasons for the new provision may have been a concern that employers could use spin-off transactions within the controlled group in order to avoid the application of the full funding limitation.¹³ The same concern would not exist in the case of a spin-off to an employer outside the controlled group. Consequently, in the latter case, the old employer and new employer may decide what portion of the excess assets to transfer to the portion of the plan created by the spin-off maintained by the new employer as part of their arms-length price negotiations for the divestiture.

IV. BRIDGE BANKS

Section 503 of the Competitive Equality Banking Act of 1987 amended the Federal Deposit Insurance Act (the FDIA) to permit the establishment of a bridge bank when any of three conditions were met.¹⁴ Section 214 of the Financial Institutions Reform, Recovery and

¹² The formula is based on the respective amounts of the difference between the full funding liability (the ongoing liability defined under section 412(c)(7)(A)(i) of the Code) and the plan termination liability for each of the pieces of the former plan.

¹³ The Code prescribes a full funding limitation for defined benefit plans. Contributions in excess of the full funding limitation are nondeductible and subject to a 10 percent excise tax under section 4972 of the Code.

¹⁴ These conditions are: (1) the net cost of reorganizing and operating a bridge bank would not exceed the cost of liquidating a failed bank (including paying its insured accounts), (2) the continued operation of the failed bank is essential to provide adequate banking services in the community, or (3) the continued operation of the failed bank is in the best interest of the depositors of the closed bank and the public.

Enforcement Act of 1989 further amended the FDIA to authorize the FDIC to organize a bridge bank in anticipation of the default of an insured bank.

If the FDIC organizes a bridge bank, the bridge bank assumes insured deposits of the failed bank and such other liabilities and assets as the FDIC deems appropriate. Once established, the bridge bank continues to operate as a bank, but with somewhat closer oversight on the part of the FDIC, until such time as bridge bank status is terminated.¹⁵

For some purposes, the bridge bank steps directly into the shoes of the failed bank. For instance, Congress required that the bridge bank honor commitments to credit-worthy customers. Under Notice 89-102, 1989-2 C.B. 436, the Internal Revenue Service treats a bridge bank as the successor entity to the transferor bank. Thus, in the case of a failed bank that is a subsidiary member of an affiliated group filing a consolidated tax return, the bridge bank continues as a member of the group.

V. THE CONFLICTING GOALS OF PENSION POLICY AND BANK INSURANCE POLICY

If a failed bank sponsors a defined benefit pension plan, the FDIC serving in the role of a receiver or conservator of the failed bank generally has the authority to amend the pension plan and consequently has control of the disposition of any excess assets in the plan. For example, the FDIC can merge the plan with another defined benefit plan established by a bridge bank or an acquirer of the failed bank. However, in the case of a plan that is sponsored by a bank holding company for the joint benefit of the employees of the bank holding company and the failed bank, the bank holding company, under the terms of the plan, normally would retain control of the disposition of the excess assets in the pension plan.¹⁶

¹⁵ For example, as a result of the acquisition of the bridge bank.

¹⁶ If the bridge bank (or another corporation that directly acquires the failed bank's assets) is going to maintain a defined benefit pension plan for the benefit of employees transferring from the failed bank to the new bank that reflects their service with the failed bank, there generally will be a spin-off of the plan sponsored by the bank holding company. While a spin-off of the

This issue as to control of the surplus pension assets arose during the deliberations of TAMRA. Concern was expressed that when assets and liabilities of a banking subsidiary of a bank holding company are transferred to a bridge bank established by the FDIC and the bank holding company goes into bankruptcy, the bankruptcy trustee could seek to maximize the recovery to the creditors of the bank holding company by retaining the full amount of the surplus pension assets in the bankruptcy estate. In contrast, the FDIC expressed the view that the closed banks contributed to any surplus in the pension plan through their historical contributions to the trust fund and consequently were entitled to an equitable portion of that surplus.

Congress addressed this issue by the enactment (in section 6067(a) of TAMRA) of section 414(l)(2)(G) of the Code. Section 414(l)(2)(G)(i) specifies that a bridge bank that receives any assets and liabilities of a failed bank is to be treated as a member of the controlled group of the plan sponsor for purposes of applying the rules of section 414(l)(2). Thus, any spin-off of the pension plan to the bridge bank generally would require the allocation of any excess pension assets under the terms of section 414(l)(2) that apply to spin-offs within the controlled group. Section 414(l)(2)(G)(ii) of the Code further provides that the requirements of section 414(l)(2)(G)(i) are not satisfied unless the bridge bank has the right to require the transfer of up to 50 percent of the excess assets in the pension plan into a new defined benefit plan established by the bridge bank for the benefit of former employees of the closed bank that are employed by the bridge bank at any time within the 180-day period after the date that the failed bank is closed¹⁷ and any other merger, spin-off, termination, or similar transaction during the 180-day period without the consent of the bridge bank is precluded.

The solution that Congress fashioned in TAMRA split the difference between the competing claims of the FDIC and the bank holding company by specifying that the plan

plan to the new sponsor may be desirable from an employee relations and business point of view, neither ERISA nor the Code generally require a plan sponsor, e.g., the bank holding company, to transfer a pension plan or a portion of a pension plan to the new employer of employees subject to a corporate transaction.

¹⁷ This provision applies regardless of whether the plan sponsor chooses to spin-off the plan to the bridge bank.

sponsored by the bridge bank had the right to 50 percent of the excess pension assets.¹⁸ This compromise serves the purpose of avoiding costly litigation to resolve the ambiguities of plan provisions regarding a failed bank's rights to a share of any excess pension assets.

VI. CONCLUSIONS

While the solution enacted by Congress in 1988 may have been a fair resolution to the specific controversies that Congress had before it at the time, it is not an appropriate solution of general applicability. The fact that a bank holding company is the pension plan sponsor of a plan that is primarily for the benefit of employees of the failed bank or banks should not mean that the FDIC, as receiver of the failed bank or banks, has less than an equitable right to the entire amount of overfunding in the pension plan. Accordingly, the provision should be amended to require an equitable allocation¹⁹ of 100 percent of the excess assets of a pension plan whenever a bridge bank receives assets and liabilities of an insured bank closed by regulators. There is no compelling policy reason to override an equitable allocation of surplus pension

¹⁸ Although the statute literally describes a transfer of 50 percent of the total excess assets, the Conference agreement specifies that the Senate amendment (requiring an equitable allocation of the excess pension assets in the case of a spin-off involving a bridge bank) only applies with respect to 50 percent of the excess assets. See H.R. Conf. Rep. No. 1104, 100th Cong., 2d Session, II-166.

¹⁹ While the definition of an equitable allocation of the excess pension assets may be subject to debate, the formulas for allocating excess pension assets generally applicable in section 414(l)(2) are an appropriate starting basis. Under these formulas for example, if the excess of the full funding liability over the plan termination liability for the employees transferred to the bridge bank represents 80 percent of the excess of the full funding liability over termination liability for the plan as a whole, then the bridge bank would be entitled to assets equal to the termination liability for the transferred employees, plus 80 percent of the plan assets in excess of the termination liability. It should be noted, however, that to the extent that the pension plan is overfunded on an ongoing basis (there are assets in excess of the full funding liability), a different allocation basis may be appropriate for the assets in excess of the full funding liability.

assets²⁰ by arbitrarily mandating that 50 percent of the excess pension assets are under the control of the bank holding company.²¹

In addition, it should be noted that the existing provisions relating to the mandatory allocation of surplus pension assets do not contain an effective enforcement mechanism to ensure that the pension plan sponsored by the bridge bank in fact receives 50 percent of the excess pension assets.²² Thus, consideration should be given to providing the FDIC or the bridge bank with a right of action to ensure that a bank holding company executes the mandatory transfer of surplus pension assets.

²⁰ One potential concern in expanding the mandatory equitable allocation of the surplus pension assets is that a bank holding company which is potentially subject to this rule (the bank holding company that sponsors an overfunded defined benefit plan covering employees of a subsidiary bank in danger of failing) may feel compelled to terminate the plan and recapture the surplus prior to the failure of the subsidiary bank rather than risking the loss of control of the disposition of the excess assets under section 414(f)(2)(G). However, the potential gain from this action would be limited by the 50 percent excise tax that would be imposed on the amount of the reversion, the corporate income tax that the sponsor would have to pay, and the cost of the termination (including the cost of vesting all the employees). Furthermore, a sponsor that attempts to terminate the plan for this purpose in contemplation of the insolvency of the subsidiary bank will be hampered by the 60-day notice requirement for plan terminations and the likelihood of litigation with the FDIC under 12 U.S.C. §91 or similar state statute.

²¹ This is especially true to the extent that all of the members of the controlled group are jointly and severally responsible for complying with minimum funding requirements under section 412(c)(11) of the Code.

²² The current provision is a condition of tax-qualification. Thus, the sanction for failure to act is a loss of the special tax treatment accorded a qualified plan. Among other effects, this imposes a tax burden on the employees who participate in the plan. See footnote 10 above.

Doc 92 342

**Report to The Congress on
The Tax Treatment of
Deferred Compensation Under Section 457**



**Department of the Treasury
January 1992**



DEPARTMENT OF THE TREASURY
WASHINGTON

92 - 347

ASSISTANT SECRETARY

January 1992

The Honorable Dan Rostenkowski
Chairman
Committee on Ways and Means
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

Section 6064(d)(4) of Public Law 100-647, the Technical and Miscellaneous Revenue Act of 1988, provides that the Secretary of the Treasury or his delegate shall conduct a study of the tax treatment of deferred compensation paid by State and local governments and tax-exempt organizations.

Pursuant to that directive, I hereby submit the "Report to The Congress on the Tax Treatment of Deferred Compensation Under Section 457."

I am sending a similar letter to Representative Bill Archer.

Sincerely,

Kenneth W. Gideon
Assistant Secretary
(Tax Policy)

Enclosure



ASSISTANT SECRETARY

DEPARTMENT OF THE TREASURY
WASHINGTON

January 1992

92 - 342

The Honorable Lloyd Bentsen
Chairman
Committee on Finance
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

Section 6064(d)(4) of Public Law 100-647, the Technical and Miscellaneous Revenue Act of 1988, provides that the Secretary of the Treasury or his delegate shall conduct a study of the tax treatment of deferred compensation paid by State and local governments and tax-exempt organizations.

Pursuant to that directive, I hereby submit the "Report to The Congress on the Tax Treatment of Deferred Compensation Under Section 457."

I am sending a similar letter to Senator Bob Packwood.

Sincerely,

A handwritten signature in cursive script that reads "Kenneth W. Gideon".

Kenneth W. Gideon
Assistant Secretary
(Tax Policy)

Enclosure

Section 457¹ governs the tax treatment of unfunded deferred compensation provided by a State or local government or a tax-exempt organization. The Technical and Miscellaneous Revenue Act of 1988 (TAMRA) directed the Treasury Department to study the tax treatment of deferred compensation arrangements under section 457.² During the deliberations under TAMRA, amendments were proposed that would have repealed the application of section 457 to tax-exempt organizations and retained the provision only for governmental employers. Although TAMRA ultimately did not include such an amendment, concerns arose that section 457 may unduly restrict tax-exempt employers. This study examines the appropriateness of limiting the deferred compensation of tax-exempt and governmental employers through the application of section 457. Because the proposals considered under TAMRA primarily concerned tax-exempt employers, this study particularly focuses on the application of section 457 to tax-exempt employers other than State or local governments.

II. BACKGROUND

Under section 457, amounts in an "eligible deferred compensation plan" of a State or local government or a tax-exempt organization are not includable in income for Federal tax purposes until paid or otherwise made available to the individual.³ If a plan does not meet the statutory definition of an eligible plan, however, the amounts held are not deferred for tax purposes and instead are taxable to the individual in the year that the amounts are no longer subject to a substantial risk of forfeiture. For purposes of section 457, an amount is subject to a substantial risk of forfeiture if payment is conditioned upon the performance of future services.

¹ Unless otherwise specified, all statutory references are to the Internal Revenue Code of 1986, as amended (the Code).

² P.L. 100-647, section 6064(d)(4).

³ Section 457 applies to deferred compensation provided to both employees and independent contractors, excluding certain nonelective arrangements covering independent contractors. See § 457(e)(12).

Thus, once an individual has performed all services necessary to receive payment at any point in the future, the amount of the deferral is taxed currently.

Section 457 limits an eligible deferred compensation plan to deferrals⁴ that are made prior to the beginning of the month in which the individual earns such compensation and that do not exceed the lesser of \$7,500 or 33-1/3 percent of the individual's compensation per year.⁵ In addition, an eligible deferred compensation plan must be an unfunded plan in which all amounts remain subject to the creditors of the employer. The amounts held under an eligible deferred compensation plan must not be distributed earlier than upon separation from service, attainment of age 70-1/2, or an "unforeseeable emergency," but they must begin no later than as required by the minimum distribution rules applicable to tax-qualified plans.⁶

Section 457 does not apply to a plan of deferred compensation that is described under sections 401(a) and 403(b) (tax-qualified plans) or under section 402(b) (non-exempt trusts), or to any transfer subject to section 83 (property transferred for performance of services). Certain grandfathered plans⁷ as well as plans that provide bona fide vacation, sick leave, severance, disability, or other similar benefits also are not subject to section 457. Additionally, section 457 does not apply to the plan of a church or church-controlled organization, as defined under section 3121(w)(3).

⁴ For this purpose, "deferrals" include both elective and nonelective deferred compensation.

⁵ Under a special catch-up rule, the plan may provide for an increase in the applicable limit (up to \$15,000) for one or more of the last 3 years preceding normal retirement age. See § 457(b)(3).

⁶ Section 401(a)(9) requires that a participant must begin distributions from a plan under section 457 generally no later than the attainment of age 70-1/2.

⁷ For example, section 1107(c)(3) of the Tax Reform Act of 1986 excludes from section 457 any deferral arrangement of a tax-exempt organization that was in writing on August 16, 1986, and provides a fixed formula or amount to be deferred for each year. Any modification to the formula or amount under the plan will cause the plan to come within section 457. Certain deferred compensation plans for state judges are also excluded from section 457. See § 252 of the Tax Equity and Fiscal Responsibility Act of 1982.

In contrast to tax-qualified plans, a plan under section 457 is not subject to nondiscrimination requirements as to the group of employees covered under the plan or the relative amounts of deferred compensation provided to highly compensated employees⁸ over non-highly compensated employees.⁹ With the exception of certain distribution timing requirements,¹⁰ other tax-qualified plan rules do not apply under section 457, including the section 415 limitations on aggregate contributions or benefits.

Section 457 generally is not excluded, however, from the requirements of Title I of the Employee Retirement Income Security Act of 1974 (ERISA). In particular, all plans that are subject to Title I of ERISA¹¹ must meet certain funding requirements, unless the plan is an "excess" plan that is designed to provide benefits above the qualified plan limits, or the plan is a "top hat" plan that covers only a select group of management or highly compensated employees.¹² As a result of the ERISA funding rules, a tax-exempt employer generally cannot provide an eligible section 457 plan (which must be unfunded) to employees other than those in the "top hat" group.

III. DISCUSSION

Legislative History

Section 457 originally was added to the Code by the Revenue Act of 1978 (the 1978 Act) to cover the deferred compensation plans of State or local governments. As indicated in the

⁸ "Highly compensated employee" is defined under section 414(q).

⁹ See §§ 410(b) (nondiscriminatory coverage) and 401(a)(4) (nondiscriminatory benefits).

¹⁰ Section 401(a)(9) requires that a participant must begin distributions from a plan under section 457 generally no later than the attainment of age 70-1/2.

¹¹ Section 4(b) of ERISA excludes governmental plans, church plans, and certain other types of plans from Title I.

¹² ERISA sections 301(a)(3) and (a)(9).

legislative history to the 1978 Act,¹³ section 457 imposed limitations on State or local governments because, unlike private, taxable employers, a State or local government otherwise would not be restrained from providing excessive deferred compensation.¹⁴ A taxable employer may prefer to pay current compensation over deferred compensation in order to avoid the deferral of its deduction. An employee, however, may prefer to receive compensation in future years in order to defer taxation. If, for example, a taxable employer provided a dollar of deferred compensation to an employee, the employer's deduction for that dollar also would be deferred until the tax year that the employee included the dollar in income.¹⁵ This "tax tension" between the deferral desired by employees and the current deduction desired by the employer was viewed by Congress as an inherent limitation on the amount of deferred compensation that a taxable employer would be willing to provide.

In contrast, State or local governments or tax-exempt organizations do not have a tax incentive to pay current compensation over deferred compensation. For these employers there is a greater incentive to defer compensation because such payments are taxable when paid to the employee but not taxable when held by the employer. As a result of their tax status, these employers would be able to offer savings opportunities similar to a tax-qualified plan,¹⁶ albeit through an unfunded arrangement, in which deferrals are held tax free until they are received by the employee. Moreover, this tax savings would be achieved without the attendant nondiscrimination rules and other limitations that are applicable to tax-qualified plans. Thus, the restrictions under section 457 were intended to preclude employers from providing these tax advantages on an unlimited basis.

¹³ H. R. Rep. No. 1445, 95th Cong., 2d Sess. 53; see also S. Rep. No. 1263, 95th Cong., 2d Sess. 65; Joint Committee on Taxation, General Explanation of the Revenue Act of 1978 68 (March 12, 1979).

¹⁴ For purposes of this study, "deferred compensation" or "deferred compensation plan" refers to an unfunded arrangement to provide deferred compensation to an employee or an independent contractor.

¹⁵ See § 404(a)(5) and Temp. Reg. § 1.404(b)-1T.

¹⁶ In a tax-qualified plan, plan assets are held in a tax-exempt trust and are not taxable until received by the participant.

Prior to the Tax Reform Act of 1986 (the 1986 Act), section 457 applied only to the plans of State or local governments and the deferred compensation plans of nongovernmental, tax-exempt organizations were not explicitly governed by any statutory provision in the Code.¹⁷ In the 1986 Act, however, Congress amended section 457 to cover the deferred compensation arrangements of all tax-exempt organizations,¹⁸ in addition to State or local governments. As indicated in the legislative history,¹⁹ the basis for limiting the deferred compensation of State or local governments applies equally to all tax-exempt organizations for which there is no tax incentive to otherwise limit deferred compensation. Thus, Congress viewed the limitations under section 457 as appropriate for nongovernmental, tax-exempt employers, as well.

Given that there previously had been no explicit statutory limitation on the deferred compensation of tax-exempt organizations, the extension of section 457 in the 1986 Act was significant. Congress subsequently revisited section 457 in TAMRA, and proposals were made at that time to reverse the change in the law under the 1986 Act and repeal the statute as to tax-exempt employers.²⁰ Although the efforts to undo the 1986 Act amendment were not successful in TAMRA, Congress indicated that further consideration of section 457 was merited and directed this study by the Department of the Treasury.

Policies for Applying Section 457 to Tax-Exempt Employers

The deliberations under TAMRA indicated a significant level of concern as to the appropriateness of applying section 457 to tax-exempt employers. Critics of section 457 have maintained that repeal is appropriate for tax-exempt employers because the tax tension theory underlying section 457 is illusory. Under this view, section 457 creates an undesirable

¹⁷ Proposed regulations had been issued, however, that would have treated any deferral of compensation made at the "taxpayer's individual option" as received in the year that the amount otherwise would have been payable, absent the election. See Prop. Reg. § 1.61-16.

¹⁸ Church plans, however, are excluded under section 457(e)(13).

¹⁹ H. R. Rep. No. 426, 99th Cong., 1st Sess. 700; Joint Committee on Taxation, General Explanation of the Tax Reform Act of 1986 654 (May 4, 1987).

²⁰ See § 350 of H.R. 4333, as passed by the House of Representatives.

distinction, with respect to deferred compensation, solely on the basis of the employer's tax status. Proponents of this view argue further that the lack of explicit limits on the deferred compensation provided by taxable employers allows these employers to offer deferred compensation programs that have a greater value than those offered by a State or local government or a tax-exempt employer. Accordingly, the section 457 limits are viewed as creating a competitive disadvantage to these employers, particularly to tax-exempt employers that compete with taxable employers for the same pool of employees.

Section 457 also has been criticized on the theory that other factors would limit deferred compensation, particularly in the case of a tax-exempt employer, and that the rules in section 457 are unnecessary. Under this view, because tax-exempt employers generally provide deferred compensation only to the level necessary to match the benefits provided by taxable employers, tax-exempt employers would limit their deferred compensation without regard to the lack of tax tension. In addition, others have argued that the structure of typical tax-exempt employers serves as an effective restriction because the boards of directors of tax-exempt employers generally are reluctant to offer excessive compensation packages to employees. Or, in the case of charitable organizations, it is argued that excessive deferred compensation is unlikely given the greater scrutiny of organizations that rely upon contributions from the public.

Although there may be restraints on particular tax-exempt employers that would serve as some limit on their deferred compensation, no limitation cited by the critics would apply equally to all tax-exempt employers. There may be, for example, individual plans that do not meet the requirements of section 457 and that do not appear abusive, per se. Critics of section 457 might argue that such is the case where a tax-exempt employer designs a plan that exceeds the limits provided under section 457 but that is intended solely to match the benefits provided by a taxable employer. In these circumstances, critics would argue that section 457 is inappropriate because the tax-exempt employer already is subjecting the deferred compensation to certain limits, i.e., the level of benefits provided by the taxable employer. Such limitations, however, are idiosyncratic to particular tax-exempt employers and do not consistently apply across the spectrum of all tax-exempt employers.

Current law provides tax-exempt employers with a broad range of compensation options, including the delivery of benefits through tax-qualified plans. Without the limits under section 457, tax-exempt employers, unlike a taxable employer, would have less incentive to maintain tax-qualified plans. A taxable employer has an incentive to utilize tax-qualified plans because of the tax benefits provided with respect to such plans. In a qualified plan, employees can maximize their deferral of compensation while the employer can preserve its current deduction for compensation. In addition, the earnings in the trust for the tax-qualified plan are not currently taxable and are deferred until distribution to the participants. A tax-exempt employer, however, is indifferent both to the timing of deductions and to the taxation of earnings on the deferrals. Accordingly, no tax benefit inures to a tax-exempt employer for maintaining a tax-qualified plan.

Absent section 457, employees of a tax-exempt employer could achieve unlimited deferrals and the employer would be unaffected by either the change in timing of the compensation payment or the accumulation of the earnings on the deferrals. Because section 457 limits deferred compensation, it creates an incentive for a tax-exempt employer that desires to provide deferred compensation to deliver more benefits through a tax-qualified plan.²¹ This result is commensurate with broader pension policy because tax-qualified plans are designed to ensure both broad coverage of employees and benefits that do not discriminate in favor of the highly compensated employees. By contrast, deferred compensation plans under section 457 are not subject to nondiscrimination requirements and, as noted above, inherently favor highly compensated employees in tax-exempt organizations because of the ERISA funding conflict.

Under current law, however, certain tax-exempt employers are effectively precluded from offering plans to their employees that include a salary reduction feature. Section 401(k) explicitly precludes both governmental and tax-exempt employers from maintaining a qualified cash or deferred arrangement,²² and the ERISA funding requirement also precludes tax-exempt

²¹ Participants in an "excess" plan that provides benefits above the levels of a qualified plan will nevertheless be limited by section 457.

²² See § 401(k)(4).

employers from maintaining a broad-based salary reduction feature under section 457. Certain tax-exempt employers, such as public schools and charitable organizations under section 501(c)(3), generally can provide a salary reduction annuity plan under section 403(b),²³ but tax-exempt employers that are not described in section 501(c)(3) have no such option under current law.

Review of Empirical Data on Section 457

In the legislative history to TAMRA, Congress directed the Department of the Treasury to review the deferred compensation provided under section 457 in comparison with the deferred compensation provided by private, taxable employers. Specifically, Congress requested that this study compare both the amounts of deferred compensation provided and the levels of coverage of highly compensated employees versus non-highly compensated employees in each type of plan.²⁴

Such comparisons necessarily are limited, however, by the lack of reliable data on the deferred compensation plans maintained under section 457. The absence of data occurs primarily because there is no established reporting mechanism for these plans. Deferred compensation is not subject to a reporting requirement with the Internal Revenue Service or the Department of Labor.²⁵ In addition, governmental and tax-exempt employers are not subject to other reporting requirements, such as filings with the Securities and Exchange Commission, from which information is often obtained with regard to taxable employers.²⁶ Other sources of reliable information also have not proven useful for purposes of section 457. For example, the Census Population Survey, Employee Benefit Supplement does not include data from which coverage

²³ Section 403(b) provides for certain tax-deferred annuities. Elective contributions generally may be made under a section 403(b) plan in amounts up to \$9,500 annually. See § 402(g)(4).

²⁴ H. R. Rep. No. 795, 100th Cong., 2d Sess. 551.

²⁵ In contrast, section 6058(a) and ERISA section 101(b)(4) require that a tax-qualified plan or any funded plan file annual reports.

²⁶ Employers that are subject to the reporting requirements of the Securities and Exchange Commission would disclose significant deferred compensation arrangements on their annual reports (Form 10-K), for example.

under a section 457 plan could be definitely determined. Similarly, such data is not included in the Statistics of Income of Tax-Exempt Organizations that is maintained by the Internal Revenue Service. As a result, there is no reliable data base from which to extrapolate information as to the aggregate amounts of deferred compensation provided under section 457.

With regard to the coverage of employees under section 457, the limited data that is available focuses almost exclusively upon plans maintained by governmental employers. In addition, this data typically does not differentiate between benefits provided under section 457 and benefits provided through other plans, such as tax-qualified plans.²⁷ With regard to governmental employers, there is anecdotal evidence suggesting that plans under section 457 provide significant levels of coverage to non-highly compensated employees.²⁸ Such results would not be unexpected, given that governmental employers are not precluded by the ERISA funding requirements from offering broad-based coverage under section 457.

In contrast to the governmental employers, if data were available for tax-exempt employers, it would not likely indicate that a large percentage of the employees of tax-exempt organizations are participating in deferred compensation plans subject to section 457. As stated above, unfunded plans under section 457 generally are restricted by ERISA to excess plans or plans that cover only a "top hat" group of employees. However, because this ERISA limitation applies equally to unfunded plans of taxable and tax-exempt employers, at least a rough parity should exist between the relative number of employees who receive deferred compensation in a taxable employer and the employees who are covered under a section 457 plan in a tax-exempt employer.

²⁷ For example, the Bureau of Labor Statistics recently issued statistics on the retirement benefits provided to certain employees of State and local governments. This information does not identify those benefits that are provided pursuant to section 457. See News Release, Bureau of Labor Statistics, Department of Labor, October 31, 1991.

²⁸ See, e.g., National Association of Government Deferred Compensation Administrators and Council of State Governments, 1989 Survey of 457 Plans (1990), p. 8 (indicating that no surveyed plans imposed minimum age or salary requirements for employees to participate in plans under section 457) and Data on State and local government deferred compensation plans, submitted by Nationwide Life Insurance Company and Public Employees Benefit Service Corp. (November 19, 1991).

IV. CONCLUSION

Section 457 appropriately limits the deferred compensation of State or local governments and tax-exempt organizations. Without such a statutory provision, there would be no tax incentive for these employers to limit the deferred compensation offered to their employees. In contrast, such limitations are not necessary for private, taxable employers because the tax tension between the employers' preference for a current deduction and the employees' incentive for deferral will provide inherent restraints on the amount of deferred compensation that is provided. Moreover, to the extent that section 457 limits deferred compensation, it creates a greater incentive for tax-exempt employers to provide tax-qualified plans.

Under current law, however, certain tax-exempt organizations that are subject to section 457 are effectively precluded from offering section 401(k) salary reduction plans that generally are available in the private sector. The extension of section 401(k) plans would not offend the general policy concerns described in the prior paragraph because section 401(k) requires a broad base of employee participation and because a per-participant cap (\$8,475 currently) is imposed in addition to nondiscrimination rules. Accordingly, the Department of the Treasury has supported legislation to extend section 401(k) plans to tax-exempt organizations if appropriate revenue offsets are provided.²⁹ Given the options that are available currently to State and local governments that wish to offer broad-based salary reduction plans, the Department of the Treasury gives priority to providing such plans to nongovernmental, tax-exempt organizations.

²⁹ See, e.g., Testimony of Kenneth W. Gideon, Assistant Secretary (Tax Policy), Department of the Treasury, before the Subcommittee on Select Revenue Measures, Committee on Ways and Means, United States House of Representatives, February 21, 1990; Testimony of Kenneth W. Gideon, Assistant Secretary (Tax Policy), Department of the Treasury, before the Subcommittee on Select Revenue Measures, Committee on Ways and Means, United States House of Representatives, July 25, 1991; and Testimony of Kenneth W. Gideon, Assistant Secretary (Tax Policy), Department of the Treasury, before the Subcommittee on Taxation, Committee on Finance, United State Senate, September 10, 1991. In addition, proposals to extend section 401(k) were contained in the POWER pension simplification proposal announced on April 30, 1991, by Secretary of Labor Martin.



ASSISTANT SECRETARY

DEPARTMENT OF THE TREASURY
WASHINGTON

January 7, 1992

Doc 92-340

The Honorable Dan Rostenkowski
Chairman
Committee on Ways and Means
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

Section 6305 of the Technical and Miscellaneous Revenue Act of 1988 (TAMRA), relating to the treatment of certain family services providers, requires the Secretary of the Treasury to prepare a report on the tax status of day care providers funded through specified federal programs. The following report covers compliance by the 88 Ohio counties in issuing information returns.

Section 6305 states that a State or political subdivision may treat a person who provides dependent care or similar services as other than an employee for employment tax purposes if all of the following conditions are met:

- (i) the person does not provide any dependent care or similar services in any facility owned or operated by the State;
- (ii) the person is compensated by the State for such services, directly or indirectly, out of funds provided pursuant to chapter 7 of title 42 of the United State Code, or the provisions and amendments made by the Family Security Act of 1988;
- (iii) the State does not treat the person, with respect to the provision of dependent care or similar services, as an employee for employment tax purposes;
- (iv) the State files all Federal income tax returns (including information returns) required to be filed with respect to such person on a basis consistent with the State's treatment of such person as other than an employee beginning on the date of the enactment of this section; and
- (v) no more than ten percent of the State's employees are provided with insurance under title II of the Social Security Act pursuant to voluntary agreements with the Secretary of Health and Human Services under section 218 of such title.

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The Federal Government funds described in (ii) above, are provided to states for a variety of programs. The states in turn allocate the funds to the counties, who contract with service providers. Certain requirements made by the state of Ohio, such as training and evaluation of the service providers by the county, caused the counties to be considered as employers by the Internal Revenue Service. Until it expired in 1990, section 6305 enabled the Ohio counties to treat service providers as other than employees for tax employment purposes, relieving them of the cost associated with treating the providers as employees of the county.

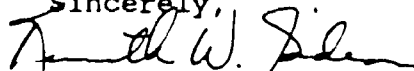
To enable the Internal Revenue Service (IRS) to provide the information requested by the Congress, a questionnaire designed to measure compliance by Ohio counties in furnishing required Form 1099 MISC information returns was developed by the IRS with the assistance of the Ohio County Human Services Directors Association. This questionnaire was distributed to, and completed by, the Ohio County Human Service Agencies. The questionnaire asked for the number of providers and total dollar amount paid to those in-home day care providers funded as described in (ii) above. Each county also supplied a sample of service providers' social security numbers and the county's Employer Identification Number, which were used for matching against an IRS data base to verify the self-reports.

The results of this study show 86 of the 88 counties issued information returns (Form 1099 MISC) to the appropriate service providers as specified in (iv) above. Two counties reported that they did not issue Form 1099s to service providers funded under chapter 7 of title 42. These two counties account for less than 1 percent of the total expenditures in each of the study years. The IRS has provided information to these two counties to educate them about filing requirements.

Although the compliance of the service providers in reporting the income earned may also be of interest, the likelihood of significant tax loss due to potential non-compliance is remote because the individuals typically earn low wages. Given the cost and difficulty involved in attempting to determine their precise level of compliance, this issue was not pursued for this report.

I trust this information is helpful to the Committee. I am sending a similar letter to Representative Bill Archer.

Sincerely,



Kenneth W. Gideon
Assistant Secretary
(Tax Policy)



PUBLIC DEBT NEWS



Department of the Treasury • Bureau of the Public Debt • Washington, DC 20239

FOR IMMEDIATE RELEASE
January 8, 1992

CONTACT: Office of Financing
202-219-3350

RESULTS OF TREASURY'S AUCTION OF 7-YEAR NOTES

Tenders for \$9,507 million of 7-year notes, Series E-1999, to be issued January 15, 1992 and to mature January 15, 1999 were accepted today (CUSIP: 912827D74).

The interest rate on the notes will be 6 3/8%. The range of accepted bids and corresponding prices are as follows:

	<u>Yield</u>	<u>Price</u>
Low	6.38%	99.972
High	6.41%	99.805
Average	6.40%	99.861

\$10,000 was accepted at lower yields.
Tenders at the high yield were allotted 77%.

TENDERS RECEIVED AND ACCEPTED (in thousands)

<u>Location</u>	<u>Received</u>	<u>Accepted</u>
Boston	20,505	20,405
New York	16,992,145	9,032,725
Philadelphia	6,359	6,359
Cleveland	19,312	19,292
Richmond	139,060	136,530
Atlanta	22,430	22,430
Chicago	695,661	188,811
St. Louis	15,556	11,556
Minneapolis	8,728	8,713
Kansas City	26,953	26,953
Dallas	8,718	8,718
San Francisco	354,873	19,873
Treasury	4,340	4,340
TOTALS	\$18,314,640	\$9,506,705

The \$9,507 million of accepted tenders includes \$772 million of noncompetitive tenders and \$8,735 million of competitive tenders from the public.

In addition, \$588 million of tenders was awarded at the average price to Federal Reserve Banks as agents for foreign and international monetary authorities. An additional \$451 million of tenders was also accepted at the average price from Federal Reserve Banks for their own account in exchange for maturing securities.

**Statement by
President Bush and Prime Minister Miyasawa
on A Strategy for World Growth**

President Bush and Prime Minister Miyasawa today announced A Strategy for World Growth designed to strengthen the world economy.

The President and Prime Minister expressed concern that growth of the world economy in 1991 slowed to the lowest level in nearly a decade. They recognized that the outlook for growth of the world economy this year is weaker than previously expected. This situation could adversely affect the prospects for income and jobs, undermine the efforts of newly emerging democracies and the developing countries to implement sound market-oriented economic reforms, and raises the spectre of renewed protectionism.

The United States and Japan are the two largest countries in the world economy, together accounting for nearly 40 percent of total global production and more than 20 percent of world trade. The President and Prime Minister, aware of a special responsibility placed on their countries by their position, recognize that each country needs to pursue responsible economic policies that strengthen the international economy and global trading system. They have decided to undertake domestic policies to improve growth prospects, as a part of a cooperative effort which contributes to the attainment of sustainable growth with price stability and the promotion of global economic recovery.

Prime Minister Miyasawa, with these considerations in mind, stated that the Government of Japan will submit to the Diet the fiscal 1992 budget and the Fiscal Investment and Loan Program aimed at strengthening domestic demand by increased public investment through the central government and local governments, and contributing to the world through its official development assistance (ODA) and other measures, despite tight fiscal conditions. Prime Minister Miyasawa stated that the Government of Japan will monitor the progress of the above measures so as to assure that the expected effects are realized. The recent decision by the Bank of Japan to reduce interest rates is also intended to maintain sustainable growth with price stability.

Toward the same end, President Bush also stated that he would be submitting to the Congress a comprehensive program to strengthen U.S. growth and competitiveness. The details of the program will be contained in the President's State of the Union message and his budget proposals for fiscal 1993 to be announced later this month. The President noted that the recent reduction in interest rates reflected the determination by the Federal Reserve to facilitate U.S. economic recovery and growth. The President also reaffirmed his commitment to achieve a substantial reduction of the U.S. budget deficit over the medium term.

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The President and Prime Minister reviewed developments in financial markets and agreed that recent exchange rate movements were consistent with current economic developments. They expressed confidence that the above measures and developments will contribute to correction of external imbalances.

President Bush and Prime Minister Miyazawa expressed their continued support for ongoing economic policy coordination among G-7 countries as essential for achieving their common objectives as expressed in this statement. They stressed the importance of continued cooperative efforts and called on other industrial countries to join with them.

THE WHITE HOUSE

Office of the Press Secretary
(Tokyo, Japan)

For Immediate Release

January 8, 1992

FACT SHEET: THE JAPANESE ECONOMY IN 1991 AND THE FY 1992 BUDGET

Domestic Economy

o The Japanese economy grew 2.0% (Quarter/Quarter) in the first quarter 1991, 0.7% in the second quarter, and 0.4% in the third quarter.

o Industrial production, not seasonally adjusted (N.S.A.), in Japan in November was down 0.6% from the prior November. New housing starts (N.S.A.) in November were down 19.4% from a year ago.

o Japan's current account surplus is increasing in FY 1991 to approximately \$73 billion from \$34 billion in FY 1990, as officially forecast by Japan. The official Japanese forecast for FY 1992 is for a small decline.

o Inflation in Japan (seasonally adjusted) fell to 3.1% in November (Year/Year) from a peak of 4.0% in January 1991.

GOJ Budget

o The proposed General Account Budget of the Central Government of Japan calls for spending outlays in FY 1992 of 72,218 billion yen, an increase of 2.7% over FY 1991. Operating outlays, which excludes debt service expenses, grants to local governments, and investments financed by sales of government-held NTT shares, will total 38,699 billion yen, an increase of 4.5%.

o Spending on public investment financed from the General Account will total 6,941 billion yen, an increase of 5.3%.

o The Cabinet also has approved a budget for the "off-budget" Fiscal Investment Loan Program (FILP) totaling 40,802 billion yen, an increase of 10.9% over FY 1991.

o Of this total, 5,224 billion yen will be targeted to public works implementing institutions, an increase of 10.8%. Excluding FILP funds set aside for pension fund management purposes, FILP money available for lending and investment purposes will increase 10.8% to 32,262 billion yen.

[Note: Based on official Japanese Government data.]

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THE WHITE HOUSE

Office of the Press Secretary
(Tokyo, Japan)

For Immediate Release

January 8, 1992

FACT SHEET: A STRATEGY FOR WORLD GROWTH

Concept: The Strategy

The strategy is an important declaration of the respective commitments of Japan and the United States to economic growth. The strategy recognizes that economic growth is the number one issue facing the world economy, and therefore is intended as a cooperative policy response to strengthen world economic growth. The effectiveness of the strategy would be enhanced by expanding it to include other countries, and we have initiated discussions with other G-7 members to obtain their views on how it could be broadened.

Economic Outlook

Growth in the G-7 countries slowed to 1.1% in 1991 from 2.6% in 1990. It is projected to recover to 2.0% in 1992.

Inflation in the G-7 declined to 4.4% last year from 4.8% in 1990. It is projected to fall to 3.7% in 1992.

The Government of Japan officially forecasts Japan's rate of economic growth at 3.5% in FY 1992 (starting April 1). This is based on a 3.6% increase in domestic demand and a 0.1% decline for net foreign demand. Inflation is forecast to decline to 2.3% in FY 1992 from 2.9%.

Major Elements of the Strategy

o The strategy recognizes the special responsibilities of both Japan and the United States to pursue policies that strengthen the international economy and global trading system.

o The strategy expresses a joint commitment to economic growth and to undertake cooperative domestic policies to improve growth.

o The strategy could be broadened to include other countries prepared to support measures to increase growth.

o The strategy sets forth specific fiscal and monetary measures to support growth.

o Japan will submit to the Diet a budget to increase domestic demand as a means of achieving 3.5% growth and a decline in the external surplus in FY 1992. The Japanese Government will monitor progress of these measures so as to assure that the expected effects are realized.

Office of the Press Secretary
(Tokyo, Japan)

For Immediate Release

January 8, 1992

PRESS BRIEFING
BY
SECRETARY OF TREASURY NICHOLAS BRADY

Okura Hotel
Tokyo, Japan

5:17 P.M. (L)

SECRETARY BRADY: President Bush and Prime Minister Miyazawa are announcing today A Strategy for World Growth. This action reflects recognition that the two countries have a special responsibility to pursue domestic policies that will strengthen the world economy.

A year ago, President Bush asked me to meet with European financial leaders concerning the importance of a strong world economy for the benefit of prosperity in industrialized countries, as well as to address the problems and challenges posed by the historic changes taking place in Eastern Europe and the Soviet Union. Clearly, the slowdown in the world economy over the past year and concern about future prospects for a strong recovery have now produced a growing consensus on the need for new measures.

The two largest economies in the world have announced a broad strategy today to improve domestic growth, including a commitment to fiscal measures. The details of the U.S. program to improve will be announced in the President's State of the Union message on January 28th and the Fiscal 1992 budget that will follow shortly thereafter.

Japan is introducing a Fiscal 1992 budget aimed at strengthening domestic demand. This budget proposes significantly higher public investment designed to achieve growth of 3.5 percent and forecasts a decline in the current account surplus which rose rapidly over the last year.

The recent reductions in interest rates in Japan and the United States, which in the U.S. case resulted in the lowest discount rate in more than a quarter of a century, will provide an additional stimulus.

We believe that the domestic economic measures announced today will contribute to a stronger world economy. The United States and Japan are committed to continue cooperative efforts for growth. In addition, we've initiated discussions with other major industrial countries to obtain their views on how the strategy could be broadened.

I'll be glad to take any questions.

Q- Could you explain what the program -- will work?

SECRETARY BRADY: Well, it is reasonably well-outlined

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In the Japanese case, their budget has been announced in the last several days and is aimed at growth in Japan of some 3.5 percent, which it is hoped -- the Japanese authorities hope will provide a leveling-off of their current account surplus.

In addition, you've had, in the last year in the United States, some four cuts in the discount rate, including one percent to 3.5 percent on December 20th. In Japan, you've had two rate cuts during 1991, the last of which just occurred several days ago. So those measures are -- added together, should stimulate the two economies which represent over 40 percent of the world's economic activity.

Q Mr. Secretary, did Japan commit to increase its domestic spending substantially as part of this agreement? And did they commit to strengthen the yen vis-a-vis the dollar, or vis-a-vis the international currency?

SECRETARY BRADY: There was no particular commitment with regard to exchange rates. I think that your statement, as you will see on the second page, indicated that the President and the Prime Minister agreed that recent exchange rate movements were consistent with current economic developments.

Q How then do you expect the recent -- will affect our bilateral trade? Will it help to expand U.S. exports?

SECRETARY BRADY: Well, the recent level of the dollar is one that's been within the range that's existed in the last three or four years, but it has -- the yen has strengthened and the dollar weakened in the last several weeks and month -- not a precipitous change, but one that certainly won't inhibit an export increase by the United States. And if the Japanese economy is expanded, as their budget presented recently expects to occasion, then that should make a difference.

Q Mr. Secretary, a moment ago you were asked what are the contents of the plan. And basically, you outlined a list of things that had already been announced sometime ago on each side, with the one exception of the President's budget. Are you saying that basically they've agreed to do what they were already planning to do?

SECRETARY BRADY: I don't think that's the case. I think that the thing that's significantly different is the President of the United States and the Prime Minister of Japan have put their names to a growth strategy, and I don't think you can say, because it's not particularly accurate, that these things -- all things had been agreed to previously. This is something that -- this particular strategy is not something that was developed in the last half-hour. So I don't agree with the way you've summarized it.

Q What elements are really new?

SECRETARY BRADY: Well, what I just mentioned to you is new. The President of the United States and the Prime Minister of Japan have agreed that both of their two countries are adapting strategies in their own countries which will stimulate their domestic economies and, hopefully, promote exports, stimulate world trade.

- 3 -

would be under consideration, or even seem to be vague on what measures this might take?

SECRETARY BRADY: Well, I'm certainly not going to spell out at this particular moment in time what's coming out in the State of the Union message or the President's budget. But I think you are well aware by some of the newspaper stories in the United States some of the incentives to perhaps housing and increased industrial activity; others initiatives aimed at savings; the fact that has been widely discussed, although not layed out in particular terms, the fact that because of the changes in the Soviet Union, there's room in the defense budget over a period of time to make other significant changes. And those things will be spelled out and they will make a difference.

Q Since there are U.S. officials who predicted that the Japanese surplus will increase as the recovery in the U.S. picks up, how confident are you that if you're stimulating the economy at home, you're going to see trade concessions from Japan that will be offset --

SECRETARY BRADY: I don't want to get into the subject which will be addressed tomorrow as a result of the meetings that are ongoing at this particular moment. But the fact that the Japanese economy, the Japanese authorities have agreed on a program that will strengthen the Japanese domestic demand and, therefore, use up a lot of their industrial output internally, and should suck in outputs from the rest of the world -- and hopefully, that will include the United States -- then that's significant change in our opinion.

Q What happened to the coordination program of the G-7? Did you consult with the other members of the G-7?

SECRETARY BRADY: The other members of the G-7 are being talked to at this particular moment. David Mulford is in Europe at this particular time and has been so for a day.

Q Mr. Secretary, you mentioned there's room in the defense to provide fiscal stimulus that you discussed. But if you take it out of defense to get the stimulus, you're really not doing anything in macroeconomic terms, are you? Aren't you going to have to run a bigger deficit to carry out the fiscal stimulus --

SECRETARY BRADY: No, I don't -- it's certainly not the President's plan to run a bigger deficit. Whatever changes will be made as a result of agreement by Congress and the administration on defense expenditures will be made within the general philosophy of pay as you go. So it is absolutely a cardinal principle of the President's program to stay within the pay-go provisions and keep a cap on the U.S. deficit to the extent that that's possible because of spending and revenue measures.

Q But doesn't that cast doubt then on the fiscal stimulus commitment that the President's making in this statement?

SECRETARY BRADY: Not necessarily, no, because some of these programs are longer-range in the defense area and they certainly could be redirected towards things such as housing and perhaps as been mentioned in ITC -- that kind of thing.

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Q Well, Mr. Secretary, there's some indication that there's been a stalemate. Is that true?

SECRETARY BRADY: I don't think so. No, I think the discussions have been progressing well.

Q Mr. Secretary, the Japanese have always -- at least the monetary authorities -- have always expressed concern that if they allow growth to get too high in this country that real estate prices will start shooting up again and we'll be back to the days of the bubble economy. In your discussions with them, did they express concern about that? And are you totally unconcerned about the possibility that this type of statement wouldn't lead to the sort of circus that we had in the late '80s here with real estate and land prices and stock prices going through the roof?

SECRETARY BRADY: No, I don't think it will. Certainly, the Japanese authorities feel that the real estate situation which was evident in the late '80s is somewhat under control. And part of their budget, as I'm sure you're well aware, removes a prohibition against commercial bank lending to the real estate area. They wouldn't do that unless they felt that the real estate area was sufficiently calm so that that kind of new lending activity would be something that would be within the bounds of normal increase in economic activity.

Q Under this strategy, what are you obliged to do if you do not achieve the goals that presumably the U.S. will set for itself as well as Japan has set for itself?

SECRETARY BRADY: Jim, these things are always a question of having to look at how things progress. That's how these policy coordination measures have worked in the past, and that's how it will work again in this particular point in time.

Certainly, interest rates are at a level which should, not only in the United States but in Japan, but particularly in the United States, engender increased economic activity. However, the important thing to realize is that they are -- the real interest rates in the United States are still at a level which for this part of a recover -- slow recovery, as everybody understands -- still can be considered high.

So I'm, obviously, not predicting because the authorities which govern interest rate activity, both in the United States and Japan, are independent. I'm certainly not predicting that there will be further cuts. But certainly we've seen a substantial decrease in the United States, the last one a cut of one percent -- one, in the case in Japan, just a few days ago. So that I think that there's always a possibility that more can be done there if it needs to be done.

But I would say to you that the Japanese authorities are enormously confident that the budget proposals that they've put forward -- emphasizing domestic spending, taking off some of the prohibitions on lending to the real estate area, and the stimulus that come from a rate cut -- are going to make the economy grow at a level that they think is satisfactory. And that has been estimated

- 5 -

kind of statement out. In spite of the fact that some people may not feel it's new, it looks new to me.

Q Is it correct then that your statement before was suggesting that this is a policy you're going to apply not just to the bilateral Japan-U.S. relationship -- but you said Mr. Mulford's in Europe -- so you expect that within some period of time there's going to be similar strategies with other major, industrial countries?

SECRETARY BRADY: There will be, as there always is at this time of year, a G-7 finance ministers meeting. I think they're aiming around the 25th of January, but I don't know if everybody's travel book can be accommodated on that day. But this is the time of year that we have such a meeting, and one is being planned at this particular time. If not for that date, somewhere around there.

Q This is aimed at reducing the Japanese surplus also? That is a key element?

SECRETARY BRADY: Sure, because if you -- you're talking about trade surplus?

Q Yes.

SECRETARY BRADY: Certainly, because if the Japanese domestic economy grows at 3.5 percent, they will absorb in their own economy some of their industrial output which previously would have going abroad. At the same time, if their economic activity inside Japan is increased to the level of 3.5 percent, obviously that's going to be a growing market here for the United States and other countries as well.

Q Will there be targets or are there targets in the strategy of how much the surplus should be reduced?

SECRETARY BRADY: No. But the Japanese authorities have said that they expect that the program, which has been outlined today and in the last several days, is one that will not increase the Japanese trade surplus this next year. It is not expected to go up to a higher level in 1992 than it was in 1991.

Q Although you haven't been very specific here today with us about the package that the President will recommend in his budget and the State of the Union, was the President more specific about the particulars with Japanese Prime Minister Miyazawa today? And if so, what kind of reaction did he get about the measures that the United States --

SECRETARY BRADY: I'm not sure that Prime Minister Miyazawa is familiar with all of the ins and outs of the reports that have been emanating from the United States in terms of what will be in the state of the Union and the budget, as are the people in this particular room. So that a good deal of what the President told Prime Minister Miyazawa are things that have been discussed in the press and which I've mentioned before -- a stimulus for housing, a

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TREASURY NEWS



Department of the Treasury

Washington, D.C.

Telephone 566-2041

PREPARED FOR DELIVERY
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January 10, 1992

Contact: Anne Kelly Williams
202-566-2041

The Honorable John E. Robson
Deputy Secretary of the Treasury
Remarks to the
California Bankers Association
Santa Barbara, California
January 10, 1992

Thank you, Claude (Hutchison). It is a pleasure to be here to discuss the important economic and financial issues facing California and the nation.

We need to start that discussion by recognizing the hard fact that in California, as in many other regions, the evidence is clear that the economy is too sluggish. We are not satisfied with the current economic situation. And we intend to continue to take action to address it.

I assure you that economic growth and jobs are priority Number One for the Bush Administration.

One economic problem we are addressing, a problem very familiar to you in this room, is the credit crunch. Everyone will agree that there has been a reduction of bank credit available to finance the needs of businesses and consumers -- and that this has adversely affected the economy. There is much less agreement on the causes of the credit restraint. But, whatever the causes, the result is a market in which many people and businesses are unable to borrow, and many bankers are reluctant to lend.

This is cause for deep concern. Economic growth is tied directly to bank lending. Banks are primary engines for growth in this country. And, if they do not lend, we are all injured.

But who gets hurt the most in this situation? I'll tell you who. It's the little guys -- the people who run small and medium-sized businesses who have no place to turn for credit except banks. And potential homebuyers are hurt, too, because homebuilders can't get credit.

Sometimes it's bigger enterprises, like real estate developers forced to liquidate property at distressed prices in distressed markets. All this has a multiplier effect--hurting the economy, jobs, and standards of living for lots of ordinary people.

Who or what is to blame for this problem? I think anyone who analyzes it carefully will conclude that the credit crunch has multiple causes. Yes, some still allege that the sole cause of the credit crunch is the bank examiners. I just don't believe that.

But I do believe that bank supervisory policies and practices have contributed to timidity and a lack of confidence in the lending environment and therefore to the credit crunch. So the leadership of the regulatory agencies, along with Treasury, have tried to make sure that overregulation of financial institutions is not contributing to the lack of credit and dampening economic growth.

Clearly, an environment must exist where banks feel confident and comfortable making loans to worthy borrowers. To accomplish this -- and to create an appropriate balance between the dual responsibilities of advancing economic growth and protecting the public -- the bank regulators have provided comprehensive new guidance to the examiner corps.

These changes and clarifications -- over 30 in number and more than a year in the making -- are the product of all four bank regulatory agencies. The goal is to promote balance and good judgment in bank examinations with straightforward commonsense ideas that simply need equally commonsense application in the field.

What I mean, for example, is that it makes sense for bank examiners to encourage lenders to work with borrowers experiencing temporary problems, not to make it unreasonably difficult to do so. It makes sense for examiners to factor in a time horizon in assessing real estate loans. And it makes sense for examiners not to assume doomsday scenarios. Our troubled economy will turn around, and so will troubled credits. That's common sense and responsible regulation.

Let me say also that these guidelines for examiners are intended to be permanent improvements in the supervisory process. They are not here just for today's problems and gone tomorrow. They are expected to provide sound guidance for examiners in good times and bad.

There also is a new parallel appeals process -- established for bankers who feel they have no objective recourse for treatment they believe to be unfair or not in accordance with the guidelines. Why? Because, while examiner decisions are by and large reasonable, we know it takes very few unreasonable decisions -- only a small number of "horror stories" -- to sap confidence in a fragile lending environment. So we have tried to address these concerns of bankers and borrowers in a way that does not undermine the integrity of the supervisory process.

One thing we promised was stepped-up communications in the bank regulation community. And we have lived up to that promise. In the past year, we have held over 200 meetings nationwide with examiners, bankers, businessmen and members of Congress.

We also called three national meetings of bank examiners to discuss the issues and go over the guidelines. I attended one of those meetings last month in Baltimore -- along with Secretary Brady, Counsel of Economic Advisors Chairman Michael Boskin, and the heads of the four bank and thrift regulatory agencies.

Our message to the bank examiners was that they should carry out their important regulatory responsibilities with balance and judgment, not strict formulas or mathematical models. That is how they can help the credit crunch and contribute to economic growth.

Still, some in Congress say this is the wrong way to go -- calling the new examiners' guidelines the "school of forbearance." They say the guidelines deemphasize current market conditions and are potentially dangerous to sound banking principles.

Well, they are wrong. This is the school of reality, where decisions need to be based on balance, good judgment, and common sense -- not on some misguided mark-everything-to-market approach, but on their experience in the field.

Perhaps former Congressman Wright Patman put it best. Many of you will remember him as a crusty, populist Democrat from Texas who chaired the House Banking and Currency Committee. When he helped christen the new FDIC building in 1963, he said:

"If the...bank examiners are using their influential offices to prevent the banks from taking risks which are prudent in the judgment of bank managers, I hope they will keep in mind that they have a bigger public purpose than protecting the insurance fund from losses, and the banks have a bigger public function than being mere bookkeepers and check collectors for the business system."

Yes, sound banking principles must be encouraged. And they will be. And we will continue our efforts to ensure consistent, balanced, commonsense bank examinations.

But even if we are 100 percent successful in alleviating short-term credit crunch problems, for the long term, banks will not be as strong and effective as they could or should be until the financial institution system is fundamentally reformed.

You know the symptoms. The banking system is hurting, and the pain is being passed on to businesses and consumers alike. Our banks must be current with the needs of the marketplace.

Banks must be strong enough to access the private capital to protect taxpayers and depositors. They must be able to stand toe-to-toe with financial competitors at home and abroad. That's why President Bush introduced legislation early last year to modernize and strengthen the banks and return the financial system to a sound footing.

The California bankers were early supporters of comprehensive reform. You saw what is good for the banking system and the country, and your progressive stance showed a vision that was, unfortunately, shared by very few of your colleagues in the banking community elsewhere in the country.

The Administration's plan called for interstate banking and branching, because diversification can protect well-capitalized banks from localized problems. And with all but two states permitting interstate banking, and technological advances such as ATMs, the issue is no longer whether there should be nationwide banking, but how.

Our reform plan also called for new financial activities and new sources of capital for banks, regulatory reforms, and recapitalization of the Bank Insurance Fund -- clearly the recipe for a better banking system.

But, after nine months of debate, the best Congress could do was adopt narrow, wholly inadequate legislation. In my opinion, Congress blew a momentous opportunity to achieve urgently needed banking system reform -- blew it big.

This new legislation is an anemic substitute for the fundamental reforms necessary to strengthen the system. Banks will not be more competitive, consumers will not be served better, and the system will not have the broader opportunities to get financially stronger over time.

And, while Congress did make capital more central to bank regulation, they created no new means of acquiring that capital. Essentially, the engines for growth must now drive even further without any additional gasoline.

Indeed, the short-sighted Congressional response hangs a bullseye on the pocketbooks of all American taxpayers. If problems persist in the banking industry, and nothing is done to fix the basic structural deficiencies, the ledger will show that Congress had the chance to remedy a potentially expensive national problem -- but it failed.

Fortunately, there is still time to pass the comprehensive reform needed to strengthen the banking industry. But the ball is in Congress' court. They still have our reform proposal. And, as President Bush said last month, "we stand ready, willing, and able to work for comprehensive reform."

So this Administration will continue to take responsible steps to strengthen the banking system, perpetuate economic growth, and create jobs. But we will need support from the Congress, and we will need the continued support of you in the private sector.

You have the ability to help make things happen, and I look forward to working with you in moving toward our common goals of a stronger economy for all Americans.

Thank you.

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**AUCTION
RESULTS**

PUBLIC DEBT NEWS



Department of the Treasury • Bureau of the Public Debt • Washington, DC 20239

FOR IMMEDIATE RELEASE
January 9, 1992

CONTACT: Office of Financing
202-219-3350

RESULTS OF TREASURY'S AUCTION OF 52-WEEK BILLS

Tenders for \$12,526 million of 52-week bills to be issued January 16, 1992 and to mature January 14, 1993 were accepted today (CUSIP: 912794ZZ0).

RANGE OF ACCEPTED COMPETITIVE BIDS:

	<u>Discount Rate</u>	<u>Investment Rate</u>	<u>Price</u>
Low	3.82%	4.00%	96.138
High	3.85%	4.03%	96.107
Average	3.84%	4.02%	96.117

\$90,000 was accepted at lower yields.

Tenders at the high discount rate were allotted 16%.

The investment rate is the equivalent coupon-issue yield.

TENDERS RECEIVED AND ACCEPTED (in thousands)

<u>Location</u>	<u>Received</u>	<u>Accepted</u>
Boston	18,745	18,745
New York	34,866,255	11,545,655
Philadelphia	10,405	10,405
Cleveland	19,495	19,495
Richmond	41,970	41,970
Atlanta	25,260	25,260
Chicago	1,092,510	333,310
St. Louis	17,540	15,540
Minneapolis	8,490	8,490
Kansas City	29,775	29,775
Dallas	13,125	13,125
San Francisco	628,505	115,505
Treasury	348,900	348,900
TOTALS	\$37,120,975	\$12,526,175
Type		
Competitive	\$33,294,080	\$8,699,280
Noncompetitive	696,895	696,895
Subtotal, Public	\$33,990,975	\$9,396,175
Federal Reserve	3,000,000	3,000,000
Foreign Official Institutions	130,000	130,000
TOTALS	\$37,120,975	\$12,526,175

An additional \$300,000 thousand of bills will be issued to foreign official institutions for new cash.

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PUBLIC DEBT NEWS



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FOR IMMEDIATE RELEASE
January 13, 1992

CONTACT: Office of Financing
202-219-3350

RESULTS OF TREASURY'S AUCTION OF 13-WEEK BILLS

Tenders for \$10,225 million of 13-week bills to be issued January 16, 1992 and to mature April 16, 1992 were accepted today (CUSIP: 912794YJ7).

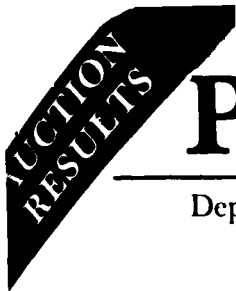
RANGE OF ACCEPTED COMPETITIVE BIDS:

	<u>Discount Rate</u>	<u>Investment Rate</u>	<u>Price</u>
Low	3.82%	3.92%	99.034
High	3.84%	3.94%	99.029
Average	3.83%	3.93%	99.032

Tenders at the high discount rate were allotted 21%.
The investment rate is the equivalent coupon-issue yield.

TENDERS RECEIVED AND ACCEPTED (in thousands)

<u>Location</u>	<u>Received</u>	<u>Accepted</u>
Boston	32,785	32,785
New York	35,475,130	8,929,880
Philadelphia	26,295	26,295
Cleveland	61,710	61,710
Richmond	75,790	47,890
Atlanta	31,325	27,955
Chicago	1,366,315	81,240
St. Louis	13,750	13,750
Minneapolis	13,385	13,385
Kansas City	34,675	34,040
Dallas	24,070	24,070
San Francisco	861,810	83,590
Treasury	848,510	848,510
TOTALS	\$38,865,550	\$10,225,100
Type		
Competitive	\$34,568,065	\$6,127,615
Noncompetitive	<u>1,697,765</u>	<u>1,697,765</u>
Subtotal, Public	\$36,265,830	\$7,825,380
Federal Reserve	2,434,920	2,234,920
Foreign Official Institutions	<u>164,800</u>	<u>164,800</u>
TOTALS	\$38,865,550	\$10,225,100



PUBLIC DEBT NEWS



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FOR IMMEDIATE RELEASE
January 13, 1992

CONTACT: Office of Financing
202-219-3350

RESULTS OF TREASURY'S AUCTION OF 26-WEEK BILLS

Tenders for \$10,276 million of 26-week bills to be issued January 16, 1992 and to mature July 16, 1992 were accepted today (CUSIP: 912794ZD9).

RANGE OF ACCEPTED COMPETITIVE BIDS:

	<u>Discount</u> <u>Rate</u>	<u>Investment</u> <u>Rate</u>	<u>Price</u>
Low	3.87%	4.01%	98.044
High	3.88%	4.02%	98.038
Average	3.87%	4.01%	98.044

Tenders at the high discount rate were allotted 34%.
The investment rate is the equivalent coupon-issue yield.

TENDERS RECEIVED AND ACCEPTED (in thousands)

<u>Location</u>	<u>Received</u>	<u>Accepted</u>
Boston	30,400	30,400
New York	34,682,370	9,272,505
Philadelphia	14,775	14,775
Cleveland	35,815	35,815
Richmond	65,055	41,855
Atlanta	35,930	31,500
Chicago	1,106,965	82,965
St. Louis	16,720	16,720
Minneapolis	10,810	10,810
Kansas City	32,545	32,545
Dallas	20,020	20,020
San Francisco	627,260	64,530
Treasury	<u>621,905</u>	<u>621,905</u>
TOTALS	\$37,300,570	\$10,276,345
Type		
Competitive	\$33,374,055	\$6,549,830
Noncompetitive	<u>1,151,915</u>	<u>1,151,915</u>
Subtotal, Public	\$34,525,970	\$7,701,745
Federal Reserve	2,450,000	2,250,000
Foreign Official		
Institutions	<u>324,600</u>	<u>324,600</u>
TOTALS	\$37,300,570	\$10,276,345

TREASURY NEWS



Department of the Treasury

Washington, D.C.

Telephone 566-2041

FOR IMMEDIATE RELEASE
January 13, 1992

Contact: Anne Kelly Williams
(202) 566-2041

ROBERT R. GLAUBER UNDER SECRETARY FOR FINANCE TO LEAVE TREASURY

Secretary of the Treasury Nicholas F. Brady announced today that Robert R. Glauber, under secretary for finance, will leave the Treasury Department to return to Harvard University to accept a position at the John F. Kennedy School of Government and to resume his consulting practice.

Mr. Glauber has served as under secretary for finance since May, 1989. During his tenure at the Treasury Department, Under Secretary Glauber had a major responsibility for writing the Financial Institutions Reform and Recovery Act of 1989 (FIRREA), the legislation that imposed safety and soundness requirements on the industry as part of a plan to provide funds to resolve bankrupt institutions. Prior to joining Treasury, Mr. Glauber was Executive Director of the Presidential Task Force on Market Mechanisms ("Brady Commission") to study the October 1987 stock market crash. While at Treasury, he oversaw the implementation of the major proposals contained in the 1987 Brady Commission stock market report.

"Bob Glauber has been an invaluable asset to the Treasury team," said Secretary Brady. "His leadership on the FIRREA, banking reform and the Brady Commission recommendations and implementation are a credit to him and are examples of the outstanding job he has done. We will greatly miss his insight, expertise and good humor."

Mr. Glauber was responsible for guiding the development of capital requirements for the government-sponsored enterprises. He was a major author of the department's Modernizing the Financial System, a two-year study which served as the basis for the Treasury's bank reform legislation introduced in 1991, and played a significant role in developing reforms of the Treasury auction process.

Prior to joining the Treasury Department, Mr. Glauber was Chairman of the Advanced Management Program and a member of the finance faculty at the Harvard Business School. Mr. Glauber joined the Harvard faculty in 1964 and became a full professor in 1973.

Mr. Glauber received a bachelor of arts in economics from Harvard College and his doctorate in finance from the Harvard Business School. He is married and has two young children.

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TREASURY NEWS



Department of the Treasury • Washington, D.C. • Telephone 566-2041

FOR RELEASE AT 2:30 P.M.
January 14, 1992

CONTACT: Office of Financing
202/ 219-3350

TREASURY'S WEEKLY BILL OFFERING

The Department of the Treasury, by this public notice, invites tenders for two series of Treasury bills totaling approximately \$20,400 million, to be issued January 23, 1992. This offering will result in a paydown for the Treasury of about \$1,200 million, as the maturing bills are outstanding in the amount of \$21,602 million. Tenders will be received at Federal Reserve Banks and Branches and at the Bureau of the Public Debt, Washington, D. C. 20239-1500, Tuesday, January 21, 1992, prior to 12:00 noon for noncompetitive tenders and prior to 1:00 p.m., Eastern Standard time, for competitive tenders. The two series offered are as follows:

91-day bills (to maturity date) for approximately \$10,200 million, representing an additional amount of bills dated May 24, 1991, and to mature April 23, 1992 (CUSIP No. 912794 YK 4), currently outstanding in the amount of \$26,682 million, the additional and original bills to be freely interchangeable.

182-day bills for approximately \$ 10,200 million, to be dated January 23, 1992, and to mature July 23, 1992 (CUSIP No. 912794 ZE 7).

The bills will be issued on a discount basis under competitive and noncompetitive bidding, and at maturity their par amount will be payable without interest. Both series of bills will be issued entirely in book-entry form in a minimum amount of \$10,000 and in any higher \$5,000 multiple, on the records either of the Federal Reserve Banks and Branches, or of the Department of the Treasury.

The bills will be issued for cash and in exchange for Treasury bills maturing January 23, 1992. Tenders from Federal Reserve Banks for their own account and as agents for foreign and international monetary authorities will be accepted at the weighted average bank discount rates of accepted competitive tenders. Additional amounts of the bills may be issued to Federal Reserve Banks, as agents for foreign and international monetary authorities, to the extent that the aggregate amount of tenders for such accounts exceeds the aggregate amount of maturing bills held by them. Federal Reserve Banks currently hold \$941 million as agents for foreign and international monetary authorities, and \$4,953 million for their own account. Tenders for bills to be maintained on the book-entry records of the Department of the Treasury should be submitted on Form PD 5176-1 (for 13-week series) or Form PD 5176-2 (for 26-week series)

Each tender must state the par amount of bills bid for, which must be a minimum of \$10,000. Tenders over \$10,000 must be in multiples of \$5,000. Competitive tenders must also show the yield desired, expressed on a bank discount rate basis with two decimals, e.g., 7.15%. Fractions may not be used. A single bidder, as defined in Treasury's single bidder guidelines, shall not submit noncompetitive tenders totaling more than \$1,000,000.

The following institutions may submit tenders for accounts of customers if the names of the customers and the amount for each customer are furnished: depository institutions, as described in Section 19(b)(1)(A), excluding those institutions described in subparagraph (vii), of the Federal Reserve Act (12 U.S.C. 461(b)); and government securities broker/dealers registered with the Securities and Exchange Commission that are registered or noticed as government securities broker/dealers pursuant to Section 15C(a)(1) of the Securities and Exchange Act of 1934, as amended by the Government Securities Act of 1986. Others are only permitted to submit tenders for their own account. Each tender must state the amount of any net long position in the bills being offered if such position is in excess of \$200 million. This information should reflect positions held as of one-half hour prior to the closing time for receipt of competitive tenders on the day of the auction. Such positions would include bills acquired through "when issued" trading, and futures and forward contracts as well as holdings of outstanding bills with the same CUSIP number as the new offering. Those who submit tenders for the accounts of customers must submit a separate tender for each customer whose net long position in the bill being offered exceeds \$200 million.

A noncompetitive bidder may not have entered into an agreement, nor make an agreement to purchase or sell or otherwise dispose of any noncompetitive awards of this issue being auctioned prior to the designated closing time for receipt of competitive tenders.

Tenders from bidders who are making payment by charge to a funds account at a Federal Reserve Bank and tenders from bidders who have an approved autocharge agreement on file at a Federal Reserve Bank will be received without deposit. Tenders from all others must be accompanied by full payment for the amount of bills applied for. A cash adjustment will be made on all accepted tenders, accompanied by payment in full, for the difference between the par payment submitted and the actual issue price as determined in the auction.

11/5/91

Public announcement will be made by the Department of the Treasury of the amount and yield range of accepted bids. Competitive bidders will be advised of the acceptance or rejection of their tenders. The Secretary of the Treasury expressly reserves the right to accept or reject any or all tenders, in whole or in part, and the Secretary's action shall be final. Subject to these reservations, noncompetitive tenders for each issue for \$1,000,000 or less without stated yield from any one bidder will be accepted in full at the weighted average bank discount rate (in two decimals) of accepted competitive bids for the respective issues. The calculation of purchase prices for accepted bids will be carried to three decimal places on the basis of price per hundred, e.g., 99.923, and the determinations of the Secretary of the Treasury shall be final.

Settlement for accepted tenders for bills to be maintained on the book-entry records of Federal Reserve Banks and Branches must be made or completed at the Federal Reserve Bank or Branch by the issue date, by a charge to a funds account or pursuant to an approved autocharge agreement, in cash or other immediately-available funds, or in definitive Treasury securities maturing on or before the settlement date but which are not overdue as defined in the general regulations governing United States securities. Cash adjustments will be made for differences between the par value of the maturing definitive securities accepted in exchange and the issue price of the new bills.

Department of the Treasury Circulars, Public Debt Series - Nos. 26-76, 27-76, and 2-86, as applicable, Treasury's single bidder guidelines, and this notice prescribe the terms of these Treasury bills and govern the conditions of their issue. Copies of the circulars, guidelines, and tender forms may be obtained from any Federal Reserve Bank or Branch, or from the Bureau of the Public Debt.

11/5/91

TREASURY NEWS



Department of the Treasury

Washington, D.C.

Telephone 566-2041

FOR IMMEDIATE RELEASE
January 15, 1992

Contact: Robert Snow
(202) 435-5708

SECRET SERVICE DIRECTOR JOHN R. SIMPSON TO RETIRE

Secretary of the Treasury Nicholas F. Brady announced today that Director John R. Simpson has announced his plans to retire on February 1, 1992, after 29 years with the United States Secret Service.

Director Simpson, who began his career in 1962 as a special agent in the Boston Field Office, has served as director of the Secret Service since 1981. He has held many other supervisory positions including special agent in charge of the protective support division, the executive protective service, the dignitary protective service, the dignitary protective division, and the presidential protective division; inspector-in-charge of the candidate nominee protective division; deputy assistant director of protective operations, executive protective service, and assistant director of protective operations.

Director Simpson supervised an unprecedented growth and expansion of the Secret Service. He introduced new computer technology; directed the expansion of the field offices; and supervised the Service's new investigative responsibilities in the areas of false identification documents, access device and computer fraud, and financial institution fraud. With Director Simpson's strong support, the Secret Service increased the number of females and minorities in law enforcement by nearly 64%.

From 1984 to 1988, Director Simpson served as the first American President of the International Criminal Police Organization (INTERPOL). During his tenure, Mr. Simpson directed several major new programs for INTERPOL and worked diligently with the 142-member countries to combat the growing threat of international crime.

A native of Boston, Massachusetts, Director Simpson holds a bachelor's degree in commerce from Loyola College in Montreal and an LL.B. from the New England School of Law in Boston. He is also a graduate of the Federal Executive Institute and the National War College. Mr. Simpson is a veteran of the U.S. Army, and a member of the International Association of Chiefs of Police, the American Society for Industrial Security, the National Sheriff's Association, the National Association of Public Administrators, and the National War College Alumni Association. Director Simpson is the recipient of the 1982 and 1986 Presidential Rank Awards, the 1985 Executive Achievement Award, the Roger W. Jones Award, the National Operations Security Advisory Committee's 1991 OPSEC Award, and the Women in Federal Law Enforcement's 1991 Manager of the Year Award.

President Bush has nominated Director Simpson to be Commissioner of the United States Parole Commission for the term expiring November 1, 1997.

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TREASURY NEWS



Department of the Treasury • Washington, D.C. • Telephone 566-2041

FOR RELEASE AT 2:30 P.M.
January 15, 1992

CONTACT: Office of Financing
202/219-3350

TREASURY TO AUCTION 2-YEAR AND 5-YEAR NOTES TOTALING \$23,000 MILLION

The Treasury will auction \$13,750 million of 2-year notes and \$9,250 million of 5-year notes to refund \$10,772 million of securities maturing January 31, 1992, and to raise about \$12,225 million new cash. The \$10,772 million of maturing securities are those held by the public, including \$614 million currently held by Federal Reserve Banks as agents for foreign and international monetary authorities.

The \$23,000 million is being offered to the public, and any amounts tendered by Federal Reserve Banks as agents for foreign and international monetary authorities will be added to that amount. Tenders for such accounts will be accepted at the average prices of accepted competitive tenders.

In addition to the public holdings, Federal Reserve Banks, for their own accounts, hold \$539 million of the maturing securities that may be refunded by issuing additional amounts of the new securities at the average prices of accepted competitive tenders.

Details about each of the new securities are given in the attached highlights of the offerings and in the official offering circulars.

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Attachment

NB-1621

HIGHLIGHTS OF TREASURY OFFERINGS TO THE PUBLIC
OF 2-YEAR AND 5-YEAR NOTES TO BE ISSUED JANUARY 31, 1992

January 15, 1992

<u>Amount Offered to the Public</u> ...	\$13,750 million	\$9,250 million
<u>Description of Security:</u>		
Term and type of security	2-year notes	5-year notes
Series and CUSIP designation ...	Series V-1994 (CUSIP No. 912827 D8 2)	Series H-1997 (CUSIP No. 912827 D9 0)
Maturity date	January 31, 1994	January 31, 1997
Interest rate	To be determined based on the average of accepted bids	To be determined based on the average of accepted bids
Investment yield	To be determined at auction	To be determined at auction
Premium or discount	To be determined after auction	To be determined after auction
Interest payment dates	July 31 and January 31	July 31 and January 31
Minimum denomination available .	\$5,000	\$1,000
<u>Terms of Sale:</u>		
Method of sale	Yield auction	Yield auction
Competitive tenders	Must be expressed as an annual yield, with two decimals, e.g., 7.10%	Must be expressed as an annual yield, with two decimals, e.g., 7.10%
Noncompetitive tenders	Accepted in full at the aver- age price up to \$5,000,000	Accepted in full at the aver- age price up to \$5,000,000
Accrued interest payable by investor	None	None
<u>Key Dates:</u>		
Receipt of tenders	Wednesday, January 22, 1992	Thursday, January 23, 1992
a) noncompetitive	prior to 12:00 noon, EST	prior to 12:00 noon, EST
b) competitive	prior to 1:00 p.m., EST	prior to 1:00 p.m., EST
Settlement (final payment due from institutions):		
a) funds immediately available to the Treasury ...	Friday, January 31, 1992	Friday, January 31, 1992
b) readily-collectible check ...	Wednesday, January 29, 1992	Wednesday, January 29, 1992

TREASURY NEWS



Department of the Treasury • Washington, D.C. • Telephone 566-2041

FOR IMMEDIATE RELEASE
January 15, 1992

Contact: Bob Levine
(202) 566-2041

Deborah Miller Witchey Appointed Deputy Assistant Secretary for Administration

Secretary of the Treasury Nicholas F. Brady today announced the appointment of Deborah Miller Witchey to serve as deputy assistant secretary for administration. Ms. Witchey will serve as the principal advisor to the assistant secretary for management on administrative and financial management issues within Main Treasury.

Ms. Witchey has served as the special assistant to the secretary for personnel since April of 1991. In this position, she served as the White House liaison for the department of the Treasury on all political and senior personnel issues. Prior to holding this position, she was a special assistant to the assistant secretary of the Treasury for policy management, since 1989. In this position, she assisted with political appointments for the department, and oversaw certain management functions relating to personnel.

Prior to joining Treasury, Ms. Witchey worked on the Presidential Inaugural Committee, in 1988, as deputy managing director for the First Family. Prior to that, she was the deputy administrator within the political campaign committee of the Bush/Quayle '88 campaign. In this position Ms. Witchey supervised and oversaw state office openings and closings, and day-to-day office management for the national campaign headquarters.

Ms. Witchey received an A.B. from Duke University. She is married to Frank Witchey, and currently resides in Springfield, Virginia.

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UNITARY TAX

REVIEW OF PROGRESS TOWARDS RESOLVING THE PROBLEMS

JOINT REPORT BY INLAND REVENUE AND US TREASURY

December 1991

UNITARY TAX

REVIEW OF PROGRESS TOWARDS RESOLVING THE PROBLEMS

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CHAPTER 1: INTRODUCTION

1.1. On 22 March 1989 the Financial Secretary to the Treasury in the UK said that the UK Government believed that progress had been made in the two previous years in resolving the unitary tax issue but that problems remained, in particular the fee which companies had to pay (in California) in order not to be subject to worldwide unitary tax. The Government proposed to review the situation jointly with the US Treasury later in the year (1).

1.2. The aim of this review is to assess progress made in modifying the worldwide combined reporting method of unitary taxation and the need for and possibility of further changes which might be made towards meeting the concerns which have been widely expressed about the present Californian State tax laws as they apply to multinational corporations.

1.3. As part of the review a small party of senior United Kingdom Government representatives went to California (which is the only remaining US State with substantial problems for multinational corporations in this area) in April 1990. The prime purpose of the visit was not to lobby but to seek guidance on the situation in California and the possibilities for further changes in the relevant tax provision.

1.4. The UK Parliament has on a number of occasions expressed its hostility to unitary tax. A motion against the tax was signed by 276 Members (nearly half the Members) of the House of Commons (2) in conjunction with a debate on unitary tax which took place in December 1989. In reply, the Financial Secretary made it clear that it was not the intention of the Government to repeal Section 812 of the Income and Corporation Taxes Act 1988 which provides a retaliatory power which can be triggered to deny the tax credit which would otherwise be payable to US companies in unitary states (3).

1.5. The US authorities have also on a number of occasions expressed opposition to the States' (particularly California's) use of the worldwide combined reporting method of unitary taxation. President Reagan wrote in November 1985 that the Federal Government supported legislation which would effect a requirement that multinationals be taxed by states only on income derived from the territory of the United States ("the water's edge requirement") (4). Consistent with that statement, the US Department of Justice filed amicus curiae briefs in the case of Barclays Bank International Ltd v Franchise Tax Board detailing the US executive branch policy with respect to California's use of worldwide combined reporting, both in the lower court in September 1986 (5) and in the intermediate appellate court in September 1988 (6). Both briefs presented the argument that California's use of worldwide combined reporting was an unconstitutional interference with the US Federal Government's exclusive authority to conduct foreign affairs and regulate foreign commerce. The US Department of Treasury in August 1989 said that the issue of unitary taxation remained a serious concern to the Treasury Department and to the administration of President Bush (7). On 17 November 1990 the Department of Justice appeared before the Californian Court of Appeal to argue the position of the US administration.

CHAPTER 2: WORLDWIDE UNITARY TAX

2.1. The UK and US Governments, together with a number of Governments of other countries, have opposed the use, by the State of California, of worldwide unitary tax as a means of assessing the Californian tax liability of multinational companies. This method of tax assessment in the circumstances in which it is applied is contrary to the principles underlying the UK/US tax treaty (and other US tax treaties); is contrary to accepted international practice; is extremely cumbersome and burdensome for multinational companies; can result in double taxation of income earned by multinationals outside the US; and effectively extends the reach of the Californian tax authorities beyond the borders of the US.

Methods of taxing multinational corporations

2.2. All tax jurisdictions in which multinationals operate are faced with the problem of determining the amount of income properly attributable to their jurisdiction. The internationally accepted method, which underlies UK and US tax treaties, is known as the separate accounting or arm's length method. This method applies the principle that each taxing authority should levy tax only on the income arising within the borders of its jurisdiction. To enable jurisdictions to assess corporation tax liability, multinational corporations operating within those jurisdictions are asked to provide separate accounts as if they were independent corporations operating at arm's length from other parts of their business.

2.3. The UK and the US, like other taxing jurisdictions, recognise that multinational companies can, in effect, transfer profits between different taxing jurisdictions, by manipulating the prices at which different constituent parts of their multinational business sell goods or services to each other. Like other taxing authorities, the UK and US deal with this by reserving the right, when assessing the extent of a corporation's earnings attributable to their jurisdiction, to adjust for tax purposes any transfer prices that have been manipulated, so that they reflect the true market price that would be paid between two

independent corporations. The UK/US tax treaties, and other tax treaties, specifically allow the contracting states to make such adjustments.

2.4. Unitary taxation is an alternative way of dealing with the same problem. Instead of taxing the income earned within its taxing jurisdiction, a tax authority using unitary tax assesses the overall income of the group, and then levies tax on a certain proportion of that income. That proportion might be calculated by reference to the company's sales, employment, or assets within one taxing jurisdiction.

2.5. The unitary method is used fairly widely by different states in the US in respect of income earned within the US. The method works reasonably well where each of the taxing authorities have broadly similar accounting rules and standards and where the tax regimes and formulae used are compatible. These conditions are moderately well satisfied in varying degrees in the different states within the US.

The effects of the worldwide combined reporting method of unitary taxation

2.6. California has chosen to use the same method in respect of worldwide income. In this context the necessary conditions for the successful use of the unitary method are clearly not fulfilled. Accounting standards in different taxing authorities throughout the world vary very considerably from those within the US. Equally importantly, no country (and certainly not the US Federal Government) adopts such a method. In these circumstances, the use of worldwide unitary tax has the following defects:

- a. a multinational company which has to provide accounts to each taxing authority in whose jurisdiction it operates, according to the accounting standards and tax regime of that authority, then has to recalculate its worldwide earnings according to the accounting standards and tax regime of California. Clearly this is a major and costly burden;

- b. in practice, determining what constitutes a unitary multinational group in some cases involves highly questionable and arbitrary assumptions. A multinational company which comes to a different judgment from that of the Californian tax authorities could find itself forced to make the burdensome calculations described at a. above several times over;
- c. there is no reason in principle why the proportion of a multinational corporation's earnings which are properly attributable to any one taxing authority should necessarily be the same as the proportion of its sales, employment or assets in that taxing authority. If California uses worldwide unitary and other countries use separate accounting/arm's length, a multinational corporation could well end up being taxed on more than 100% of its worldwide income; it could also be taxed on much less than 100% of its worldwide income. The risk of double taxation or double exemption is clearly very real;
- d. a multinational company which had assets, sales and payroll in California, but which happened to make a loss in any one year, could find itself paying tax on non-existent (or even negative) income. Or, alternatively, a multinational corporation which improved its profitability in, say, Australia, by reducing costs in that country, would, under the unitary method, find itself paying more tax in California (which would levy tax on a proportion of any increase in profits) even although there had been no change in the income earned in California;
- e. the narrow circumstances which may justify an internationally agreed formulary apportionment of income (for example, for 24-hour, global trading of a single book of securities) do not exist in the majority of cases to which California applies the worldwide ~~combined~~ reporting method of unitary tax.

Review conclusion

2.7. We believe that the worldwide combined reporting method of unitary taxation in the circumstances in which it is applied by California remains contrary to internationally agreed standards embodied in the arm's length principle and that the ultimate goal of the UK and US Governments should remain the elimination of the worldwide combined reporting method of unitary taxation.

CHAPTER 3: MODIFICATIONS IN UNITARY TAX LAW

3.1. Since July 1984 there has been action to reform unitary tax in a number of US States - Oregon, Florida, Massachusetts, Montana, Indiana, Utah, Colorado, New Hampshire, Idaho, North Dakota, California and most recently Alaska - although in some cases the application of unitary tax to foreign-owned corporations is limited and not completely eliminated.

3.2. In 1985 the British Parliament enacted legislation (8) giving the UK Government powers to deny tax credits to multinational corporations based in California, as a form of retaliation against the worldwide combined method of unitary taxation. In the following year the Californian Assembly amended Californian law, so as to enable a multinational corporation to "elect" to be taxed on a "water's edge" basis. The "water's edge" basis was broadly similar to the internationally accepted arm's length/separate accounting method. However, this election required payment of an election fee and the Californian tax authorities had the right to disallow such an election (without refunding the fee) in a number of instances, at their sole discretion. This modification in the Californian law that took place in 1986 persuaded the British Government not to bring into operation the retaliatory powers.

3.3. In 1988 some further modifications were made in California which reduced the election period and rendered the Californian tax authorities' decisions subject to some form of appeal. However, the fee remained in the law. In addition, many of the administrative requirements and potential penalties create conditions under which many multinational corporations say that they are unable to operate. The modifications made, although welcome, do not, therefore, remove all the concerns about the worldwide combined reporting method of unitary taxation.

3.4. This view is shared by other major industrialised countries. In June 1989, all Member States of the European Community ~~reaffirmed~~ in a letter to the US Secretary of State

that the present law in California was unsatisfactory. In reply, Treasury Deputy Secretary Robson confirmed that the US shared the European Community's concerns, and stated that further progress would have to be made in California before the US Government's concerns were met (7). In 1989, Canada, Japan, Australia and Switzerland also made clear their continued opposition to the worldwide combined reporting method of unitary taxation.

Review conclusion

3.5. While California (and some other states) have made some significant modifications in their law in response to international criticism, further progress is required before concerns on this issue can be put to rest. To alleviate the concerns of the interested governments, it would be necessary at least to ensure that the choice between the worldwide combined reporting method and the "water's edge" method of reporting should be unconditional and not subject to any fee, penalty, or subsequent override. In pursuing these goals the Governments of the US and the UK recognise that, under the US federal system, provided the method does not infringe upon a power reserved to the Federal Government or is not otherwise denied a State by the US Constitution, the Federal Government cannot dictate precisely how a State determines income subject to its tax jurisdiction.

CHAPTER 4: THE POSSIBILITY OF FURTHER MODIFICATIONS IN CALIFORNIA'S UNITARY TAX LAW

4.1. Senior UK Government representatives went to Sacramento on 23-27 April 1990 following letters from the UK Chancellor of the Exchequer to US Treasury Secretary Brady and Governor Deukmejian and from Secretary Brady to Governor Deukmejian.

4.2. The purpose of the visit was to enable the UK to contribute to this UK/US review of progress on the unitary tax problem, in particular to assess what further modifications in unitary tax law could realistically be expected from the Californian legislature.

4.3. The delegation was grateful to Governor Deukmejian for setting aside time for a substantial meeting with him. The delegation was also grateful to key Senators and Assemblymen from both the Republican and Democratic parties, Senate/Assembly staffers, Californian tax officials and representatives of both Californian and British business who also made time to see them.

4.4. The administration made it clear that it had done much to meet UK concerns in introducing the modifications it had in 1986 and 1988. The Californian legislature had not been prepared to eliminate the worldwide combined reporting method of taxation completely but had provided for an alternative. Some 700 businesses (out of possibly 5000) had elected for water's edge, of which about 50 were UK companies.

Options for reform in 1990

4.5. There seemed to be two possibilities for legislative changes in 1990.

4.6. First, a revenue neutral Bill which failed earlier in the year (proposed by Assemblyman Brown) was re-introduced, this time by Assemblyman Peace (9). This would have reduced the

election period (not to be subject to the worldwide combined reporting method of unitary taxation) from 5 years to 3 years and abolished, with treble damages for wilful default, the provision under which companies can be thrown back on unitary tax (the 'throwback') and the domestic disclosure spreadsheet. It did not deal with the election fee (see paragraph 4.7 below).

4.7. The second possibility for legislation in 1990 was that abolition of the election fee might feature in a Tax Conformity Bill. It was, however, urged on the UK Government delegation by Senators and Assemblymen that the Californian budget currently faced a \$2 billion deficit (although the election fee - some \$40 million - was small in this context).

4.8. In the event neither legislative possibility materialised and there was virtually no progress on the legislation front in 1990. The only Bill that did pass (Alquist) provided mainly for election fees to be refunded with interest if the Courts finally ruled the worldwide combined reporting method of unitary taxation unconstitutional (10).

Meeting with tax officials

4.9. One point that came out of a very detailed meeting the UK delegation had with Californian tax officials was that the latter confirmed that the throwback provision (see paragraph 4.6 above) would be used only in the most extreme circumstances of wilful default. Although it would of course be preferable to have the throwback abolished altogether, this confirmation was helpful and letters were exchanged to this effect.

The future

4.10. The end of the 1988-1990 two year session of the Californian legislature has now passed and there can be no assurance of any immediate modifications to unitary tax law.

4.11. It is understood that the Auditor General is required to make a review of the spreadsheet and make a preliminary report to the Legislature by 31 December 1991.

4.12. The Californian Franchise Tax Board said that when a Bill was introduced in 1989 to repeal the election fee an analysis indicated that this would cost annually something like \$100 million. This loss was made up of two components. First, there was the loss of the fee itself which would have had a \$35 million impact. Second, under the Board's assumptions, more people would elect if the fee were eliminated giving rise to a \$60-\$65 million revenue loss. These estimates were mid-year 1989 and economic circumstances had changed which would, in all likelihood, result in a change in the estimates.

Review conclusion

4.13. It is disappointing that no substantial progress was made on legislation in 1990 and that there can be no assurance of any immediate prospect of legislation. However, the undertaking of the Franchise Tax Board on throwback was helpful.

CHAPTER 5: LITIGATION

5.1. Under the US Constitution the power to conduct foreign affairs and to regulate commerce with foreign nations is reserved to the Federal Government. Where state or local taxes result in actual international multiple taxation, where such a tax "may impair federal uniformity in an area where federal uniformity is essential", and where such a tax prevents "the Federal Government from 'speaking with one voice' when regulating commercial relations with foreign governments", the tax can be held to be unconstitutional by US courts and may not be collected. See Japan Line Ltd v County of Los Angeles, 441 US 434 (1979).

5.2. Early efforts to challenge the constitutionality of the Californian worldwide combined reporting method of unitary taxation under this principle were brought by US-based parent corporations with foreign subsidiaries. They did not succeed. See Container Corporation of America v Franchise Tax Board, 463 US 159 (1983). The US Supreme Court, however, in a footnote to its decision in Container, explicitly stated that it was not addressing the constitutionality of the worldwide combined reporting method with respect to state taxation of US corporations with foreign parents or of foreign corporations. More recently Colgate-Palmolive Company Inc, a US-based parent corporation with foreign subsidiaries, has again challenged the constitutionality of Californian worldwide reporting in the Californian Courts. A decision favourable to Colgate in the Californian Superior Court for the County of Sacramento was reversed in August 1991 by the Californian Court of Appeal which could not find a meaningful distinction between that case and the earlier Container decision. The company has since filed a Petition for Hearing in the Californian Supreme Court.

5.3. Cases have been brought by foreign corporations and the US subsidiaries of foreign corporations to address the question left open in the Container case. In Barclays Bank International Ltd v Franchise Tax Board, 275 Cal.Rptr.626 (1990), the Court of Appeal of the State of California on 27 December 1990 affirmed the judgment of the Superior Court of California for the County

of Sacramento that the worldwide combined reporting method was unconstitutional under the US Constitution's commerce clause. An appeal against that decision has been made by the Franchise Tax Board to the Californian Supreme Court, which has announced that it will hear the appeal. Either party may appeal against its decision to the United States Supreme Court.

5.4. Unlike in the Container case, the US Department of Justice filed an amicus curiae brief in Barclays both before the trial court as well as in the Californian Court of Appeal. The amicus briefs presented the argument that California's use of the worldwide combined reporting method is an unconstitutional interference with the US Federal Government's exclusive authority to conduct foreign affairs and regulate foreign commerce. The Californian Appellate Court in its decision in Barclays noted that the filing of the amicus brief, the US/UK income tax treaty debate, a letter from President Carter's administration to the State of California, and President Reagan's directive to the Attorney General all demonstrated that the US Federal Government had spoken clearly in opposition to the worldwide combined reporting method. The Appellate Court also found that "every single nation in the industrialised western world has sent letters to the United States Government protesting the use of worldwide combined reporting by American states", and took note of the UK's enactment of retaliatory legislation and the cancellation of several trade missions to the United States. The Court also took note of evidence presented to it by Barclays regarding its incurring a one-time cost of between \$6.4 million and \$7.7 million to establish a system of reporting to comply with the requirements of California's worldwide combined reporting and an additional expense from \$2 to \$3.8 million each year to maintain the system. The Appeals Court decision in Barclays was unanimous.

5.5. The Californian Supreme Court has agreed to hear the appeal against the judgment of the Californian Court of Appeal, and the US Government has prepared an amicus brief and sought the Court's permission to file it.

5.6. A preliminary injunction was issued in October 1989, in

two suits against the Californian Franchise Tax Board, ordering that about \$9.5 million in election fees paid to California (fees paid to elect for the use of the water's edge reporting method) be placed into escrow pending the outcome of constitutionality challenges. See Nestle Holding Inc v FTB, California Superior Court, San Francisco County, No.911305 and Coca Cola Company v FTB, California Superior Court, San Francisco County, No.911416.

5.7. In recent Court decisions involving Alcan Aluminium Corp. it was held that California's use of the worldwide combined reporting method of unitary taxation was constitutional. However, these cases will be proceeding to appeal.

Review Conclusion

5.8. The recent decision (on 27 December 1990) of the Californian Court of Appeal in the Barclays case confirms that a satisfactory solution to the problems faced by UK-based multinationals doing business through subsidiaries in California stands a good chance of being reached by litigation in the US courts, particularly where the US Federal Government makes its views known through the filing of amicus briefs.

CHAPTER 6: RECOMMENDATIONS TO THE UK AND US GOVERNMENTS

6.1. Following the recent welcome confirmation in the Californian Appeal Court that the worldwide combined reporting method of unitary taxation, as applied to foreign-based unitary groups, is unconstitutional, we recommend that both Governments should continue strongly to support litigation against worldwide unitary tax.

6.2. UK Government statements up to 22 March 1989 (1) have made clear that, in the event of the retaliatory legislation being activated, it would not apply to dividends paid on or before 31 December 1989.

6.3. Pending a settlement of the matter by litigation, the UK reviewers recommend that the United Kingdom should maintain its retaliatory legislation on the statute book, giving no further guarantees as to whether the legislation, if it were to be triggered, would be retrospective, but should not trigger it; the US reviewers recommend that the United States should defer taking any action on the declaration of President Reagan in 1985 and subsequent statements by the federal authorities, except as recommended in 6.1., above but that the situation shall be reassessed should the position of the US administration not be upheld in Court.

CHAPTER 7: SUMMARY OF CONCLUSIONS

7.1. The reviewers conclude that

- a. the worldwide combined reporting method of unitary taxation remains contrary to internationally agreed standards embodied in the arm's length principle (paragraph 2.7);
- b. the ultimate goal of the UK and US Governments should remain the elimination of the worldwide combined reporting method of unitary taxation (paragraph 2.7);
- c. while California has made some relaxations in its law in response to international criticism, further progress is required before concerns on this issue can be put to rest. Californian tax law should at least ensure a meaningful choice - unconditional and not subject to any fee, penalty or subsequent override - between the worldwide combined method of reporting and the water's edge method (paragraph 3.5);
- d. it is disappointing that no substantial progress was made on legislation in 1990 and there can be no assurance of any immediate prospect of legislation (paragraph 4.13);
- e. the recent decision in the Californian Appeal Court (on 27 December 1990 in the Barclays case) that the worldwide combined reporting method of unitary taxation, as applied to foreign-based unitary groups, is unconstitutional confirms that a satisfactory solution stands a good chance of being reached by litigation in the US courts (paragraph 5.8); and
- f. both Governments should continue strongly to support litigation against worldwide unitary tax (paragraph 6.1);

- 7.2. Pending a settlement of the matter by litigation,
- a. the UK reviewers conclude that the UK should maintain its retaliatory legislation on the statute book, giving no further guarantees as to whether the legislation, if it were to be triggered, would be retrospective, but should not trigger it (paragraph 6.3);
 - b. The US reviewers conclude that the US should not take any further action on the declaration of President Reagan in 1985 and subsequent statements by the federal authorities, except as stated in paragraph 7.1.f. above but that the situation shall be reassessed should the position of the US administration not be upheld in Court (paragraph 6.3).

BRIAN T HOUGHTON
formerly Director, International Division
Inland Revenue (United Kingdom)

PHILIP D MORRISON
International Tax Counsel
US Treasury (United States)

PETER W FAWCETT (Secretary)
Assistant Secretary, International Division
Inland Revenue (United Kingdom)

APPENDIX: NOTES

1. HM Treasury Press Release of 22 March 1989.
2. UK Parliamentary motion of 15 December 1989.
3. Hansard 18 December 1989 Cols 172-178.
4. HM Treasury Press Release of 8 November 1985.
5. Superior Court of the State of California, County of Sacramento, Nos 325059 and 325061.
6. Court of Appeal of the State of California, Third Appellate District 3 Civil C003388 (Consolidated with C003389).
7. US Treasury statement of September 1989.
8. Section 812 Income and Corporation Taxes Act 1988.
9. California Legislature - 1989-90 Regular Session - Assembly Bill No 3333.
10. Senate Bill No 2177.

TREASURY NEWS



Department of the Treasury

Washington, D.C.

Telephone 566-2041

FOR IMMEDIATE RELEASE
January 16, 1992

Contact: Anne Kelly Williams
(202) 566-2041

Ronald A. Rosenfeld
Appointed Deputy Assistant Secretary
for Corporate Finance

Secretary of the Treasury Nicholas F. Brady today announced the appointment of Ronald A. Rosenfeld to serve as deputy assistant secretary for corporate finance. Mr. Rosenfeld will serve as the principal advisor to the assistant secretary for domestic finance on corporate economic and financial issues.

Mr. Rosenfeld has worked at the Department of Housing and Urban Development since 1989 as the general deputy assistant secretary for housing and federal housing commissioner, the acting deputy assistant secretary for multifamily housing, and the deputy assistant secretary for single family housing. From 1982 - 1989, he was the executive vice president of the Cleveland-based investment banking firm Prescott, Ball and Turben, Inc., a wholly owned subsidiary of Kemper Financial Corporation.

From 1976 until 1981, Mr. Rosenfeld was a partner with the investment banking company Zappala & Company and a partner with F.R.A. Associates, a shopping center development entity located in Pittsburgh, PA. Mr. Rosenfeld was also president of Multiplex, Inc., an apartment and condominium development company.

Mr. Rosenfeld has a B.S. in economics from the Wharton School of Business at the University of Pennsylvania and a J.D. from Harvard University. He serves on the Wharton School board of overseers. Mr. Rosenfeld lives in Washington, D.C. with his wife Patti and has three children, Philip, 27, Laura, 25, and David, 21.

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NB-1623

TREASURY NEWS



Department of the Treasury

Washington, D.C.

Telephone 566-2041

FOR IMMEDIATE RELEASE
JANUARY 17, 1992

CONTACT: SCOTT DYKEMA
202-566-2041

KENNETH W. GIDEON
ASSISTANT SECRETARY FOR TAX POLICY
TO LEAVE TREASURY

Kenneth W. Gideon, assistant secretary for tax policy, will leave the Treasury Department January 31 to return to private law practice, Treasury Secretary Nicholas F. Brady said.

Mr. Gideon will rejoin the law firm Fried, Frank, Harris, Shriver and Jacobson in Washington, D.C. He was appointed assistant secretary June 9, 1989 by President Bush.

As the assistant secretary, Mr. Gideon served as the top Treasury official and advisor to the secretary in formulating and executing domestic and international tax policies and programs. He was chief counsel for the Internal Revenue Service between 1981-1983.

"Ken Gideon has been a valuable advisor in one of Treasury's key areas of responsibility," Mr. Brady said. "His help in crafting the tax elements of the 1990 budget deficit reduction agreement was especially important. His efforts contributed to achieving a fiscal package that controls spending and imposes pay-as-you-go discipline. We will miss Ken's advice and expertise."

Mr. Gideon received a B.A. from Harvard University in 1968 and a J.D. from Yale Law School in 1971. A native of Lubbock, Texas, he is married to the former Carol Almack. They have four children and live in McLean, Virginia.

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TREASURY NEWS



Department of the Treasury • Washington, D.C. • Telephone 566-2041

FOR IMMEDIATE RELEASE

January 21, 1992

Contact: Anne Kelly Williams

(202) 566-2041

Deborah J. Danker
Appointed Deputy Assistant Secretary
for Federal Finance

Secretary of the Treasury Nicholas F. Brady today announced that Deborah Danker is being detailed from the Federal Reserve to serve as deputy assistant secretary for federal finance. Ms. Danker will serve as the principal advisor to the assistant secretary for domestic finance on the formulation of Treasury and federal government debt management policy. In addition, she will advise Treasury officials on a wide range of economic and monetary matters. Ms. Danker also will serve as the liaison between the Department of the Treasury and dealers of U.S. government securities.

Prior to joining Treasury, Ms. Danker worked for the Board of Governors of the Federal Reserve System as the chief of the banking and monetary analysis section in the division of monetary affairs. Previously, Ms. Danker was senior staff economist for macroeconomics, money and finance for the Council of Economic Advisers. She has also held various economist positions at the Federal Reserve Board and the Federal Reserve Bank of New York. In addition, Ms. Danker was an instructor in the economics department at Yale University and spent several summers as an intern at the International Monetary Fund.

Ms. Danker received her A.B. in economics from Princeton University and her Ph.D. in international economics from Yale University.

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NB-1625



PUBLIC DEBT NEWS



Department of the Treasury • Bureau of the Public Debt • Washington, DC 20239

FOR IMMEDIATE RELEASE
January 21, 1992

CONTACT: Office of Financing
202-219-3350

RESULTS OF TREASURY'S AUCTION OF 13-WEEK BILLS

Tenders for \$10,218 million of 13-week bills to be issued January 23, 1992 and to mature April 23, 1992 were accepted today (CUSIP: 912794YK4).

RANGE OF ACCEPTED COMPETITIVE BIDS:

	<u>Discount Rate</u>	<u>Investment Rate</u>	<u>Price</u>
Low	3.76%	3.86%	99.050
High	3.78%	3.88%	99.045
Average	3.78%	3.88%	99.045

Tenders at the high discount rate were allotted 48%.
The investment rate is the equivalent coupon-issue yield.

TENDERS RECEIVED AND ACCEPTED (in thousands)

<u>Location</u>	<u>Received</u>	<u>Accepted</u>
Boston	30,240	30,240
New York	29,325,580	8,756,630
Philadelphia	17,905	17,905
Cleveland	54,840	54,840
Richmond	58,870	43,670
Atlanta	23,955	23,435
Chicago	1,346,345	264,945
St. Louis	59,605	24,405
Minneapolis	7,340	7,340
Kansas City	28,215	28,215
Dallas	25,105	25,105
San Francisco	752,545	79,385
Treasury	<u>862,235</u>	<u>862,235</u>
TOTALS	\$32,592,780	\$10,218,350

<u>Type</u>		
Competitive	\$28,564,045	\$6,589,615
Noncompetitive	<u>1,533,035</u>	<u>1,533,035</u>
Subtotal, Public	\$30,097,080	\$8,122,650
Federal Reserve	2,302,960	1,902,960
Foreign Official		
Institutions	<u>192,740</u>	<u>192,740</u>
TOTALS	\$32,592,780	\$10,218,350

An additional \$35,960 thousand of bills will be issued to foreign official institutions for new cash.

**AUCTION
RESULTS**

PUBLIC DEBT NEWS



Department of the Treasury • Bureau of the Public Debt • Washington, DC 20239

FOR IMMEDIATE RELEASE
January 21, 1992

CONTACT: Office of Financing
202-219-3350

RESULTS OF TREASURY'S AUCTION OF 26-WEEK BILLS

Tenders for \$10,216 million of 26-week bills to be issued January 23, 1992 and to mature July 23, 1992 were accepted today (CUSIP: 912794ZE7).

RANGE OF ACCEPTED COMPETITIVE BIDS:

	Discount Rate	Investment Rate	Price
Low	3.83%	3.97%	98.064
High	3.84%	3.98%	98.059
Average	3.84%	3.98%	98.059

Tenders at the high discount rate were allotted 75%.
The investment rate is the equivalent coupon-issue yield.

TENDERS RECEIVED AND ACCEPTED (in thousands)

<u>Location</u>	<u>Received</u>	<u>Accepted</u>
Boston	20,155	20,155
New York	30,967,620	9,093,575
Philadelphia	14,035	14,035
Cleveland	30,385	30,385
Richmond	48,435	37,185
Atlanta	22,095	22,095
Chicago	995,455	104,205
St. Louis	33,165	13,165
Minneapolis	5,890	5,890
Kansas City	32,160	32,160
Dallas	13,000	13,000
San Francisco	643,610	133,860
Treasury	696,675	696,675
TOTALS	\$33,522,680	\$10,216,385
<u>Type</u>		
Competitive	\$29,173,455	\$6,267,160
Noncompetitive	1,150,665	1,150,665
Subtotal, Public	\$30,324,120	\$7,417,825
Federal Reserve	2,650,000	2,250,000
Foreign Official Institutions	548,560	548,560
TOTALS	\$33,522,680	\$10,216,385

An additional \$101,940 thousand of bills will be issued to foreign official institutions for new cash.

TREASURY NEWS



Department of the Treasury • Washington, D.C. • Telephone 566-2041

FOR RELEASE AT 2:30 P.M.
January 21, 1992

CONTACT: Office of Financing
202/219-3350

TREASURY'S WEEKLY BILL OFFERING

The Department of the Treasury, by this public notice, invites tenders for two series of Treasury bills totaling approximately \$20,400 million, to be issued January 30, 1992. This offering will result in a paydown for the Treasury of about \$575 million, as the maturing bills are outstanding in the amount of \$20,965 million. Tenders will be received at Federal Reserve Banks and Branches and at the Bureau of the Public Debt, Washington, D. C. 20239-1500, Monday, January 27, 1992, prior to 12:00 noon for noncompetitive tenders and prior to 1:00 p.m., Eastern Standard time, for competitive tenders. The two series offered are as follows:

91-day bills (to maturity date) for approximately \$10,200 million, representing an additional amount of bills dated October 31, 1991, and to mature April 30, 1992 (CUSIP No. 912794 YL 2), currently outstanding in the amount of \$10,548 million, the additional and original bills to be freely interchangeable.

182-day bills (to maturity date) for approximately \$10,200 million, representing an additional amount of bills dated August 1, 1991, and to mature July 30, 1992 (CUSIP No. 912794 YW 8), currently outstanding in the amount of \$12,651 million, the additional and original bills to be freely interchangeable.

The bills will be issued on a discount basis under competitive and noncompetitive bidding, and at maturity their par amount will be payable without interest. Both series of bills will be issued entirely in book-entry form in a minimum amount of \$10,000 and in any higher \$5,000 multiple, on the records either of the Federal Reserve Banks and Branches, or of the Department of the Treasury.

The bills will be issued for cash and in exchange for Treasury bills maturing January 30, 1992. Tenders from Federal Reserve Banks for their own account and as agents for foreign and international monetary authorities will be accepted at the weighted average bank discount rates of accepted competitive tenders. Additional amounts of the bills may be issued to Federal Reserve Banks, as agents for foreign and international monetary authorities, to the extent that the aggregate amount of tenders for such accounts exceeds the aggregate amount of maturing bills held by them. Federal Reserve Banks currently hold \$2,020 million as agents for foreign and international monetary authorities, and \$5,167 million for their own account. Tenders for bills to be maintained on the book-entry records of the Department of the Treasury should be submitted on Form PD 5176-1 (for 13-week series) or Form PD 5176-2 (for 26-week series).

TREASURY'S 13-, 26-, AND 52-WEEK BILL OFFERINGS, Page 2

Each tender must state the par amount of bills bid for, which must be a minimum of \$10,000. Tenders over \$10,000 must be in multiples of \$5,000. Competitive tenders must also show the yield desired, expressed on a bank discount rate basis with two decimals, e.g., 7.15%. Fractions may not be used. A single bidder, as defined in Treasury's single bidder guidelines, shall not submit noncompetitive tenders totaling more than \$1,000,000.

The following institutions may submit tenders for accounts of customers if the names of the customers and the amount for each customer are furnished: depository institutions, as described in Section 19(b)(1)(A), excluding those institutions described in subparagraph (vii), of the Federal Reserve Act (12 U.S.C. 461(b)); and government securities broker/dealers registered with the Securities and Exchange Commission that are registered or noticed as government securities broker/dealers pursuant to Section 15C(a)(1) of the Securities and Exchange Act of 1934, as amended by the Government Securities Act of 1986. Others are only permitted to submit tenders for their own account. Each tender must state the amount of any net long position in the bills being offered if such position is in excess of \$200 million. This information should reflect positions held as of one-half hour prior to the closing time for receipt of competitive tenders on the day of the auction. Such positions would include bills acquired through "when issued" trading, and futures and forward contracts as well as holdings of outstanding bills with the same CUSIP number as the new offering. Those who submit tenders for the accounts of customers must submit a separate tender for each customer whose net long position in the bill being offered exceeds \$200 million.

A noncompetitive bidder may not have entered into an agreement, nor make an agreement to purchase or sell or otherwise dispose of any noncompetitive awards of this issue being auctioned prior to the designated closing time for receipt of competitive tenders.

Tenders from bidders who are making payment by charge to a funds account at a Federal Reserve Bank and tenders from bidders who have an approved autocharge agreement on file at a Federal Reserve Bank will be received without deposit. Tenders from all others must be accompanied by full payment for the amount of bills applied for. A cash adjustment will be made on all accepted tenders, accompanied by payment in full, for the difference between the par payment submitted and the actual issue price as determined in the auction.

11/5/91

Public announcement will be made by the Department of the Treasury of the amount and yield range of accepted bids. Competitive bidders will be advised of the acceptance or rejection of their tenders. The Secretary of the Treasury expressly reserves the right to accept or reject any or all tenders, in whole or in part, and the Secretary's action shall be final. Subject to these reservations, noncompetitive tenders for each issue for \$1,000,000 or less without stated yield from any one bidder will be accepted in full at the weighted average bank discount rate (in two decimals) of accepted competitive bids for the respective issues. The calculation of purchase prices for accepted bids will be carried to three decimal places on the basis of price per hundred, e.g., 99.923, and the determinations of the Secretary of the Treasury shall be final.

Settlement for accepted tenders for bills to be maintained on the book-entry records of Federal Reserve Banks and Branches must be made or completed at the Federal Reserve Bank or Branch by the issue date, by a charge to a funds account or pursuant to an approved autocharge agreement, in cash or other immediately-available funds, or in definitive Treasury securities maturing on or before the settlement date but which are not overdue as defined in the general regulations governing United States securities. Cash adjustments will be made for differences between the par value of the maturing definitive securities accepted in exchange and the issue price of the new bills.

Department of the Treasury Circulars, Public Debt Series - Nos. 26-76, 27-76, and 2-86, as applicable, Treasury's single bidder guidelines, and this notice prescribe the terms of these Treasury bills and govern the conditions of their issue. Copies of the circulars, guidelines, and tender forms may be obtained from any Federal Reserve Bank or Branch, or from the Bureau of the Public Debt.

11/5/91

TREASURY NEWS



Department of the Treasury

Washington, D.C.

Telephone 566-2041

FOR IMMEDIATE RELEASE
January 22, 1992

Contact: Robert Snow
(202) 435-5708

JOHN W. MAGAW APPOINTED DIRECTOR OF THE UNITED STATES SECRET SERVICE

Secretary of the Treasury Nicholas F. Brady announced today the appointment of John W. Magaw to serve as the director of the United States Secret Service. Mr. Magaw will begin on February 1, following the retirement of the present director, John R. Simpson.

Mr. Magaw will be the 17th director of the United States Secret Service. His appointment continues the long tradition of directors being drawn from the ranks of the career special agents.

Mr. Magaw brings over 31 years of law enforcement experience to this position. He has served since 1990 as the special agent in charge of the presidential protective division. From 1989 - 1990, Mr. Magaw served as the deputy assistant director in charge of protective operations. From 1988 - 1989, he was the deputy assistant director of protective research, and was made the assistant director during that period.

Mr. Magaw has held numerous other positions within the United States Secret Service, including special agent in charge of the Washington D.C. field office, special agent in charge of the dignitary protective division, deputy special agent in charge of the vice-presidential protective division, and numerous other positions in his 24 years with the Secret Service.

Mr. Magaw attended the University of Dayton, and received a B.S. in education in 1957 from Otterbein College, in Westerville, Ohio. He studied police administration and investigation at Case Western Reserve University, and attended graduate courses at Ohio State University.

Mr. Magaw lives in Annapolis, Maryland with his wife Helen. He and his wife have five children, Jayne, Janet, Mark, Gary and Craig.

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TREASURY NEWS



Department of the Treasury

Washington, D.C.

Telephone 566-2041

EMBARGOED FOR RELEASE
January 22, 1992
4:00 p.m.

Contact: Anne Kelly Williams
(202) 566-2041

The Treasury, The Securities and Exchange Commission, and the Federal Reserve Release Report on the Government Securities Market

The Treasury, the Federal Reserve, and the Securities and Exchange Commission today released their Joint Report on the Government Securities Market. The report is a comprehensive review of the market that the federal government relies upon to meet its borrowing needs. The report contains recommendations for changes in policies as well as legislation aimed at ensuring the integrity of the market.

"The United States securities market is the largest and most liquid market in the world," said Treasury Secretary Nicholas F. Brady. "The administrative and legislative changes recommended in this report will strengthen the market's integrity and further encourage broad participation by investors. The government has an obligation to meet its financing needs in the most cost-effective manner for the taxpayer and to ensure continued strong enforcement of all rules and regulations. The recommended changes accomplish these goals."

The report addresses a broad range of government securities market issues including the need to strengthen enforcement of Treasury's auction rules; the need to automate the auctions; potential changes in Treasury's auction technique and debt management policies; and the role of the primary dealers. The report also calls for reauthorization of Treasury's rulemaking authority under the Government Securities Act, and addresses the need for sales practice rulemaking authority and the removal of the exemption under the federal securities laws for certain securities issued by government-sponsored enterprises ("GSEs").

Changes recommended by all three agencies include:

o Administrative and Regulatory

Recommendations include a system of written confirmation by customers receiving large awards; tightened enforcement of noncompetitive bidding rules; the creation of a permanent Operating Group on Market Surveillance; a reopening policy to combat short squeezes; automation of the auctions by the end of 1992; proposal of a uniform-price, open auction system; changes in noncompetitive auction rules; changes in required net long position reporting; and elimination of the market share requirement for primary dealers.

o Administrative and Regulatory (previously announced)

Changes already announced by Treasury include allowing all registered brokers and dealers to submit bids for customers in Treasury auctions; permitting any bidder to bid in note and bond auctions without deposit, provided the bidder has an autocharge agreement; increasing the noncompetitive award limitation from \$1 million to \$5 million; spot-checking of customer bids for authenticity; and earlier public release of borrowing needs.

o Legislative

Joint recommendations include reauthorization of Treasury rulemaking authority under the Government Securities Act which expired October 1, 1991; registration of equities and unsecured debt of GSEs; and making misleading statements to an issuer of government securities a violation of federal securities law.

(Note: see attached Summary of Reforms for explanation and details.)

The Treasury also released today a proposed uniform offering circular which summarizes Treasury's auction rules in one document. The circular is being published for comment in the Federal Register.

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EMBARGOED

until 4:00p.m.
January 22, 1992

SUMMARY OF REFORMS

ADMINISTRATIVE AND REGULATORY CHANGES

- **Broadening participation in auctions:**
 - All government securities brokers and dealers registered with the SEC are now allowed to submit bids for customers in Treasury auctions. Formerly, only primary dealers and depository institutions could do so (announced October 25).
 - Any bidder is now permitted to bid in note and bond auctions without deposit, provided the bidder has an agreement with a bank (an "autocharge agreement") to facilitate payment for securities purchased at auctions. Formerly, only primary dealers and depository institutions could do so (announced October 25).
 - To facilitate bidding by smaller investors, the noncompetitive award limitation has been raised from \$1 million to \$5 million for notes and bonds (announced October 25).
- **Stronger enforcement of auction rules:**
 - The Federal Reserve now engages in spot-checking of customer bids in Treasury auctions for authenticity (announced September 11).
 - The Treasury and the Federal Reserve are instituting a new system of confirmation by customers receiving large awards (over \$500 million), to verify the authenticity of customer bids.
 - The Treasury and the Federal Reserve have tightened enforcement of noncompetitive bidding rules.
- **Detecting and combatting short squeezes:**
 - **Improved surveillance of the Treasury market.** A new working group of the Agencies has been formed to improve surveillance and strengthen interagency coordination. The Federal Reserve Bank of New York

¹ Reforms have the unanimous support of the Department of the Treasury, the Board of Governors of the Federal Reserve, and the Securities and Exchange Commission ("SEC") (the "Agencies") unless otherwise noted. All actions listed are recommended or implemented as part of this report, unless otherwise indicated.

("FRBNY") will enhance and expand its market surveillance efforts, in its role as the agency that collects and provides the SEC, the Treasury, and the Federal Reserve Board with information needed for surveillance purposes.

- **Reopening policy to combat short squeezes.** The Treasury will provide additional quantities of a security to the marketplace when an acute, protracted shortage develops, regardless of the reason for the shortage. The reopening of issues will greatly reduce the potential for short squeezes. Reopenings could occur either through standard auctions, through "tap" issues whereby the Treasury offers securities to the market on a continuous basis, or through other means.

Changes to Treasury auction policies:

- **Automation.** The Treasury and the Federal Reserve have accelerated the schedule for automating Treasury auctions. It is anticipated that the auctions will be automated by the end of 1992 (announced September 11).
- **Proposal of uniform-price, open auction system.** The Treasury will consider implementing an open method of auctioning securities with repeated rounds of bidding at descending yields. The total bids received at the announced yield would be announced after each round. All securities would be awarded at a single yield. Such a system will be feasible once the auctions are automated and could encourage broader participation in Treasury auctions.
- **Publication of uniform offering circular.** Treasury auction rules and procedures have been compiled into a uniform offering circular, to be published in the *Federal Register* with a request for comments.
- **Change to noncompetitive auction rules.** To limit noncompetitive bidding to the small, less sophisticated bidders for whom it was designed, the Treasury will not permit a noncompetitive bidder in a Treasury auction to have a position in the security being auctioned in the when-issued, futures, or forward markets prior to the auction. Furthermore, the Treasury will not permit bidders to submit both competitive and noncompetitive bids in a single auction.
- **Change in net long position reporting required on auction tender form.** To streamline reporting requirements, the Treasury will not require competitive bidders to report net long positions at the time of the auction, unless the total of the bidder's net long position plus its bid exceeds a high threshold amount. This threshold amount will represent a substantial share of each auction and will be announced for each auction.

- **Improvements to the primary dealer system:**
 - **Opening up the system by eliminating the market share requirement.** The Federal Reserve will gradually move to a more open set of trading relationships. To this end, the FRBNY is eliminating the requirement that each primary dealer effect at least one percent of all customer trades in the secondary market. The FRBNY expects to add counterparties that meet minimum capital standards, initially in modest numbers, but on a larger scale once open market operations are automated.
 - **Clarification of regulatory authority over primary dealers.** In the future, direct regulatory authority over primary dealers will rest unambiguously with the primary regulator — in most cases, the SEC. Although the FRBNY has no statutory authority to regulate the primary dealers, the primary dealer system may have generated the false impression in the marketplace that the FRBNY somehow regulates or takes responsibility for the conduct of primary dealers. To make clear that its relationship with the primary dealers is solely a business relationship, the FRBNY will eliminate its dealer surveillance program, while upgrading its market surveillance program as described above.
 - **Other features regarding primary dealers.** To remain a primary dealer, firms must demonstrate to the FRBNY that they make reasonably good markets, provide it with market information, and bid in Treasury auctions. Primary dealers must also maintain capital standards. Failure to meet the Federal Reserve's performance standards, or the capital standards, will lead to removal of the primary dealer designation. In addition, any primary dealer that is convicted of (or pleads guilty or *nolo contendere* to) a felony will face suspension of its primary dealer designation.
- **Enhanced GSCC.** The Agencies support enhancements to the Government Securities Clearing Corporation, which provides comparison and netting facilities for reducing risk in the government securities market.

LEGISLATIVE RECOMMENDATIONS

- **Reauthorization of Treasury rulemaking authority under GSA.** Treasury rulemaking authority under the Government Securities Act of 1986 for government securities brokers and dealers expired on October 1, 1991. The Agencies support prompt reauthorization of this authority.
- **Misleading statements as violation of federal securities laws.** The Agencies support legislation that would make it an explicit violation of the Securities Exchange Act of

1934 to make false or misleading written statements to an issuer of government securities in connection with the primary issuance of such securities.

- **Registration of GSE securities.** The Agencies support legislation removing the exemptions from the federal securities laws for equity and unsecured debt securities of Government-sponsored enterprises ("GSEs"), which would require GSEs to register such securities with the SEC.
- **Backup position reporting.** The Treasury, the FRBNY, and the SEC support legislation that would give the Treasury backup authority to require reports from holders of large positions in particular Treasury securities. This authority would not be used unless the reopening policy and other measures implemented fail to solve the problem of acute, protracted market shortages. The Federal Reserve Board believes that the reopening policy makes this authority unnecessary and that it would be difficult to resist activating this authority if it were granted; thus, it opposes this proposal.
- **Sales practice rules.** The Treasury and the SEC support legislation granting authority to impose sales practice rules, but differ on the implementation and extent of such rules. The Federal Reserve does not believe that a case has been made for sales practice rules authority, but would not oppose application of such rules to National Association of Securities Dealers members.
- **Backup transparency authority.** The SEC supports legislation that would grant it authority to require, if deemed necessary, expanded public dissemination of price and volume information in the secondary market for government securities. The Treasury and the Federal Reserve believe that private sector initiatives should be allowed to develop and that the costs of such regulation would outweigh the benefits at this time; therefore, they oppose this proposal.
- **Audit trails.** The SEC supports legislation that would give it authority to require audit trails — time-sequenced reporting of trades to a self-regulatory organization — in the government securities market. The Treasury and the Federal Reserve believe that the costs of such regulation would outweigh the benefits, and oppose this proposal.

PUBLIC DEBT NEWS



Department of the Treasury • Bureau of the Public Debt • Washington, DC 20239

EMBARGOED FOR RELEASE
January 22, 1992
4:00 p.m.

CONTACT: Office of Financing
202/219-350

TREASURY MODIFIES AUCTION RULES

The Department of the Treasury, the Federal Reserve, and the Securities and Exchange Commission today released their joint review of the government securities market. Also released, as a proposed rule, was the uniform offering circular which formalizes and combines in one document Treasury's auction rules.

Several changes to the auction rules were announced in October 1991 and are already in place. The following rule changes are being announced today and will become effective with the auction of the 3-year note on February 11, 1992.

Reporting Net Long Positions

A competitive bidder must report its net long position in the security being offered when the total of all its bids for that security and the bidder's net long position in the security equals or exceeds \$2 billion, unless otherwise announced. Bidders who meet this requirement and are customers of a depository institution or government securities broker/dealer must report their positions through the institution submitting the bid on their behalf.

Restrictions on Noncompetitive Bidding

A bidder, whether bidding directly or submitting bids through a depository institution or government securities broker/dealer, may not submit a noncompetitive bid for its own account in the same auction in which it is submitting a competitive bid for its own account.

A bidder may not submit a noncompetitive bid for the security being auctioned if the bidder holds a position in "when issued" trading, or in futures or forward contracts. Furthermore, a noncompetitive bidder may not enter into any agreement to purchase or sell or otherwise dispose of the security being auctioned, nor may it commit to sell the security prior to the designated closing time for receipt of competitive bids.

Customer Bid Confirmation

Any customer that is awarded \$500 million or more in an auction must furnish, no later than 10:00 a.m. local time the day following the auction, written confirmation of its bid to the Federal Reserve bank or branch where the bid was submitted. The depository institution or government securities broker/dealer submitting a bid for a customer is responsible for notifying its customer of this requirement.

Joint Report on the Government Securities Market

Department of
the Treasury



Securities and
Exchange Commission



Board of Governors
of the
Federal Reserve System



January 1992

Joint Report on the Government Securities Market

**Department of
the Treasury**



**Securities and
Exchange Commission**



**Board of Governors
of the
Federal Reserve System**



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DEPARTMENT OF THE TREASURY
WASHINGTON

January 22, 1992

The Honorable J. Danforth Quayle
President
United States Senate
Washington, D.C. 20510

Dear Mr. President:

We are pleased to transmit our report on the government securities market, as promised in statements before Congressional subcommittees last year.

The recent widely publicized events involving abuses in the government securities market have prompted us to undertake a thorough review of the market that the federal government relies upon to meet its borrowing needs. The Federal Reserve Bank of New York was a full participant in this review, and its views are reflected here as well. Our recommendations for legislation and changes in policies are contained in this report. We believe that these reforms will improve the fairness and efficiency of the market, to the benefit of taxpayers and investors alike.

We urge the Congress to move swiftly in enacting our legislative recommendations.

We are also transmitting the report to the Speaker of the House.

Sincerely,

Nicholas F. Brady
Secretary
Department of the
Treasury

Richard C. Breeden
Chairman
Securities and
Exchange Commission

Alan Greenspan
Chairman
Board of Governors
of the Federal
Reserve System



DEPARTMENT OF THE TREASURY
WASHINGTON

January 22, 1992

The Honorable Thomas S. Foley
Speaker
House of Representatives
Washington, D.C. 20515

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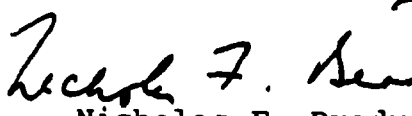
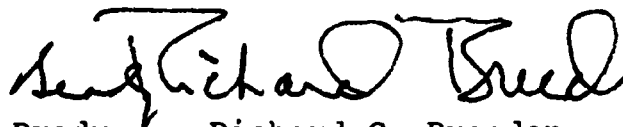

		
Nicholas F. Brady Secretary Department of the Treasury	Richard C. Breeden Chairman Securities and Exchange Commission	Alan Greenspan Chairman Board of Governors of the Federal Reserve System

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OVERVIEW OF THE GOVERNMENT SECURITIES MARKET

Treasury Auctions

The Treasury sells marketable bills, notes, and bonds in more than 150 regular auctions per year. Treasury bills are 13-week, 26-week, or 52-week securities that are auctioned at a discount from face value, rather than carrying an interest coupon. Short-term cash-management bills are also auctioned when required by the Treasury's cash-flow needs. Coupon-paying securities include notes and bonds. Treasury notes are currently auctioned in 2-year, 3-year, 5-year, 7-year, and 10-year maturities. Treasury bonds are currently auctioned in a 30-year maturity. The Treasury also issues nonmarketable securities, such as savings bonds and certain government account issues.

The Treasury uses a sealed-bid, multiple-price auction mechanism. Competitive bidders for Treasury securities to be held in the commercial book-entry system submit their tenders in writing at Federal Reserve banks. Each successful competitive bidder is awarded securities at a price that reflects the yield bid. As a result, successful bidders for a security may pay different prices for that security.

Instruments

Sophisticated financial instruments based on Treasury securities have been developed over time. For example, zero-coupon securities (such as those created through the Treasury's program for Separate Trading of Registered Interest Principal — "STRIPS") and derivative instruments (including forward contracts, futures, and options) have become widespread.

Repurchase agreements ("repos") are commonly used to fund positions in Treasury securities. A repo comprises two distinguishable transactions: the sale of Treasury securities, and a forward agreement to repurchase the same securities for a certain price at a certain time in the future. A reverse repo is the other side of a repo transaction. The maturities of repos are typically overnight or a few days but can extend for longer periods.

Government agencies such as the Government National Mortgage Association, the Small Business Administration, and the Tennessee Valley Authority either guarantee securities or issue marketable debt. The Government-sponsored enterprises ("GSEs") — Federal National Mortgage Association, Federal Home Loan Mortgage Corporation, Farm Credit System, Federal Home Loan Bank System, and Student Loan Marketing Association — also issue marketable debt, subordinated debt, and guaranteed asset-backed securities. Some GSEs also issue exchange-traded equity securities.

Markets and Market Participants

Government securities are traded predominantly in an over-the-counter market, comprised of a network of dealers, brokers, and investors who effect transactions in Treasury

and other government securities over the telephone. The market is largely a wholesale one in which institutional investors, such as banks, thrifts, dealers, pension funds, insurance companies, mutual funds, and state and local governments operate. However, a significant number of small, retail investors also trade government securities through brokers and dealers. Although all marketable Treasury notes, bonds, and STRIPS are listed on the New York Stock Exchange ("NYSE"), exchange trading volume is a small fraction of total over-the-counter volume. Some derivative instruments on Treasury securities trade on regulated futures exchanges, while others are mainly over-the-counter instruments.

Primary dealers are the firms with which the Federal Reserve conducts its open market operations. Although there are approximately 1,700 brokers and dealers (including banks) trading in the secondary market, the 38 primary dealers account for a majority of the trading volume. Daily trading volume by primary dealers in Treasury securities, excluding financing transactions, averaged \$85 billion per day in September 1991, according to data reported to the Federal Reserve Bank of New York ("FRBNY"). By contrast, the average daily volume of equities trading on the NYSE is \$6 billion. Though the aggregate dollar value of trading in the government securities markets is much larger than that in the equity markets, the number of daily trades is actually much smaller. Over 100,000 individual equity trades per day are reported through the current equity trade reporting systems. By way of comparison, about 2,000 trades per day in Treasury securities are being reported through the new GOVPX system (though it only captures a portion of all government securities trading).

The primary dealers and some other market participants rely on interdealer brokers (currently seven in number) to trade in the market for government securities. Interdealer brokers compile the best bid and ask prices provided by the dealers and make this information available on computer screens. The brokers receive a commission for arranging trades. The identities of the dealers who submit the price quotes are kept confidential, with the understanding that anonymous trading allows the dealers to protect the confidentiality of their trading strategies.

Settlement — the exchange of securities for funds — is performed electronically and typically occurs one business day after a buyer and seller agree on a trade. The electronic system used for settlement of Treasury securities and many other government securities is the commercial book-entry system maintained by the Federal Reserve System. Funds are transferred simultaneously over the system. This system enables government securities trades to be settled quickly (within seconds) and relatively cheaply, thus contributing substantially to market liquidity.

Much of the trading activity in government securities is settled through the Government Securities Clearing Corporation ("GSCC"), a clearing organization that provides its members with automated trade comparison and netting services for Treasury and other government securities. The most active brokers, dealers, and banks in the government securities market are GSCC members. GSCC combines each member's total purchases and sales for each security with other GSCC members into a single net purchase or sale. This

process greatly reduces the amount of trades that have to be cleared through the commercial book-entry system and, along with the guarantee GSCC provides, substantially reduces counterparty risk for GSCC members.

Regulation

The Secretary of the Treasury ("Secretary") is authorized under Chapter 31 of Title 31, United States Code, to issue Treasury securities and to prescribe terms and conditions for their issuance and sale. The Secretary may issue bonds under 31 U.S.C. § 3102, notes under 31 U.S.C. § 3103, and certificates of indebtedness and Treasury bills under 31 U.S.C. § 3104. Under 31 U.S.C. § 3121, the Secretary may prescribe the form of such securities and the terms and conditions for the issuance and sale of the securities. Treasury auction rules are issued under this authority.

Compliance and enforcement responsibility for the auction rules rests with the Treasury. The Treasury may bar or suspend a firm from auctions, and the Treasury reserves the right to reject bids in auctions. However, the Securities and Exchange Commission ("SEC"), the Treasury, and the self-regulatory organizations ("SROs") are not authorized to examine government securities firms for compliance with Treasury auction rules. Securities fraud is the enforcement responsibility of the SEC and the Justice Department, and the Justice Department enforces the antitrust laws.

Brokers and dealers in the secondary market for government securities are regulated under the authority of the Government Securities Act of 1986 ("GSA"). In addition, broker-dealers and banks are subject to regulation under the Securities Exchange Act of 1934 and the banking laws, respectively. Under the GSA, the Treasury has promulgated regulations concerning financial responsibility, protection of investor securities and funds, recordkeeping, reporting, and auditing of government securities brokers and dealers. The Treasury also was given responsibility for the development of regulations related to the custody of government securities held by depository institutions. The GSA required the SEC and the Federal Reserve Board to promulgate rules establishing the procedures and forms to be used by government securities brokers and dealers for the registration and notice process.

In promulgating the regulations, the Treasury was required to consult with the SEC and the Federal Reserve Board. As a result of these consultations and the Treasury's analysis, most of the SEC regulations (e.g., customer protection, recordkeeping, reports, and audits) that applied to registered brokers and dealers were, with limited exceptions, adopted for firms registered pursuant to the GSA. Enforcement authority for these rules rests with the SEC and the SROs or with financial institution regulators, depending on the entity. Treasury rulemaking authority under the GSA expired on October 1, 1991.

SUMMARY OF REFORMS¹

ADMINISTRATIVE AND REGULATORY CHANGES

- **Broadening participation in auctions:**
 - All government securities brokers and dealers registered with the SEC are now allowed to submit bids for customers in Treasury auctions. Formerly, only primary dealers and depository institutions could do so (announced October 25).
 - Any bidder is now permitted to bid in note and bond auctions without deposit, provided the bidder has an agreement with a bank (an "autocharge agreement") to facilitate payment for securities purchased at auctions. Formerly, only primary dealers and depository institutions could do so (announced October 25).
 - To facilitate bidding by smaller investors, the noncompetitive award limitation has been raised from \$1 million to \$5 million for notes and bonds (announced October 25).
- **Stronger enforcement of auction rules:**
 - The Federal Reserve now engages in spot-checking of customer bids in Treasury auctions for authenticity (announced September 11).
 - The Treasury and the Federal Reserve are instituting a new system of confirmation by customers receiving large awards (over \$500 million), to verify the authenticity of customer bids.
 - The Treasury and the Federal Reserve have tightened enforcement of noncompetitive bidding rules.
- **Detecting and combatting short squeezes:**
 - **Improved surveillance of the Treasury market.** A new working group of the Agencies has been formed to improve surveillance and strengthen interagency coordination. The Federal Reserve Bank of New York

¹ Reforms have the unanimous support of the Department of the Treasury, the Board of Governors of the Federal Reserve, and the Securities and Exchange Commission ("SEC") (the "Agencies") unless otherwise noted. All actions listed are recommended or implemented as part of this report, unless otherwise indicated.

("FRBNY") will enhance and expand its market surveillance efforts, in its role as the agency that collects and provides the SEC, the Treasury, and the Federal Reserve Board with information needed for surveillance purposes.

- **Reopening policy to combat short squeezes.** The Treasury will provide additional quantities of a security to the marketplace when an acute, protracted shortage develops, regardless of the reason for the shortage. The reopening of issues will greatly reduce the potential for short squeezes. Reopenings could occur either through standard auctions, through "tap" issues whereby the Treasury offers securities to the market on a continuous basis, or through other means.

Changes to Treasury auction policies:

- **Automation.** The Treasury and the Federal Reserve have accelerated the schedule for automating Treasury auctions. It is anticipated that the auctions will be automated by the end of 1992 (announced September 11).
- **Proposal of uniform-price, open auction system.** The Treasury will consider implementing an open method of auctioning securities with repeated rounds of bidding at descending yields. The total bids received at the announced yield would be announced after each round. All securities would be awarded at a single yield. Such a system will be feasible once the auctions are automated and could encourage broader participation in Treasury auctions.
- **Publication of uniform offering circular.** Treasury auction rules and procedures have been compiled into a uniform offering circular, to be published in the *Federal Register* with a request for comments.
- **Change to noncompetitive auction rules.** To limit noncompetitive bidding to the small, less sophisticated bidders for whom it was designed, the Treasury will not permit a noncompetitive bidder in a Treasury auction to have a position in the security being auctioned in the when-issued, futures, or forward markets prior to the auction. Furthermore, the Treasury will not permit bidders to submit both competitive and noncompetitive bids in a single auction.
- **Change in net long position reporting required on auction tender form.** To streamline reporting requirements, the Treasury will not require competitive bidders to report net long positions at the time of the auction, unless the total of the bidder's net long position plus its bid exceeds a high threshold amount. This threshold amount will represent a substantial share of each auction and will be announced for each auction.

- **Improvements to the primary dealer system:**
 - **Opening up the system by eliminating the market share requirement.** The Federal Reserve will gradually move to a more open set of trading relationships. To this end, the FRBNY is eliminating the requirement that each primary dealer effect at least one percent of all customer trades in the secondary market. The FRBNY expects to add counterparties that meet minimum capital standards, initially in modest numbers, but on a larger scale once open market operations are automated.
 - **Clarification of regulatory authority over primary dealers.** In the future, direct regulatory authority over primary dealers will rest unambiguously with the primary regulator — in most cases, the SEC. Although the FRBNY has no statutory authority to regulate the primary dealers, the primary dealer system may have generated the false impression in the marketplace that the FRBNY somehow regulates or takes responsibility for the conduct of primary dealers. To make clear that its relationship with the primary dealers is solely a business relationship, the FRBNY will eliminate its dealer surveillance program, while upgrading its market surveillance program as described above.
 - **Other features regarding primary dealers.** To remain a primary dealer, firms must demonstrate to the FRBNY that they make reasonably good markets, provide it with market information, and bid in Treasury auctions. Primary dealers must also maintain capital standards. Failure to meet the Federal Reserve's performance standards, or the capital standards, will lead to removal of the primary dealer designation. In addition, any primary dealer that is convicted of (or pleads guilty or *nolo contendere* to) a felony will face suspension of its primary dealer designation.
- **Enhanced GSCC.** The Agencies support enhancements to the Government Securities Clearing Corporation, which provides comparison and netting facilities for reducing risk in the government securities market.

LEGISLATIVE RECOMMENDATIONS

- **Reauthorization of Treasury rulemaking authority under GSA.** Treasury rulemaking authority under the Government Securities Act of 1986 for government securities brokers and dealers expired on October 1, 1991. The Agencies support prompt reauthorization of this authority.
- **Misleading statements as violation of federal securities laws.** The Agencies support legislation that would make it an explicit violation of the Securities Exchange Act of

1934 to make false or misleading written statements to an issuer of government securities in connection with the primary issuance of such securities.

- **Registration of GSE securities.** The Agencies support legislation removing the exemptions from the federal securities laws for equity and unsecured debt securities of Government-sponsored enterprises ("GSEs"), which would require GSEs to register such securities with the SEC.
- **Backup position reporting.** The Treasury, the FRBNY, and the SEC support legislation that would give the Treasury backup authority to require reports from holders of large positions in particular Treasury securities. This authority would not be used unless the reopening policy and other measures implemented fail to solve the problem of acute, protracted market shortages. The Federal Reserve Board believes that the reopening policy makes this authority unnecessary and that it would be difficult to resist activating this authority if it were granted; thus, it opposes this proposal.
- **Sales practice rules.** The Treasury and the SEC support legislation granting authority to impose sales practice rules, but differ on the implementation and extent of such rules. The Federal Reserve does not believe that a case has been made for sales practice rules authority, but would not oppose application of such rules to National Association of Securities Dealers members.
- **Backup transparency authority.** The SEC supports legislation that would grant it authority to require, if deemed necessary, expanded public dissemination of price and volume information in the secondary market for government securities. The Treasury and the Federal Reserve believe that private sector initiatives should be allowed to develop and that the costs of such regulation would outweigh the benefits at this time; therefore, they oppose this proposal.
- **Audit trails.** The SEC supports legislation that would give it authority to require audit trails — time-sequenced reporting of trades to a self-regulatory organization — in the government securities market. The Treasury and the Federal Reserve believe that the costs of such regulation would outweigh the benefits, and oppose this proposal.

JOINT REPORT

I. Introduction

The U.S. government securities market is the largest and most liquid securities market in the world. It has shown the ability to absorb efficiently the enormous amounts of Treasury securities made necessary by the massive borrowing requirements of the U.S. Government. The market also serves the needs of the Federal Reserve in conducting open market operations, the Federal Reserve's most important monetary policy tool. The enormous liquidity and pricing efficiency of the market provide incalculable benefits to other financial markets in the United States and worldwide by providing a continuous benchmark for interest rates on dollar-denominated instruments across the maturity spectrum. Because of its demonstrated success in meeting both public and private needs, the U.S. government securities market has been a model for other government securities markets around the world.

Over time, there has been significant innovation in the U.S. government securities market. Examples include the active trading of Treasury securities on a when-issued basis prior to Treasury auctions, which helps the market gauge demand and price the securities being offered; repurchase and reverse repurchase agreements, which serve both to increase liquidity and to allow dealers to finance their inventory of Treasury securities; the development of active futures and options markets related to Treasury securities, enabling market participants to pursue diverse hedging strategies in a liquid market setting; and the creation of zero-coupon instruments through the stripping of Treasury securities, which allows the market to restructure payment flows to meet the varying needs of different purchasers. These innovations have benefitted the market and the taxpayer by increasing liquidity, thereby lowering the government's financing costs.

On the whole, this market has enabled the government to meet its large financing needs in a cost-effective manner for the taxpayer, which is the government securities market's primary public purpose. Nevertheless, the events of 1991 have focused public attention on some shortcomings in this market. In August 1991, under the pressure of investigations by the Securities and Exchange Commission (the "SEC") and the Justice Department, Salomon Brothers Inc ("Salomon"), a major participant in the market, admitted deliberate and repeated violations of Treasury auction rules beginning in 1990. In addition, in two widely publicized instances during 1991, so-called "short squeezes" developed after an auction, in one case apparently as a result of very high concentration of auction awards. Taken together, these events threatened the public's confidence in this crucial marketplace, which ultimately could result in higher costs for taxpayers in financing the national debt.

In September 1991, in the wake of Salomon's August admissions of wrongdoing, the Treasury Department, the Federal Reserve, and the SEC (collectively, the "Agencies")

undertook a joint review of the government securities market.¹ This report is the product of that review. The report addresses a broad range of government securities market issues that arose directly or indirectly from the events of 1991, including the need to strengthen enforcement of Treasury's auction rules; the need to automate the auctions; potential changes in Treasury's auction technique and debt management policies; and the role of the primary dealers. The report also addresses certain issues that were widely debated before the events of mid-1991, such as reauthorization of Treasury's rulemaking authority under the Government Securities Act, the need for sales practice rulemaking authority, and "transparency" — that is, the availability of timely, accurate price and volume information to market participants. Finally, the report proposes to remove the exemption under the federal securities laws for certain securities issued by Government-sponsored enterprises ("GSEs").

The Agencies do not believe that the government securities market is flawed or broken in any fundamental economic sense. However, serious problems have arisen, and these problems suggest that various aspects of the efficient operation and regulation of this marketplace can be improved. Indeed, the events described above suggest several specific areas for improvement, including better enforcement of auction rules and more effective methods of preventing and alleviating "short squeezes."² The improvements recommended in this report include some basic reforms that are designed to lessen the potential for fraud and misconduct and to increase the Agencies' ability to detect such misconduct when it occurs.

This report reflects an attempt of the Agencies to reach a consensus on the changes that are necessary in the regulation of this marketplace. There is substantial agreement among the Agencies on the necessary initiatives and the direction in which government policy should move. As described below, however, there remain some differences with respect to certain specific proposals for change.

The Agencies share common objectives in evaluating potential changes in government policy. These objectives include preserving and enhancing the efficiency of the government's financing mechanism, ensuring the integrity and fairness of the marketplace, deterring and detecting fraud, and protecting investors. In particular, there is a strong consensus that, while change is necessary, that change must be managed with care to assure that the national debt is financed at the lowest possible cost.

¹ The SEC and the Department of Justice are conducting separate investigations from a law enforcement perspective. These investigations are not yet complete, and neither the SEC nor the Department of Justice has reached any conclusions with respect to the actions of any particular market participant. As a result, the discussion contained herein should not be understood as reaching any conclusions of fact or law with respect to the SEC's or the Department of Justice's investigations.

² In fact, as described in this report, Treasury has already used its authority to correct some of the problems that were highlighted by these events.

Any degradation in the smooth functioning of the government securities market would result in higher costs to the taxpayer. An increase in financing costs of only one basis point — one hundredth of one percentage point — would cost taxpayers over \$300 million each year. Thus, in pursuing the goal of market integrity, the Agencies are sensitive to the need to avoid unnecessary responses that could drive investors and market makers out of the market. Moreover, every avenue for achieving supervisory goals through market solutions should be explored.

Background

The Government Securities Act. Congress passed the Government Securities Act of 1986 (the "GSA") with the support of the Reagan Administration, the SEC, the Federal Reserve, and many market participants. The GSA closed then-existing gaps in the regulation of market participants that had been highlighted by the failure of certain previously unregulated government securities dealers, involving losses for investors and, in some cases, fraudulent activity in the market for repurchase agreements.

Prior to the enactment of the GSA, some government securities brokers and dealers were not registered with or regulated by any federal government agency. The GSA required this group of brokers and dealers to register with the SEC. In addition, the GSA granted to the Treasury limited rulemaking authority³ over all government securities brokers and dealers, including financial institutions⁴ engaged in this business. The Treasury rules are enforced by the appropriate regulatory agency. The federal banking regulators fill that role for financial institutions that are government securities brokers or dealers, and the SEC does so for all other government securities firms.

Treasury's rulemaking authority under the GSA expired on October 1, 1991. Before both houses of Congress had voted to renew that authority, Salomon admitted its violations and triggered intense scrutiny of the market for government securities. In this atmosphere, the Treasury's authority under Section 15C of the Securities Exchange Act of 1934 (the "Exchange Act") to promulgate new rules was allowed to expire, although all rules already promulgated by the Treasury under the GSA remain in effect. The Agencies recommend that Treasury's rulemaking authority be reinstated promptly.

The Salomon episode and market squeezes. While the events referred to above have received widespread publicity, they are restated here as background for some of the recommendations made in this report.

³ Treasury's GSA rulemaking authority was limited to matters involving financial responsibility, recordkeeping, reporting and confirmation requirements, and custody and use of customers' securities and funds balances.

⁴ The term "financial institution," for purposes of the GSA, means banks and savings and loans. 15 U.S.C. § 78c(a)(46).

Fraudulent bids. The inquiries into Salomon's conduct began, seemingly innocuously, on February 21, 1991, when Federal Reserve Bank of New York ("FRBNY") staff called Salomon concerning a bid the firm had made in the Treasury five-year note auction that day on behalf of an entity identified by Salomon as "Warburg Asset Management." A Salomon official stated that the firm had made a mistake and that Warburg Asset Management was actually Mercury Asset Management.⁵ S.G. Warburg, a U.S.-based primary dealer, had separately submitted a tender at the same yield for its own account. Combined, the two bids exceeded 35 percent of the public offering amount.

The two bids triggered a discussion between staff of the FRBNY and the Treasury's Bureau of the Public Debt. The sole issue then under consideration was whether Warburg (or Mercury) Asset Management and S.G. Warburg should be deemed a single bidder for purposes of the 35 percent rule.⁶

The Treasury decided to accept both bids because the combined awards to the two bidders — after proration — did not exceed 35 percent of the public offering amount. Nonetheless, the Treasury subsequently further considered the relationship between S.G. Warburg and Mercury Asset Management for purposes of application of the 35 percent rule. The Treasury's Bureau of the Public Debt sent a letter dated April 17, 1991, to Mercury Asset Management, which provided details concerning the two bids submitted in the February five-year note auction and informed Mercury of the Treasury's decision to treat the two entities as a single bidder in the future for purposes of the 35 percent limitation. Copies of this letter were sent to officers of S.G. Warburg (the primary dealer), S.G. Warburg Group P.L.C. (the British parent company), and the FRBNY. In addition, a copy of the letter was sent to the Salomon official in charge of government securities trading.

As Salomon subsequently admitted, the February bid from "Warburg Asset Management" was unauthorized. Salomon's top executives had learned in April that the securities in question were, in fact, purchased by Salomon itself. However, Salomon's senior management did not promptly inform the appropriate government officials of the unauthorized bid.

Short squeezes. The problem of short squeezes in the market was drawn into sharp focus during 1991. While yields on Treasury securities of approximately equal maturity vary constantly, there were two instances during the Spring of 1991 in which particular securities traded well off the yield curve for an extended period. In the first case, a short squeeze

⁵ Mercury Asset Management P.L.C. is a subsidiary of S.G. Warburg Group P.L.C. S.G. Warburg, a U.S. primary dealer, is also a subsidiary of S.G. Warburg Group P.L.C. Warburg Asset Management is a subsidiary of Mercury Asset Management that operates in the United Kingdom.

⁶ This rule limits the amount Treasury will recognize as bid at a single yield by a single bidder to 35 percent of the public offering amount and also limits awards to a single bidder to 35 percent of the public offering amount.

developed in the two-year note auctioned on April 24, 1991. When the squeeze first manifested itself in mid-May, the yield on the April two-year note moved considerably out of line with surrounding market rates, and the notes were "on special" in the repurchase agreement ("repo") market.⁷

The shortage of the April two-year note did not become evident until almost four weeks after the securities were auctioned. Awards at the auction itself were not particularly concentrated. It appears that the shortage developed when the securities were not made available to the repo market.

As the squeeze in the April two-year note began, Salomon submitted large, aggressive bids for itself and two customers in the auction of two-year notes on May 22. As a result of these bids and additional purchases in the aftermarket, Salomon's position on the settlement date was almost 94 percent of the issue, according to Salomon's subsequent public statements.

A number of market participants contacted the FRBNY and the Treasury to point out the shortage in the May two-year note. From the information available to Treasury officials, it appeared that the squeeze resulted from the concentration of auction awards to Salomon and some of its customers. Treasury officials thought the situation serious enough to warrant investigation by the SEC. On May 29, the Treasury told the SEC's Divisions of Market Regulation and Enforcement about the situation and provided them with information concerning auction awards. The SEC promptly began investigating the matter. In addition, the Antitrust Division of the Department of Justice requested and was provided information pertinent to its own investigation of the squeeze. As the investigations of the Warburg/Mercury incident and the May short squeeze progressed, Salomon asked outside counsel to investigate the firm's potential legal problems.

The government investigations ultimately resulted in Salomon's August 1991 admissions that it had submitted unauthorized customer bids in several auctions in 1990 and 1991 and led to changes in Salomon's top management.

Improprieties involving GSE securities. In addition to the falsified Treasury auction bids discussed above, Salomon admitted that it had engaged in the practice of overstating its customer orders in connection with distributions of the securities of GSEs. It now appears that this practice was widespread among GSE selling group members.

On January 16, 1992, the SEC, the Federal Reserve, and the Office of the Comptroller of the Currency instituted administrative proceedings against 98 GSE selling group members for violating various recordkeeping requirements by preparing and

⁷ In other words, market participants desiring to borrow the two-year notes had to accept an interest rate significantly lower than the prevailing repo rate on funds they deposited with their counterparties. To look at it another way, owners of the scarce two-year notes could finance them at exceptionally low interest rates.

maintaining records reflecting inflated indications of customer orders or sales. Simultaneously with the order instituting proceedings, virtually all of these selling group members submitted offers of settlement, which were accepted. The terms of the settlements require each of such selling group members to: (1) cease and desist from future violations of the recordkeeping requirements; (2) pay civil money penalties of up to \$100,000 to the U.S. Treasury; and (3) devise, implement, and maintain policies and procedures designed to ensure future compliance with the relevant provisions of the Exchange Act. The SEC also published a report pursuant to Section 21(a) of the Exchange Act concerning the results of its investigation of violations of law in connection with the distribution of GSE securities.

Aftermath. The events described above have triggered a thorough examination of various aspects of the government securities market. Since August 1991, the Treasury has made important changes in its auction rules and other policy changes under its existing regulatory authority, as described below. This report recommends or implements a number of additional measures. The goal of all of these initiatives is to protect and improve the integrity and efficiency of the government securities market.

II. Treasury Securities Market Issues

Enforcement of auction rules

The Salomon episode pointed out the need for more effective enforcement of auction rules.⁸ The Agencies agree that legislation is desirable to strengthen auction rule enforcement and to enhance private sector oversight of auction practices. Moreover, since August 1991, the Treasury has taken a number of important steps to enhance rule enforcement, including large bidder certification and tighter enforcement of rules governing noncompetitive bidding.

Misleading statements to issuers. The Agencies support legislation that would make it an explicit violation of the Exchange Act to submit false or misleading written statements to an issuer of government securities in connection with the primary issuance of securities. Such legislation would re-emphasize the applicability of the existing antifraud provisions of the federal securities laws to the government securities market. It would also serve to reaffirm the seriousness with which this matter is taken by the government by serving notice on participants in Treasury auctions and on purchasers of securities from federal agencies, as well as on members of the selling groups of GSEs, that the SEC and other regulatory agencies will undertake investigations of, and enforcement actions against, those who make misleading written statements.

⁸ Treasury's remedy for breaches of its rules is to exclude the bidder from Treasury auctions. In addition, persons who commit fraud in the context of a Treasury auction remain subject to potential civil and criminal actions under Section 10(b) of the Exchange Act and Rule 10b-5 thereunder, the general antifraud proscriptions, as well as possible criminal actions under 18 U.S.C. §§ 1001 and 1005.

Such a provision would also reaffirm management's responsibility to supervise the conduct of government securities market participants to ensure compliance with high ethical standards. The recommended statutory provision would therefore foster compliance by government securities brokers and dealers with the general antifraud provisions of the federal securities laws.⁹

The Treasury is developing written certification requirements for dealers, depository institutions, and others, including customers, who purchase securities in Treasury auctions. These written certifications, in conjunction with the proposed statutory provision, will provide an additional mechanism for enforcing Treasury auction rules.

Spot checks and large bidder certification. In August 1991, the FRBNY (which receives almost all large bids) began making spot checks by contacting customers of primary dealers to verify the legitimacy of large winning bids submitted for customer accounts. In addition, the Treasury and the FRBNY are implementing a more formal system to require customers who make large winning bids through dealers or depository institutions to verify their bids in writing to the Federal Reserve prior to the settlement date. While no verification system is totally foolproof, it would now be extremely difficult for a firm to evade the 35 percent limitation by submitting large, unauthorized "customer" bids. While it is recognized that the new certification requirement will impose an additional regulatory burden, the Treasury and the FRBNY are implementing this requirement with a view to minimizing that burden.

The new verification system will work as follows:

1. All customers receiving awards of over \$500 million will be required to confirm their bid to the Federal Reserve via facsimile on the bidder's letterhead. The deadline for confirmation will be 10:00 a.m. on the business day following the auction.
2. The Federal Reserve will continue to spot check large bids both above and below the \$500 million level by contacting bidders directly by telephone.
3. When a customer award of over \$500 million is made through a dealer that was awarded over 25 percent of an auction for its own account, Federal Reserve personnel will call the customer directly to seek additional confirmation. To preserve the confidentiality of the dealer's award, this call will be presented as part of the Federal Reserve's existing program of spot checking large bids. The size of the dealer's bid will not be discussed with the customer.

⁹ Such a provision would not affect existing sanctions, such as penalties for false statements provided by 18 U.S.C. §§ 1001 and 1005 and the general antifraud and recordkeeping provisions set forth in the Exchange Act.

4. Failure of a customer to confirm a bid in a timely manner will mean that the dealer will be held responsible to make good on the bid, unless doing so would cause a violation of the 35 percent rule, in which case the Treasury will reduce the size of the issue accordingly. Any failure to confirm will cause an investigation by the appropriate regulatory authorities.

Noncompetitive abuses. The Treasury permits noncompetitive bids of up to \$1 million for bills and \$5 million for notes and bonds. Unlike competitive bidders, who receive the yield they actually bid, all noncompetitive bidders get the average yield. The Treasury permits noncompetitive bidding in order to make it easier for smaller, less sophisticated bidders to bid in Treasury auctions. At the same time, it is necessary to maintain a large pool of competitive bidders to determine a price in the auction that accurately reflects market demand.

Abuses of the Treasury's noncompetitive bidding rules have recently come to light, both before and after the industry-wide investigations triggered by the Salomon episode. These abuses generally involved dealers skirting these rules by effectively arranging to purchase for their own account large amounts of securities at the price paid by noncompetitive bidders. The pattern of abuse had been for a list of individuals — often employees of the firm — all to bid the maximum noncompetitive amount and then sell their positions to the firm very shortly after the auction. In the Treasury's view, practices of this nature are not in keeping with the purpose of the noncompetitive bidding rules.

As a result of these abuses, the Treasury and the Federal Reserve banks are now engaging in more aggressive policing of noncompetitive bids. The Federal Reserve banks are responsible for the first level of review and for submitting all questionable bids to the Treasury's Bureau of the Public Debt. The Treasury pays particular attention to bidders who place large noncompetitive bids in auctions on a regular basis. In addition, the Treasury and the Federal Reserve are developing a mechanism for interdistrict policing of noncompetitive bids. The centralization of information that this requires will become easier as progress is made on auction automation. In cases of clear abuse, the Treasury will take appropriate measures, including referral of cases involving suspected fraud to the SEC for enforcement action.

Uniform Offering Circular. Simultaneously with the issuance of this report, the Treasury is releasing for publication in the *Federal Register* for comment a uniform offering circular for marketable Treasury securities. The offering circular contains auction rules, including the new large bidder certification requirements, the existing 35 percent limitation, and the definition of a "single bidder." This effort by the Treasury to formalize the rules with input from market participants and other interested parties should result in rules that are more easily accessible and more readily understood.

Short Squeezes and Reopenings

How short squeezes arise. Market shortages of recently issued Treasury securities arise from time to time. Such shortages are usually temporary and relatively mild and are corrected quickly through market forces. In rare cases, they can be acute and protracted. In these instances, market forces fail to relieve the squeeze, and questions of market manipulation may arise.

Most market shortages appear to be a natural, temporary by-product of the way in which the Treasury distributes its securities.¹⁰ Before a security is auctioned, dealers often sell the security short to customers (or other dealers) in the when-issued market, with the expectation of covering short positions by subsequent purchases — either in the when-issued market, the auction, or the aftermarket. This process benefits the Treasury by serving a price discovery function and by stretching out the actual distribution period for each issue, thereby allowing the market more time to absorb large issues without disruption.

When-issued trading in Treasury securities functions somewhat like trading in a futures market, in which positions may be taken and covered many times before the actual settlement date. In addition, the when-issued Treasury security displaces the most recently issued Treasury security as the benchmark, "on-the-run" issue in the cash market. In many auctions, the estimated aggregate size of outstanding positions in the when-issued market substantially exceeds the quantity of securities to be sold at that auction at some point between the date of announcement of the auction and the date on which the securities are delivered. Those positions can be taken more cheaply and potentially in greater size (due to the lack of a delivery requirement) during the when-issued period than in subsequent trading.

Market forces ordinarily reduce the size of outstanding positions in the when-issued market as the issue date approaches. However, the leverage, liquidity, and volume of trading in the when-issued market can cause market participants to overestimate their ability to cover short positions prior to settlement. Nevertheless, when-issued trading contributes to the smooth, low-cost distribution of the federal debt, and it should not be discouraged. Solutions to the potential for shortages should be found that do not impede when-issued trading.

Dealers sometimes carry large net short positions in a new Treasury issue immediately prior to the auction. In some cases, holders of short positions find that they cannot acquire the issue to deliver, either in the auction or in the secondary market, at the price anticipated. Instead, dealers may turn to the financing market after the settlement date, where they borrow the security for delivery in a "reverse repo" transaction. When a material shortage develops, the price of the security becomes noticeably higher than Treasury issues of similar maturity, and the cost of borrowing the particular security in the repo market becomes higher.

¹⁰ See Appendix A for a discussion of when-issued trading and the repo market.

Market shortages can develop in a number of ways. Short sellers may simply misgauge market demand because, for example, other market participants do not follow usual trading strategies or anticipated monetary policy actions are not forthcoming. As a general matter, temporary shortages that arise as a consequence of day-to-day trading — and not as a consequence of deliberate manipulation — do not represent a material flaw in the marketplace. These shortages arise from decisions by sophisticated market participants to establish short positions and are generally relieved by natural market processes within a short time. Such shortages are an inherent risk in the price discovery process.

Market developments following the April and May 1991 two-year note auctions demonstrated the potential for acute, protracted squeezes in Treasury issues, despite the huge size of these issues. In fact, a market squeeze that resulted in large losses for some dealers had occurred five years previously in connection with the 30-year bond issued in February 1986.¹¹ However, in the five years since the 1986 squeeze, there had been no demonstrated instances of such protracted, aggravated squeezes.

In contrast to temporary shortages, an acute, protracted shortage can cause lasting damage to the marketplace, especially if market participants attribute the shortage to market manipulation. Dealers may be more reluctant to establish short positions in the future, which could reduce liquidity and make it marginally more difficult for the Treasury to distribute its securities without disruption. Moreover, some market participants may perceive that a protracted squeeze is the product of a scheme by those who benefitted from it. Market manipulation — or even the perception of it — can undermine the integrity of the marketplace, cause participants to withdraw, and produce higher costs for the taxpayer.

The Agencies agree that changes in government policy are needed to deal with acute, protracted squeezes in Treasury issues. The Agencies believe that the best course is to address the problem of short squeezes through changes to the Treasury's debt management practices — in particular, through a new policy of reopening Treasury issues whenever such squeezes occur. The proposed changes in auction technique, discussed below, may also prove helpful in mitigating the short squeeze problem.

Reopenings. The Treasury has the ability to break a squeeze by issuing more of the particular security that is the subject of a squeeze — by "reopening" the issue. In a reopening, the Treasury would simply offer an additional amount of an outstanding issue. By sufficiently increasing the supply of the security, the Treasury can eliminate any shortage.

The Treasury actively considered this option as a way of alleviating the squeeze in the May two-year note. The Treasury decided against this course — and has traditionally been

¹¹ These dealers had sold this bond short as part of a trading strategy that had worked in the past as they prepared to bid for a new 30-year bond in May 1986. However, the trading strategy did not work as expected, apparently because some institutional investors did not make the February 30-year securities available to the repo market.

reluctant to reopen securities issues outside of its normal financing schedule — for three distinct reasons. First is the concern that a policy of reopening securities might cause market participants to demand a higher yield on securities at auction, given the greater uncertainty about the eventual supply of the security. Second, the Treasury could be subjected to frequent calls for reopening. Since some issues would be reopened and others not, the Treasury would inevitably be accused of favoring one group of market participants over another. Third, the Treasury plans its borrowing schedule well in advance, based on the schedule of maturing issues and on projections of the government's cash needs. The unscheduled reopening of a security would, by definition, produce excess cash and disrupt the Treasury's cash management planning.

The Treasury has concluded that, while a reopening policy could be difficult to implement, it is justified under certain circumstances. Uncertainty about the potential damage from acute, protracted shortages may weigh more heavily on the market than the concern that the Treasury might issue an additional amount of a relatively high-priced security. Moreover, adoption of a policy of reopening issues whenever an acute, protracted squeeze occurs would tend to discourage market participants from attempting to generate a squeeze.

The Agencies support this initiative and believe that a policy of reopenings should be effective in addressing the problem of acute, protracted market shortages.

Therefore, under this new approach, the Treasury will be prepared to provide the market with additional supply of any security that is the subject of an acute, protracted shortage. The Treasury will not require evidence of manipulation in deciding whether to reopen a particular issue, but instead will reopen any issue that, in its judgment, is the subject of such a shortage.

Once a decision to reopen has been made, there are a number of ways in which an issue may be reopened.¹² First, the Treasury may immediately auction an amount sufficient to eliminate any possibility that a squeeze could persist. The amount auctioned would depend upon all the facts and circumstances, but could be in the \$1-5 billion range.

Second, the Treasury could sell additional amounts of a security in a "tap" issue managed by the FRBNY. A tap issue would involve an incremental offering of securities by the Federal Reserve, acting as the Treasury's agent. The securities could be sold as market conditions warranted, or the market could be given notice that, at a given spread off the yield curve, the authorities stand ready to supply additional amounts in response to market demand.

A third option that merits further study, but that would require legislation, would be for the Treasury to make additional supply of the securities temporarily available through securities lending, using the Federal Reserve as agent. The advantage of this approach is that

¹² Potential ways of creating additional supply of an issue are discussed in detail in Appendix B.

it is a temporary response to a temporary market imbalance, and would be neutral from the standpoint of the Treasury's debt management — that is, it would not permanently affect the Treasury's cash balance or the amount of outstanding debt.

The Treasury intends to select the appropriate reopening method on a case-by-case basis, and will consider the views of market participants and others concerning the relative merits of alternative means of reopening issues. As experience grows with approaches to reopenings, the Treasury may modify them or develop new ones.

Other measures to address short squeezes. There is a wide range of additional remedial initiatives that could be implemented to address the problem of acute, protracted market shortages. One possible solution would be to establish a new regulatory regime, using regulatory tools that have proved useful in the equity and derivative markets, such as enhanced position reporting and improved audit trails. Position limits in newly issued government securities could also be imposed.

Such regulatory measures could be effective in deterring or alleviating short squeezes. However, such initiatives could also raise taxpayer costs by imposing possibly unnecessary regulatory burdens. Given the relative rarity of acute, protracted short squeezes, the ability to identify them from easily observable market price distortions, and the need to proceed judiciously in this marketplace, the Agencies agree that the reopening policy should be implemented and tested before regulatory measures designed to achieve the same ends are adopted.

Treasury Auction Issues

Background. In order to fulfill its duty to U.S. taxpayers, the Treasury must seek to obtain financing for the U.S. Government at the lowest possible cost. That goal is well served by minimizing the potential for manipulative and collusive behavior in the marketplace.

In general, the Treasury believes that the current "multiple-price, sealed-bid" auction technique has worked well, with an active when-issued market and significant customer participation.¹³ However, this technique, in which each successful bidder's award is made at the yield the participant actually bid, has been criticized by some for failing to minimize financing costs to the Treasury, as well as for encouraging manipulative behavior in the marketplace.

In part as a result of the incidents described above, some have perceived that auctions can be manipulated, that collusive behavior is possible, and that insiders have an unfair advantage over other participants. Other factors that may have contributed to this perception

¹³ See Appendix B for a detailed discussion of Treasury's auction technique and various other possible auction techniques.

include Treasury's auction rules and the auction technique itself, the information advantage historically possessed by the primary dealers, the lack of automation in the auction process, and the historical relative lack of publicly available transaction quotations.

Some commentators have argued that the current multiple-price Treasury auction technique in effect forces bidders to bid through primary dealers to avoid placing bids at a level above the market consensus. As a result, these commentators argue, the primary dealers gain an information advantage due to their exclusive knowledge of the intentions of the large bidders. Moreover, until recently, only primary dealers and depository institutions could submit bids for customers, which further strengthened the market power of primary dealers by fostering the perception of an information advantage.

The lack of automation in the auction process may also create an appearance that market insiders have an advantage over others. Under the current system, bidders submit bids manually at their local Federal Reserve bank. In practice, most of the large primary dealers station employees for this purpose in the lobby of the FRBNY. These employees receive last minute telephone instructions and then fill in and submit the bid sheets by hand. This system presents a logistical hurdle for bidders who might wish to bid directly rather than through a primary dealer.

Steps have been taken or will be taken to address each of these concerns.

Automation. As noted above, Treasury auctions rely to a large extent on a paper-based, manual system for bidding and auction administration. Greater use of automation will make the auction process faster and more efficient, result in fewer errors, facilitate broader participation, and assist in monitoring of compliance with auction rules. It also will enable the Treasury to experiment more easily with different types of auction techniques.

The delay between the submission of bids and the announcement of results inherent in a paper-based system may have an adverse impact on bidding, because bidders do not know for a period of time whether their bids have been successful. As a result, automation may also have the effect of encouraging more aggressive bidding, to the benefit of the taxpayer.

In view of these expected benefits, the Treasury and the Federal Reserve have made the completion of a system to permit automated bidding a high priority. A project is nearing completion at the Federal Reserve Bank of Kansas City that will allow medium-sized and smaller bidders to submit bids to the Federal Reserve banks electronically. This project is expected to be completed by the second quarter of 1992.

There is also a project under way at the FRBNY that will permit electronic bidding by large bidders. This project, which was under way before the Salomon events were disclosed, has already made substantial progress and is scheduled for completion by the end of 1992. The resulting system will be able to handle the multiple-price, sealed-bid auction technique currently in use or a uniform-price, sealed-bid auction. It is expected that it will also be

possible to implement the new open auction technique discussed below by early 1993, if the Treasury determines to do so.

Auction technique. Because Treasury auctions are not automated, it has been impossible to place all potential competitive bidders in Treasury auctions in direct communication at the same time. As a result, the Treasury has used a sealed-bid auction, rather than an "open" auction in which bidding is public and competing bidders can respond.

In addition, different bidders currently pay different prices for the same security, based on their bids. These multiple-price awards result in what economists refer to as the "winner's curse" — the highest bidder "wins" the auction by paying the highest price, only to find that the price paid is higher than the consensus price, as reflected in the market. Because bidders are aware of this "curse," they tend to shade their bids below the maximum they are actually willing to pay.

The other type of sealed-bid auction that some commentators have argued would produce superior results for the Treasury is the uniform-price, sealed-bid auction, sometimes called a "Dutch auction." In this type of auction, all bidders whose tenders are accepted pay the same price for a given security. This price is the *lowest* of the *accepted* prices bid (or highest of the accepted yields). As a result, some of the bidders whose tenders are accepted pay a lower price than they actually bid. At first glance, this approach might appear to produce *lower* revenue, because money appears to be "left on the table." On the other hand, participants in a uniform-price, sealed-bid auction can be expected to bid higher prices than they would in a multiple-price, sealed-bid auction, since there is no "winner's curse" — that is, they do not run the risk of paying a higher price than others whose tenders are accepted. The expected revenue effects of uniform-price auction versus current practice thus turn on the following empirical question: Is the revenue generated from increased demand in uniform-price, sealed-bid auctions greater than the revenue that is apparently forgone due to the difference between prices bid and prices paid?

Aside from revenue considerations, a perceived advantage of a uniform-price, sealed-bid auction is that it would eliminate much of the need for pooling information to gauge the market consensus. Thus, the incentive for bidding through dealers would be lessened. It is argued that this could broaden auction participation and encourage a wider range of investors to bid directly for their own account rather than through primary dealers. This should naturally lead to less concentration of ownership of securities awarded at auction.

During 1973 and 1974, the Treasury conducted six uniform-price, sealed-bid auctions. The results of this experiment were inconclusive. In the August 1973 uniform-price auction of 20-year bonds, tenders received from the public were not sufficient to sell the entire issue. However, the failure of this auction appears to have been unrelated to the auction technique.

Open auction alternative. Irrespective of whether the single-price, sealed-bid auction would prove superior to the current practice, the Agencies believe that there is an

auction technique that may be superior to both types of sealed-bid auction techniques discussed above. This is an ascending-price, open auction system, which will be feasible for the first time once the auctions are automated. Auction theory suggests that, in general, Treasury revenue would not suffer, and indeed might increase, in the switch to an open, ascending-price system.

In this type of auction, registered dealers and other major market participants would have terminals that are connected by telephone line (with appropriate security) to a central computer.¹⁴ The auction would begin with the Treasury announcing an opening yield somewhat above the yield at which the security is quoted in when-issued trading. All interested parties would then immediately submit tenders electronically for the quantity of securities they would be willing to purchase at that yield.

Once all bids were submitted, the resulting total volume of bids at this high yield would be announced; presumably, the issue would be oversubscribed after the first round since the yield quoted would be higher than the when-issued yield. The yield would then be reduced, perhaps by one basis point, and the bidding process repeated. Bidding would proceed in successive rounds — perhaps at 10 minute intervals — with decreasing yields until the volume demanded was smaller than the size of the issue. All participants who bid at that closing yield would receive awards, but at the next higher yield. Those who bid in the next-to-last round but did not bid at the last round would receive prorated awards at the same yield.

From the viewpoint of a bidder, this decreasing sequence of yields lessens the risk to participants of bidding too low a yield for the securities. Even if an investor had a much higher valuation of the securities than other bidders, the bidding would stop before the yield moved downward very far as other bidders dropped out of the bidding. The open nature of the bidding, along with the single price outcome, should eliminate the "winner's curse." Further, the public exposure of the volume of bids provides information about other bidders' valuation of the securities, perhaps augmenting overall demand.

An open auction system allows participants to react to surprise bids, turning market forces against attempts at market manipulation. Entities attempting to corner this type of auction are effectively forced to disclose their intentions to their competitors, as they continually bid as the Treasury lowers the yield. This allows those not party to the attempted market manipulation — particularly those holding short positions from when-issued trading — to bid along with those who are trying to corner the issue. Hence, the would-be market manipulators may fail to corner the security or, at the least, find it a more expensive proposition.

¹⁴ Those not pre-registered could appear at their local Federal Reserve bank with sufficient documentation and acceptable payment arrangements to be included in the auction through a computer hookup provided at the bank.

By contrast, in a sealed-bid auction — of either the multiple- or single-price variety — the price reaction comes at the announcement of surprising awards, when dealers may realize that they are caught short and react. In a real-time, open auction, that reaction occurs when the bidding is still open, and thus the Treasury garners part of the profits of any attempted corner.

The Agencies believe that this type of auction, in combination with other recommendations of this report, has the potential for reducing the incentives for market participants to engage in manipulation, and would also provide assurances to market participants that they are not seriously disadvantaged in participating in Treasury auctions. The Treasury will be discussing this form of auction with market participants, academic experts, and others, and it welcomes the views of all interested parties.

Auction rule changes. The Treasury has made several important changes in auction rules and practices.

First, on October 25, the Treasury announced changes in its auction rules that eliminated any distinctions in those rules with regard to primary dealers. The Treasury announced that *all* government securities brokers and dealers registered with the SEC would be eligible to submit bids for customers in Treasury auctions. Previously, only primary dealers and depository institutions were accorded this privilege. In addition, the Treasury announced the establishment of a payment mechanism by which any competitive bidder would be able to bid without making a deposit at a Federal Reserve bank or having an explicit payment guarantee.¹⁵ Prior to this change, only primary dealers and depository institutions could bid without a deposit or a guarantee in coupon auctions, and only responsible, recognized dealers and depository institutions could do so in bill auctions.

Second, the Treasury has increased to \$5 million from \$1 million the maximum award to any single noncompetitive bidder in auctions of Treasury notes and bonds. This change is

¹⁵ Treasury, in conjunction with the Federal Reserve, has developed a standard "autocharge" agreement that permits auction participants without a funds account at a Federal Reserve bank to pay for securities purchased at auction. An autocharge agreement is a written arrangement by a bidder and a depository institution. This agreement, which is filed with the appropriate Federal Reserve bank, authorizes the Federal Reserve bank to charge the depository institution's funds account on the issue date for securities purchased by the bidder.

Autocharge agreements may be rescinded by the clearing bank up to 24 hours before settlement. Thus, risk exists from auction date until 24 hours before settlement that a successful bidder may become unable to pay Treasury for its auction purchases. Such an event would simply mean that Treasury would sell less of a particular issue.

As discussed below, the Agencies are analyzing whether Government Securities Clearing Corporation, a registered clearing agency that offers an efficient, automated clearance and settlement system, can alleviate this concern.

designed to encourage direct noncompetitive bidding by the smaller institutional investors in the government securities market.

Third, effective with the November 1991 quarterly refunding, the Treasury now publicly releases data on quarterly borrowing needs two days prior to each quarterly refunding announcement and before the meeting of the Treasury Borrowing Advisory Committee. Previously, this information had been released at the time of the announcement of the securities to be offered in the refunding. As a result of this change, the Borrowing Advisory Committee no longer receives any information about Treasury's borrowing needs that has not already been made public.

The Treasury has considered other potential rule changes, but has decided that they are not currently necessary or appropriate. For example, no further changes are being made at this time to the 35 percent rule. The Treasury believes that this rule places an appropriate limit on auction awards.

The Treasury is not imposing any limitation on the combined amount awarded to a dealer and the customers for whom the dealer has placed bids. Such a limitation would discourage aggressive bidding and raise the Treasury's financing costs without providing a compensating benefit. It would also force a dealer that plans to make a large bid or receives an unusually high level of customer bids to advise customers to take their auction business elsewhere. If the dealer did not do this, the customers might find that their auction awards were reduced. Customers should have the right to place bids in the auction with the assistance of the dealer they prefer, without having to worry about rationing problems due to the dealer's auction participation for its own account or the account of other customers.

The Treasury also will not compel large bidders to place bids directly, rather than going through a dealer. Large bidders have always had the option of placing bids directly. The Treasury does not believe it is appropriate to deny large bidders the advice and other services that a firm specializing in the government securities market can provide.

The Primary Dealer System

The primary dealer system was created (and is administered) by the Federal Reserve to assist it in implementing monetary policy. However, the system has also served the Treasury's crucial interest in financing the nation's deficit spending.

In order to implement monetary policy, the Federal Reserve buys and sells government securities in the secondary market. The Federal Reserve determines the dealers with which it will trade, and these dealers, currently 38 in number, are called primary dealers. The FRBNY requires these dealers to meet certain criteria. Of course, each of the primary dealers is subject to comprehensive regulatory oversight by the appropriate regulatory agency — generally, the SEC.

The Treasury does not determine which dealers can be primary dealers, and it does not set any criteria for this designation. However, the Treasury believes that the government securities market, and hence the Treasury, have benefitted from the primary dealer system. The FRBNY has required that the primary dealers make markets in all maturity sectors of Treasury securities, and that each primary dealer's share of customer trading volume must equal at least one percent of total secondary market volume. The FRBNY also expects primary dealers to demonstrate their continued commitment to the market for Treasury securities by bidding meaningfully in all Treasury auctions. If a dealer fails to bid meaningfully in an auction, the FRBNY typically contacts that dealer to remind it of its so-called "underwriting" responsibilities.

The Treasury believes that the existence of a group of dealers with a commitment to the government securities market has been of great benefit to the Treasury. The dealers' underwriting responsibilities have served to "backstop" Treasury auctions, considerably reducing the risk of insufficient auction cover. This consideration perhaps receives less weight when market conditions are strong, but Treasury financing requirements are unrelenting and necessitate sales in uncertain or weak markets as well. The willingness of the primary dealers to assume underwriting risk for the Treasury has served to ensure that, within yield levels reasonably related to current market quotations and trading experience, enough bids are received to sell all Treasury security offerings.

Primary dealers routinely serve as intermediaries between the Treasury and ultimate investors. Since these dealers are in the business of developing customer business and meeting customer needs, competition for customer business is intense. This competition has served to broaden the market for Treasury debt. It has helped the Treasury to sell large amounts of debt quickly, with the knowledge that dealers will work to distribute securities to ultimate buyers.

The relationship between the Federal Reserve and the primary dealers is purely a business relationship, and not a regulatory one. The FRBNY has required that primary dealers submit reports to it and permit FRBNY staff to inspect their operations and books and records. However, the FRBNY has imposed these requirements primarily in order to assure itself that the primary dealers meet the established requirements for primary dealership, and without any view to regulating or taking responsibility for the overall conduct of the primary dealers.

Recent developments affecting primary dealers. The primary dealer system has evolved over time, in ways that have significantly reduced the advantages that primary dealers have in the government securities market.

For example, there has been a growing consensus that the information to which primary dealers have access through the interdealer broker screens should be more widely available. One interdealer broker — Cantor Fitzgerald — has long made its screens available through Telerate. And beginning on June 16, 1991, information on pricing and trading

volume from the screens of five of the other interdealer brokers became available for the first time through GOVPX, a private joint venture. The Agencies support increased availability of information in this marketplace, and believe that, one way or another, more information will become available over time. As a result, the information advantage of the primary dealers over other market participants can be expected to continue to decline.

The proposed change to an automated, open auction system may also serve to lessen the Treasury's reliance on primary dealers to distribute Treasury securities, if the new auction technique results in broader direct participation in the competitive auction process. Any information advantage that the primary dealers retain would be considerably less significant in a single-price, open auction.

The creation of the Government Securities Clearing Corporation ("GSCC"), which registered with the SEC in 1988 and commenced netting operations on July 7, 1989, has made the government securities market even more efficient. The counterparty risk reduction that netting provides has led four interdealer brokers to broaden their customer lists beyond primary and aspiring primary dealers for the first time, to include potentially all netting members of GSCC, some of which are not primary dealers.¹⁶ As the group of dealers that are netting members broadens, the privilege of trading through the interdealer brokers — a privilege which is the product of private business decisions, not government regulation — will no longer be limited to primary dealers.

Another development that changed the special status of primary dealers occurred on October 25, when the Treasury announced the changes in its auction rules discussed above that eliminated the remaining distinctions that favored primary dealers.

Additional changes in the primary dealer system. The Treasury and the Federal Reserve believe that the primary dealer system has served the nation well for many years, but recognize that there also have been drawbacks. Notably, there may be a mistaken public impression that, by setting and maintaining certain standards for its primary dealer relationships, the Federal Reserve is in effect the regulator of the primary dealer firms. Moreover, the primary dealer designation has been viewed as conferring a special status on these firms that carries with it an element of "franchise value" for the dealer operation and possibly for other aspects of the firm's standing in the marketplace. Given these concerns, and given the near-term prospect of automation of Treasury auctions and Federal Reserve open market operations, it has become both feasible and appropriate for the Federal Reserve to amend its dealer selection criteria to provide for a more open system of trading relationships. The Federal Reserve still plans to exercise the discretion that any responsible market participant would demand to assure itself of creditworthy counterparties who are prepared to serve its needs.

¹⁶ Cantor Fitzgerald has permitted trading access for customers that are not primary dealers for a number of years.

One feature of the amended criteria is that existing as well as new primary dealers will no longer be required to maintain a one percent share of the total customer activity reported by all primary dealers in the aggregate.

All primary dealers will continue to be expected to (1) make reasonably good markets to the FRBNY's trading desk; (2) participate meaningfully in Treasury auctions; and (3) provide the trading desk with market information and commentary.

New primary dealers must be commercial banking organizations subject to official supervision by U.S. federal bank supervisors or broker-dealers registered with the SEC. The dealer firms and the entities controlling the dealer firms must meet certain minimum capital standards (these are spelled out in the appended FRBNY statement on Administration of Relationships with Primary Dealers; see Appendix E).

For the time being, the number of additional primary dealers will be relatively limited by resource constraints on the FRBNY's trading desk operations. Following the implementation of automated trading, further expansion in the number of primary dealers will be feasible.

While continuing to seek creditworthy counterparties, and while enhancing its *market* surveillance capabilities, the FRBNY plans to discontinue the "dealer surveillance" now exercised over primary dealers through the monitoring of specific Federal Reserve standards and through regular on-site inspection visits. The FRBNY will expect to receive periodic reports on the capital adequacy of primary dealers, just as any other responsible market participant should expect to receive such reports.

Primary dealer firms that are convicted of felonies under U.S. law or that plead guilty or *nolo contendere* to felony charges relating directly or indirectly to their business with the Federal Reserve will be subject to suspension as primary dealers.

Taken together, these changes are designed to facilitate an orderly and gradual move to a more open system of primary dealer relationships with the FRBNY, while preserving beneficial characteristics of the current system. Over time, the implementation of automated systems for Treasury auctions and Federal Reserve open market operations may well provide the room for still further changes. However, the desirability of further changes will have to be evaluated against the experience with these changes and the need to preserve both the efficiency and flexibility of Federal Reserve monetary policy operations, and the liquidity and efficiency of the market for U.S. government securities.

Other Regulatory Issues

Large position reporting. When market problems such as short squeezes occur, the Treasury and the FRBNY rely on major market participants for information concerning market developments. While the Treasury and the FRBNY believe that major market

participants will continue to provide such information, the Treasury, the FRBNY, and the SEC believe that backup legal authority for the government to compel disclosure of certain information is appropriate given the changes that are taking place in the government securities market. These changes include the evolution of the primary dealer system and the growing presence of a new set of large, relatively unregulated participants in the market — a group commonly called "hedge funds."

The Agencies believe that other measures announced in this report, including particularly the change in Treasury's reopening policy and potential changes in its auction technique, make acute, protracted short squeezes far less likely to occur in the future. The Agencies also believe that the new reopening policy will probably make it unnecessary to impose a system of large position reporting on the marketplace. However, the Treasury, the FRBNY, and the SEC believe that legislation should be enacted to clarify and broaden Treasury's rulemaking authority under the GSA to authorize the Treasury to make rules requiring holders of large positions in Treasury securities, including when-issued positions, to report this information to the regulatory authorities.¹⁷ Such rulemaking authority would only be used if market problems persisted despite the other actions being taken.

Unlike section 13(d) of the Exchange Act, which requires beneficial owners of more than 5 percent of a corporation's equity to make a public disclosure of this information, any position reporting concerning Treasury securities would not be publicly disclosed. There is no intention to force market participants to disclose their trading strategies, and there would not be a presumption that the mere fact of holding a large position is evidence of manipulative or other illegal intent. The purpose of such reporting, if necessary, would be similar to the purpose of the position reporting in the commodity futures markets — it would enable government agencies to monitor market developments and have early warning of potential problems.

The Federal Reserve Board believes that large position reporting authority is unnecessary, particularly in light of the new policy on reopening securities issues. Once backup authority was granted, it might be difficult to resist activating that authority as a precautionary step. Large position reporting would impose costs on the marketplace and could cause some investors intent on protecting the confidentiality of their investment strategies to move their business offshore or to limit their participation in this market, raising the cost of financing the federal debt and yielding little net gain in avoiding disruptions in this market.

The Agencies believe that, if there is to be authority to require large position reporting, the Treasury is the appropriate agency to receive that authority.

¹⁷ The Agencies do not believe that reporting of large *trades* appears to provide a desirable means for interested government agencies to discover the causes of any market difficulties or pricing anomalies.

Surveillance and regulation. Adequate surveillance of the government securities market is necessary if regulators are to detect and address disorderly market conditions and manipulation. Timely and accurate information is essential to effective surveillance and regulation of the government securities market. Each of the Treasury, the SEC, the Federal Reserve Board, and the FRBNY has access to different types of information about the government securities market, and each has different abilities to require market participants to furnish information. Surveillance and regulation of the government securities market will therefore require a high level of cooperation among the responsible authorities.

Some information about the government securities market is already being shared among the Agencies. For example, the FRBNY now prepares daily reports concerning significant market developments that are distributed to the SEC, the Treasury, the Federal Reserve Board, and the Commodity Futures Trading Commission ("CFTC"). These reports, which combine readily available market information with market-sensitive analyses, have improved the ability of the Agencies to monitor developments in the government securities market.

The current level of information provides a helpful start, but more information must be shared among the Agencies over time to assure effective surveillance. To this end, the Agencies have formed a surveillance working group to determine what types of information are needed for surveillance purposes, to develop mechanisms for collecting and disseminating that information to all of the Agencies, and to coordinate surveillance systems and procedures covering the government securities market.

The working group has been developing a framework for enhanced market surveillance for Treasury securities. Under this framework, the Agencies would develop a consensus on the types of data to be used in such a program, allocate responsibilities within the working group for surveillance and investigatory efforts, and establish parameters for inquiries and procedures to facilitate interagency information sharing and coordination.

The basis for any market surveillance program is collection and analysis of a range of market data. The Agencies believe that it would be appropriate that this data collection and monitoring function be conducted in the first instance by the FRBNY, which currently performs this function. The FRBNY would transmit this information promptly to the Federal Reserve Board, the SEC, and the Treasury.

In order better to fulfill this responsibility, the FRBNY plans to expand its current market data collection program. At present, some market data on prices, yields, and trading volume are received directly from automated systems operated by vendors. In addition, the FRBNY collects market information through daily telephone surveys of primary dealer operations. Dealer-specific transaction and position information is obtained through a series of weekly and daily reports.

In order to enhance its surveillance capabilities, the FRBNY plans to review and expand these data sources and develop automated feeds of market data to run computer exception reports. In assessing additional data requirements, the Agencies recognize that the need for regular and detailed position and transaction data is lessened to the extent that reopenings are effective in discouraging acute, protracted price anomalies. Such data will be more useful in particular instances in which misconduct or manipulation may have occurred.

The expanded program of data collection is likely to involve revisions to the reports that are currently submitted on a daily basis by primary dealers showing their gross long, gross short, and net positions in when-issued securities. These revisions could include: (1) expansion of the reporting period beyond the when-issued period up to the commencement of when-issued trading in the next security of the same initial maturity; (2) enhancement of information on related positions in options and forward contracts; and (3) information on related activity in the financing market. In addition, an effort will be made to capture relevant information on positions in Treasury futures.¹⁸ Of course, as additional experience is gained with the surveillance system and as other recommendations in this report are implemented, consideration may need to be given to modifying the reports, perhaps to include additional information such as aggregate customer positions.

Such revisions cannot be implemented overnight. The working group must agree on the precise formats and reporting thresholds that will be utilized, and regulatory requirements for revised reporting programs must be satisfied. In addition, new automated systems to process this information must be developed. As a result, actual implementation of this new system is expected to take approximately one year. In the interim, therefore, the FRBNY will utilize existing reporting requirements, to the extent possible, in order to collect position and transaction information on an *ad hoc* basis to carry out surveillance inquiries into questionable market activity.

Separately, the working group is developing a framework to ensure that surveillance operations and inquiries into suspicious market developments are conducted systematically. Reports on surveillance exceptions, investor complaints, and trading inquiries will be distributed among the working group members in agreed-upon formats on pre-determined schedules. Every effort will be made to ensure that all relevant information is shared among the Agencies, and that inquiries and investigations are thorough and well-documented prior to their resolution. In addition, senior staff of the Agencies will coordinate through regular meetings in order to keep track of significant market developments that might affect surveillance programs and any other related matters.

Audit trails. Audit trails are the primary surveillance tools produced and used by self-regulatory organizations ("SROs") to detect manipulation or fraudulent or illegal trading in the equity and options markets, and for investigative purposes in disciplinary proceedings.

¹⁸ This will permit increased surveillance by the SEC and CFTC for possible intermarket trading abuses involving the cash and futures markets in Treasury securities.

They are automated, time-sequenced records of information pertaining to trades in securities. This computerized information permits SROs to sift through voluminous trading data to detect potential trading abuses and provides time-sequenced information on transactions that may reveal intermarket abuses. The GSA did not grant authority to set up a similar audit trail system for government securities transactions.

Treasury and Federal Reserve position on audit trails. The Treasury and the Federal Reserve do not believe that a strong case has been made for an audit trail system to be imposed on the government securities market. Given that the government securities market is less vulnerable to the types of insider trading and other abuses that occur in the equities and derivatives markets, the Treasury and the Federal Reserve do not believe that it has been demonstrated that sufficient benefits would accrue to the SEC in its enforcement activities to outweigh the costs of establishing and maintaining an automated audit trail system. The Treasury and the Federal Reserve also believe that improvements in transparency in the government securities market and other measures discussed in this report designed to make significant short squeezes even less likely reduce the value of an automated audit trail.

SEC position on audit trails. The SEC believes that audit trails would be a valuable tool in conducting surveillance of the government securities market and in enforcing the rules that govern the market's operation. At present, the SEC can only monitor unusual price or yield movements in Treasury securities through its market data and news retrieval systems, and through the summary market data provided by the FRBNY. As a result, the SEC's information regarding the government securities market is not comprehensive and is clearly inferior to the information that is available to the SEC and the SROs with respect to the equity and options markets. Indeed, the conduct of the SEC's investigation of Salomon was made more difficult by the absence of comprehensive audit trail data.

The SEC recognizes that, because of the government securities market's unique characteristics, regulatory tools that are appropriate in other securities markets may need to be tailored to fit the government securities market, and that any regulatory measure proposed for the government securities market should be evaluated carefully on a cost/benefit basis prior to implementation. As a result, the SEC is not convinced that the full equity market audit trail need be replicated in the government securities market at this time.

However, the SEC believes that an audit trail system for the government securities market would not need to be expensive or burdensome on market participants. In particular, the SEC believes that a partial audit trail could be constructed by combining transaction information from GSCC with price and volume information from GOVPX (and perhaps Cantor).¹⁹ Such a partial audit trail would not involve significant expense to market participants, and the process would be nearly invisible from their point of view.

¹⁹ GOVPX was not designed to provide regulators with the types of detailed, party-specific information provided by audit trails in the stock and options markets. GOVPX is not an audit trail for regulatory purposes.

The SEC believes that creation of this sort of audit trail in the government securities market could provide significant benefits in terms of improved oversight and surveillance, and that there should be legislative authority for the SEC to effectuate an audit trail system. However, to the extent that trading in government securities becomes significantly more transparent, and given the Treasury's intention to reduce the potential for short squeezes by reopening Treasury issues when necessary, the SEC believes that the desirability for new legislative authority concerning audit trails would be reduced, but not eliminated.

Internal controls. It is essential that firms conducting a government securities business maintain an effective system of internal controls and supervisory procedures. Recent events in the market, however, have cast doubt on the effectiveness of internal controls employed by certain government securities brokers and dealers.

Existing SRO rules require each member to establish an internal supervisory system that includes a requirement that it maintain and enforce written procedures for conducting its business. Once legislation is enacted concerning misleading written statements to issuers of government securities, SRO authority in this area would explicitly extend to Treasury auctions and primary distributions of GSE securities. Enactment of this legislation would accomplish the desired extension to Treasury and GSE securities of requirements for appropriate written procedures to implement adequate internal controls. It would then be superfluous to enact additional legislation to mandate internal controls.

Transparency. An important characteristic of fair and efficient markets is transparency, defined as the degree to which real-time trade and quotation information and other market-related information, such as information about the depth of the market, is available to all market participants.

Transparency is important for several reasons. Availability of market information serves the public interest because it ensures that a broad spectrum of market participants can obtain current, accurate information concerning market conditions, thus fostering the integrity, competitiveness, liquidity, and efficiency of the market. The derivative markets are also strengthened by the availability of timely and accurate information on the underlying securities used for pricing and hedging strategies. Further, access to accurate market information enhances the ability of regulatory examiners and independent auditors to carry out their respective responsibilities to ensure that securities transactions and positions are priced appropriately. Finally, transparency enhances customer protection, since customers are in a better position to determine actual or potential prices for securities and to evaluate the fairness of trades.

In a completely transparent market, all market participants have equal and immediate access to all firm quotations, including the size of those quotations, as well as reports of prices and volumes on all trades effected in the market. Of course, complete transparency represents a theoretical model that has not been achieved in any market. Of all securities

markets, the level of transparency is probably highest in the U.S. equity markets.²⁰ In contrast, there is substantially less market data publicly available for U.S. debt markets, including the government securities market.

Interdealer broker quotations and trade reports currently represent the best source for deriving market prices for government securities, because they include the current bids and offers of the primary and many other large active dealers, the principal market makers in the government securities market. The Agencies believe that all useful information on the screens of the interdealer brokers should be made available to the public, either through GOVPX or otherwise.

Recent developments in transparency. Significant progress was made during 1991 in increasing information access in the government securities market. A private sector initiative — a joint venture known as GOVPX, Inc. — became operational on June 16, 1991. GOVPX disseminates real-time price and quotation information on all Treasury bills, notes, and bonds on a 24-hour, global basis. The system provides information regarding all trading of Treasury securities (other than zero-coupon instruments) that is executed through five interdealer brokers. The information disseminated is a composite picture of the trading activity, showing executed trade prices, volume of executed trades, best bids and best offers, and running aggregated volumes traded for each security on a daily basis. This information is provided to on-line vendors for distribution to the public.

While GOVPX is a promising step, it has deficiencies. For example, it does not provide the size associated with published bids and offers; it does not allow users to capture the data or to apply financial analytical techniques; and it does not include information on stripped Treasury securities or on non-Treasury government securities. In addition, the Agencies recognize that even a greatly expanded GOVPX system has certain inherent limitations in its coverage of the Treasury market. GOVPX was not designed to cover all trading volume, only trading volume effected through contributing interdealer brokers.²¹ It does not report trading volume among primary dealers or between a primary dealer and a customer, such as a hedge fund, that is not effected through an interdealer broker. Thus, a substantial amount of market activity is not reflected in GOVPX reports. However, despite its limitations, GOVPX is an important step forward in bringing increased transparency to the Treasury market.

²⁰ For a large percentage of equity securities traded in the United States, all current, sizable quotations are immediately disseminated to market data subscribers, and trade reports are required to be reported and disseminated within 90 seconds of execution, although the average is around 10 seconds.

²¹ One of the major interdealer brokers, Cantor Fitzgerald, Inc. ("Cantor") has made its price information available to the public through Telerate Systems, Inc. ("Telerate") since the early 1970s. Telerate disseminates to its customers the same information that Cantor disseminates to the dealers that trade through Cantor. While Cantor does not report trades to GOVPX, and GOVPX is not available through Telerate, market participants who subscribe to both GOVPX and Telerate are able to obtain quotation information from all but one of the interdealer brokers.

In a letter to GOVPX's Board of Directors, dated October 25, 1991, the Treasury strongly encouraged GOVPX to address certain of these deficiencies and urged that all useful interdealer broker screen information be made available to the public as promptly as possible.

Treasury and Federal Reserve position on transparency. The Treasury and the Federal Reserve believe that the transparency problem in the government securities market has been greatly alleviated, and that the private sector initiatives already under way should be allowed additional time to develop before any new rulemaking authority is deemed necessary. The two Agencies therefore support S.1247, which calls for a joint Treasury/SEC/Federal Reserve Board evaluation of private sector initiatives regarding the dissemination of price and volume information.

The Treasury originally proposed that it be granted rulemaking authority in this area in order to ensure that private sector initiatives, such as GOVPX, continue to take further steps to disseminate government securities price and volume information. However, for now, the Treasury accepts the judgment of the Senate in passing S.1247 that adequate private sector solutions are likely to be found without the need for additional federal regulation. The commencement of operations by GOVPX in June was an important factor in Treasury's decision to support the Senate approach. The continued positive response of the industry in enhancing transparency will be an important determinant of whether the Treasury eventually comes to support additional regulatory authority in this area.

SEC position on transparency. The SEC supports legislation providing it with backstop authority to adopt requirements for dissemination of data concerning transactions in government securities where private efforts, such as GOVPX, do not meet standards established in legislation. In order to enable the SEC to respond to structural shifts in the market, including either a consolidation of brokerage firms or a move to direct dealer to dealer trading, the SEC believes that the backstop authority should be broad and flexible.

The SEC believes that markets are stronger and less susceptible to manipulation and unfair pricing when there is broad public access to real-time pricing information. Furthermore, access to more complete pricing information would enhance fair competition among primary and secondary dealers by increasing the ability of secondary dealers to quote competitive markets. The SEC further believes that there should be authority to collect pricing information from all government securities brokers and dealers. This should include both dealer quote and trade information, including price and volume on all government securities.

Private sector initiatives to provide this information are, of course, preferable to regulatory solutions. In recent months, GOVPX has made progress in improving the transparency of the government securities market. Without backstop legislation, however, the SEC believes that the impetus for further improvements could diminish. With backstop authority, if GOVPX or other private efforts prove unreliable or inadequate in delivering

valuable market data, the SEC could act to ensure adequate information is available to all market participants.

The SEC believes that it should be the agency to exercise this authority, because it already exercises similar, though more extensive, responsibility for overseeing a large number of electronic trading and reporting systems. Its experience and expertise would enable it to monitor the development of private sector systems with largely existing capability and without significant additional cost. The SEC also has the existing expertise to take any necessary action should GOVPX or other private efforts prove inadequate. Any alternative would result in one agency exercising oversight over transparency in every market but the government securities market.

Sales practice and other SRO rules. The imposition of sales practice rules on the government securities market has been controversial. The Agencies were not able to develop a common position on this subject. The Treasury and the SEC agree that this market should have sales practice rules, but they disagree on precisely how such rules should be implemented. The Federal Reserve does not believe that the necessity for sales practice rules has been demonstrated, but would not oppose removal of the prohibition on the National Association of Securities Dealers ("NASD") applying its sales practice rules to government securities.

Treasury position on sales practice rules. The government securities market is the only regulated securities market in which not all brokers and dealers are subject to sales practice rules. The Treasury's concern in this area is not for the large, institutional investors, who should be expected to have the ability to judge the suitability of particular securities, but for the smaller, less sophisticated customers who are attracted to the government securities market because of their desire for safe and secure investments. Adding to this concern is the proliferation in the market of instruments that are far riskier than the traditional Treasury and agency securities on which they are based. These instruments include mortgage-backed securities and real estate mortgage investment conduits ("REMICS") issued or guaranteed by government agencies or GSEs, zero-coupon instruments such as STRIPS, agency mortgage-backed securities stripped into interest-only ("IOs") and principal-only ("POs") pieces, and over-the-counter options on government securities. Many of these securities are backed by a U.S. government guarantee or are highly rated by nationally recognized statistical rating organizations, and are attractive due to their apparent higher returns. However, unsophisticated investors may not fully understand their complexity, risks, and speculative nature. In addition, it is necessary to prevent unscrupulous persons, who may have operated in other markets, from gravitating to the government securities market.

The Treasury supports the regulatory structure for sales practice rules set out in S.1247, which in its view reflects a balanced and appropriate role for each of the regulatory agencies. The primary rulemaking powers pertaining to such rules for financial institution brokers and dealers and members of registered securities associations rest with the appropriate federal financial institution regulator and the NASD, respectively. This approach utilizes the

expertise and experience of the bank regulatory agencies and the NASD in implementing and enforcing sales practice rules that are in place for other markets. Additionally, the Treasury believes that the regulatory structure of S.1247 preserves the SEC's oversight role for self-regulatory organizations.

By permitting sales practice rules to become effective only if the Treasury has not determined that the rules would "adversely affect the liquidity and efficiency of the market for government securities" or "impose any burden on competition not necessary or appropriate," this regulatory framework also ensures that the Treasury retains an oversight role, consistent with the regulatory approach set out in the GSA. This structure is appropriate given Treasury's interest in minimizing the cost to the taxpayer of financing the public debt by maintaining the liquidity, efficiency, and integrity of the government securities market. A Treasury oversight role would also help to minimize disparities in sales practice rules for the various types of brokers and dealers.

SEC position on sales practice rules. The SEC believes it would be appropriate to extend normal sales practice standards and other NASD rules²² to transactions in government securities by removing the statutory restriction on NASD authority in the government securities market. The SEC does not oppose granting the appropriate regulatory agencies for financial institutions the authority to adopt similar sales practice rules governing transactions in government securities.²³ First, expansion of the NASD's authority is consistent with Congress's preference for self-regulation of the securities markets.²⁴ The NASD already has experience in the sales practice area and maintains an ongoing relationship with its members. Second, this approach is the most cost-effective means of preventing sales practice abuse. Sales practice abuses are not security-specific, and existing sales practice rules may be sufficient without significant modifications. The extension of these rules to the government securities market would reduce training and compliance burdens because basic sales practice rules are already known and understood by the sales forces of integrated securities broker-dealers. Of course, the existing NASD rules could, if necessary, be tailored

²² The SEC believes that, in addition to sales practice rules, the NASD should be free to apply other types of just and equitable principles of trade and anti-fraud rules to the government securities activities of its members. In addition, the SEC believes that the NASD should be authorized to adopt appropriate other rules for the government securities markets. Examples of such rules include fidelity bonding requirements and qualification and testing requirements, which would allow the NASD to assure that personnel associated with member firms had the requisite knowledge to comply with sales practice and financial responsibility rules.

²³ The SEC also does not oppose provisions in H.R. 3927 introduced by Chairman Markey and other members of the House Subcommittee on Telecommunications and Finance that would amend Section 15(c)(2) of the Exchange Act to remove the exemption for brokers and dealers in government securities from rules designed to prevent fraudulent and manipulative acts. Such authority, together with the rulemaking authority under Section 10(b) of the Exchange Act, would permit the Commission to adopt effective antifraud and anti-manipulative rules, if necessary.

²⁴ See Securities Industry Study Report of the Subcommittee on Securities, Senate Committee on Banking, Housing & Urban Affairs, S. Doc. No. 93-13, 93rd Cong., 1st Session 149 (1973).

to the specific market conditions and specific types of abuses that may occur in the government securities market. Finally, the principle of "functional regulation," which the SEC has long supported,²⁵ suggests that for purposes of NASD rules government securities should not be treated differently from other types of securities. As a result, the SEC believes that the statutory prohibition on application of NASD rules (including sales practice rules) to the government securities market should be lifted, so that all securities receive equivalent treatment (and all customers receive equivalent protection) under the NASD's rules.

The SEC opposes the provisions in Senate bill S.1247 that would permit sales practice rules to become effective only if the Treasury has not determined that the rules would "adversely affect the liquidity and efficiency of the market for government securities" or "impose any burden on competition not necessary or appropriate." Such provisions give the Treasury a veto over the actions of independent financial regulators in connection with the exercise of new sales practice rulemaking authority. This would set a negative precedent of direct intrusion into the decisions of independent regulators. This veto provision has been opposed by the Chairmen of the SEC, the Federal Reserve, and the Federal Deposit Insurance Corporation on these grounds. The Treasury's legitimate interest in financing the debt at the lowest possible cost to federal taxpayers could easily be recognized through consultation requirements associated with the new rulemaking authority. The SEC, an independent financial regulator, shares the Treasury's concern with the liquidity and efficiency of the markets and believes it has established an excellent record of carrying out consultation and coordination requirements in other federal laws.²⁶ For example, the SEC routinely consults with the banking regulatory agencies regarding proposed rule changes for the clearance and settlement of securities and SEC rule proposals for lost or stolen securities.²⁷

Federal Reserve position on sales practice rules. The Board of Governors believes that a decisive case has not yet been presented for adding statutory requirements in this area. Nevertheless, the Board would not oppose a modest broadening of current law, with adequate safeguards.

If Congress believes that a provision for sales practice rules is a necessity, perhaps the least costly and most responsive added measure would be a simple removal of the prohibition on the NASD applying its sales practice rules to government securities transactions. That

²⁵ As a general matter, the SEC believes that functional regulation can provide important benefits by promoting efficiency, effectiveness, and consistency. Testimony of Richard C. Breeden, Chairman, SEC, before the Subcommittee on Securities, Committee on Banking, Housing and Urban Affairs (June 12, 1991).

²⁶ Letter from Alan Greenspan, Chairman of the Board of Governors of the Federal Reserve System, Richard C. Breeden, Chairman of the Securities and Exchange Commission, and L. William Seidman, Chairman of the Federal Deposit Insurance Corporation, to the Honorable Christopher J. Dodd, Senate Securities Subcommittee, Committee on Banking, Housing and Urban Affairs, dated July 19, 1991.

²⁷ See 15 U.S.C. § 78q-1(d)(3).

change would bring NASD firms into line with what is already the case for New York Stock Exchange member firms, extending sales practice rules to all nonbank brokers and dealers. In this process, which would in essence take place with oversight by the SEC, the Federal Reserve would favor substantive consultation and cooperation with the Treasury as the primary regulator of this market. In general, the Federal Reserve favors consultation and cooperation and opposes the granting of veto powers over other agencies' regulations in this market.

GSCC enhancements. GSCC has the potential to provide the basis for further improvements to the government securities market.

(1) Repo processing. The market for repurchase and reverse repurchase agreements could benefit from automated comparison. GSCC could benefit the market by offering a system that clearly defines which stage of the transaction is occurring (e.g., opening, closing, setting up a reverse repo or closing a reverse repo) and that automatically generates a comparison of the transaction.²⁸ Such a service, if capable of capturing a high percentage of repo transactions, could enable regulators to obtain data on repos as necessary for surveillance purposes at little or no cost to market participants.²⁹ The Agencies urge GSCC to develop efficient processing systems for market participants' repo activity.

(2) More trades in the net. The benefits of netting are greater as more trades are included in the net. In addition, as more trades are included in GSCC's netting system, a larger percentage of market trades become guaranteed trades, thereby freeing members from certain counterparty risk associated with those trades. To this end, GSCC is planning to include more types of trading activity in the netting process and to expand its membership. Specifically, GSCC has proposed to add yield-based trades and auction take-down activity to the netting process. The Agencies agree that the benefits of netting should be expanded to a greater universe of trades.

(a) Yield-based trades. The SEC recently approved GSCC's proposal to include yield-based trades in the netting system beginning in January 1992.³⁰ By including yield-based trades in the netting system, members will enjoy the credit protections of GSCC's trade guarantee for their yield-based trades sooner than under the current procedure, whereby

²⁸ Some clearing agencies currently offer repo processing services. For example, DTC operates a Repo Tracking System that is designed to ensure that distributions on the securities underlying the repo are paid to the proper party.

²⁹ Activity in the government securities repo market is sizable. Centralized repo processing would give regulators a truer picture not only of the government securities market, but also of each market participant's total risk profile, enabling GSCC, other clearing agencies, and regulators to refine their risk reduction policies.

³⁰ Securities Exchange Act Release No. 29732 (September 24, 1991), 56 FR 49937. In order to include yield-based trades in the netting system, GSCC will convert the yield trades into priced trades at the time of comparison. To convert, GSCC will use a standard Treasury conversion formula.

compared yield-based trades are deleted from the system and re-submitted for netting after the Treasury auction.

(b) Auction take-down activity. Another type of trading activity that GSCC could include in the netting process is auction take-down activity. GSCC has proposed that its services be used in connection with the delivery of auction purchases. Under its proposal, GSCC would accept and report in its comparison system data on securities purchases made at auctions by GSCC netting members, net the purchases with when-issued trades of such members in the same securities through the netting system, and assume responsibility for the delivery of the purchased securities through GSCC's clearing mechanism.³¹ If this proposal is implemented, additional information on the overall distribution process required to settle Treasury auction purchases and on the true net settlement positions of members during a when-issued period would be available at GSCC.

GSCC's proposal is especially significant in light of the risk to the Treasury resulting from the auction settlement process and the use of autocharge agreements. GSCC's proposal would reduce the risk to the Treasury to the extent that GSCC assumes responsibility for auction purchases that are netted against when-issued sales.

(3) Increasing membership. Currently, a significant number of GSCC's netting members are primary dealers, aspiring primary dealers, and interdealer brokers. GSCC represents that it is actively developing changes to its membership standards to admit a second tier of market participants beyond these entities. GSCC believes this tier of potential members is composed of two categories of market participants: a small group of arbitrage firms and registered or noticed government securities brokers and dealers. Interest from the second group principally is to meet the government securities needs of their retail equity customers. The Agencies believe that GSCC should accelerate its efforts to expand membership to more government securities brokers and dealers.

(4) Confirmation systems for institutional customers. Ideally, centralized comparison systems might be adapted and expanded to include non-dealer, institutional customers.

³¹ GSCC has refined its proposal so that any Treasury auction purchase by a netting member — whether competitive or noncompetitive in nature and whether or not for a customer — automatically would be delivered to GSCC's clearing bank and encompassed within GSCC's net. GSCC would allocate auction deliveries to allow for the most complete netting process and to ensure timely delivery so that each member would take possession of the entire amount of its auction purchases that it needs on the morning of issue date.

Comparison systems for institutional customers generally offer automated confirmation³² and affirmation³³ services.

Although GSCC does not yet offer centralized, automated confirmation and affirmation systems, such systems exist today at other clearing agencies. With adaptation or change, these systems could be expanded to include government securities trades involving institutions. For example, the Depository Trust Company's ("DTC")³⁴ Institutional Delivery ("ID") and International Institutional Delivery ("IID") Systems provide automated confirmation and affirmation services to brokers, banks, and institutional customers.³⁵ The Agencies urge GSCC to explore with DTC whether benefits would accrue to government securities market participants if GSCC and DTC were to provide them with access to existing confirmation and affirmation systems.

III. Government-Sponsored Enterprise Issues

In connection with the investigation of unlawful behavior in the government securities market, certain misconduct has been revealed in the primary market for GSE securities. Many members of GSE selling groups submitted inflated indications of customer interest to the fiscal agents for GSE securities. This practice had persisted for a significant period of time.

To address this situation, the Agencies recommend adoption of an amendment to the Exchange Act, discussed above, that would make it an explicit violation of that Act to provide misleading written information in connection with a primary offering of any

³² In a typical institutional trade, the customer's executing broker must confirm the terms of the trade in writing to the investment manager. See 17 C.F.R. § 240.10b-10.

³³ If the confirmation conforms to the investment manager's records of the customer's ordered trades, the investment manager must issue instructions (affirmation) to the custodian bank authorizing the receipt or delivery of securities against payment to or by the broker.

³⁴ DTC is a registered clearing agency and the largest securities depository in the United States.

³⁵ Adapting DTC's ID or IID Systems for use in the government securities markets would mean that dealers who participate in GSCC might be required to interact with more than one clearing agency to compare their government securities trades. It might be possible, however, for GSCC to act as a conduit for its members, by accepting trade data from them and transmitting the data to DTC for confirmation processing. Output from DTC could be transmitted to GSCC for distribution to its members.

DTC would need to adapt the ID system in at least one way in order to accommodate the need for earlier confirmations in the government securities market. Currently, the ID system trade input is in batch form and is processed only once a day — too late for the needs of the government securities market. Plans to enhance the ID system are under discussion. The IID system currently uses a multi-batch system that could accommodate earlier confirmations that would be useful for government securities trades.

government security. Although deliberate misstatements to GSEs or their fiscal agents are already covered by the general antifraud provisions of the securities laws, adoption of such a new statutory provision would highlight the importance of compliance in this area and facilitate SRO compliance reviews.

Exempt Status of GSE Securities

The Agencies believe that the exemptions under the federal securities laws for equity and unsecured debt securities of GSEs should be eliminated.³⁶ The securities of GSEs are generally exempt from registration and are treated as government securities for purposes of the federal securities laws.

Securities issued by the U.S. Government are exempted from certain provisions of the federal securities laws, due primarily to the credit quality of the securities, which eliminates the need for disclosure of information relating to the financial condition of the issuer. Unlike Treasury securities, however, the securities of GSEs do not have a government guarantee (except for the obligations issued by the Farm Credit System Financial Assistance Corporation). Indeed, in many cases Congress has been careful to specify explicitly that securities of a particular GSE are *not* guaranteed by the U.S. Government, and in other cases it has required GSEs to disclose that fact to the public. The debt securities of GSEs normally are priced in the market at a spread over the rate on Treasury securities of similar maturity, in order to compensate for lower liquidity than Treasury securities and for the implicit risk that the U.S. Government might not honor the debt obligations of a GSE that was unable to meet its obligations. Debt securities issued by GSEs thus do not have the unquestioned credit quality that justifies the exemption for government securities under the federal securities laws.

The case is clearest with respect to equity securities of GSEs. All the GSEs except for one small entity are now completely privately owned, and the value of GSE equity securities rests primarily on their financial condition and value as going concerns. Therefore, investors need the same basic financial and operational information about GSEs as they would need from any company in order to evaluate the merits of an investment in its equity securities. All this information should be provided in the same form, and under the same time frames, as for similar securities of other issuers. For these reasons, the Agencies support repeal of the exemption of GSE equity and unsecured debt securities under the federal securities laws.

³⁶ Any legislation should make clear that such securities would maintain their current eligibility for use in repo transactions and for trading by government securities brokers and dealers that have registered or filed notice under section 15C of the Exchange Act.

APPENDICES

APPENDIX A

BACKGROUND ON THE TREASURY SECURITIES MARKET

1. Characteristics of the Primary Market

The public debt amounted to \$3,665 billion on September 30, 1991, including \$2,114 billion of marketable securities held by private investors.¹ Nonmarketable Treasury securities (including those issued directly to federal trust funds), United States savings bonds, state and local government series securities, and marketable securities held by federal government accounts and the Federal Reserve System comprise the rest of the public debt.

Size of borrowing needs. The Treasury has auctioned large amounts of marketable Treasury securities in the past ten years. In fiscal year 1981, Treasury sold over \$670 billion of marketable Treasury securities. By fiscal year 1991, this figure had increased to over \$1.7 trillion. As long as there is a budget deficit, the amount of securities the Treasury is required to sell will tend to increase, not only to raise funds to cover the shortfall between receipts and expenditures, but also to refinance maturing debt.

Evolution of Treasury financing techniques. The Treasury has employed auctions for Treasury bills since the securities were introduced in 1929. Since then, the only major modifications to bill auctions have been a provision for noncompetitive bids in 1947 and a change in 1983 to receiving bids on the basis of yield (bank discount basis) rather than price.

Prior to the early 1970s, the traditional methods for selling notes and bonds were subscription offerings, exchange offerings, and advance refundings. Subscriptions involved the Treasury setting an interest rate on the securities to be sold and then selling them at a fixed price. In exchange offerings, the Treasury would allow holders of outstanding maturing securities to exchange them for new issues at an announced price and coupon rate. In some cases, new securities were issued only to holders of the specific maturing securities; in others, additional amounts of the new security would be issued. Advance refundings differed from exchange offerings in that the outstanding securities could be exchanged before their maturity date.

A fundamental difficulty with subscription offerings was that market yields could change between the announcement of the offering and the deadline for subscriptions. Increased market volatility in the 1970s made fixed-price subscription offerings very risky for the Treasury.

A modified auction technique was introduced in 1970, in which the interest rate (coupon rate) was still preset by the Treasury, and bids were made on the basis of price. Setting the coupon rate in advance, however, still involved forecasting interest

¹ Privately held marketable securities exclude holdings of federal government accounts, such as the Social Security trust funds, and holdings of the Federal Reserve System.

rates, with the risk that the auction price could vary significantly from the par value of the securities. In 1974, Treasury started to auction coupon issues on a yield basis. Bids were accepted on the basis of an annual percentage yield, with the coupon rate based on the weighted average yield of accepted competitive tenders received in the auction. This freed Treasury from having to set the coupon rate prior to the auction and ensured that the interest costs of new note and bond issues would accurately reflect actual market demand and supply conditions at the time of the auction.

Another sale method was used in six auctions of long-term bonds in Treasury mid-quarter refundings between February 1973 and May 1974. This was the sealed-bid, uniform-price, or "Dutch," auction method. The coupon rate was preset by the Treasury and bids were accepted in terms of price, starting with the highest price and moving through successively lower prices until the offering had been fully placed. All successful bidders were awarded securities at the lowest price of accepted bids.

Current auction technique. Today, all Treasury auctions are conducted on a yield basis. Competitive bidders submit tenders stating the yield (discount rate for bill auctions) at which the bidder wants to purchase the securities. The bids are ranked from the lowest yield to the highest yield required to sell the amount offered to the public. Competitive bidders whose tenders are accepted pay the price equivalent to the yield that they bid. In an auction of Treasury notes or bonds, the coupon rate is based on the average yield of accepted competitive bids.

Noncompetitive bids from the public for up to \$1 million of Treasury bills and up to \$5 million of notes and bonds are awarded in full at the weighted average yield of accepted competitive bids. The ability to bid on a noncompetitive basis ensures that small investors, who may not have current market information, can purchase securities at a current market yield. Noncompetitive bidding eliminates the risk that a prospective investor might bid a yield that is too high and not obtain the securities desired or might bid a yield that is too low and pay too much for the securities. It also helps serve the goal of achieving a broad distribution of Treasury securities.

To participate in a Treasury auction, any potential investor may submit tender forms to a participating Federal Reserve bank or branch,² which acts as the Treasury's fiscal agent in the auction, or to the Treasury's Bureau of the Public Debt. Currently, tenders are received at 37 sites. The deadline for competitive bids is usually 1:00 p.m., Eastern time; noncompetitive tenders must be received one hour before the closing time for competitive tenders, or, if sent by mail, must be postmarked by midnight on the day before the auction and received on or before the issue date.

² Currently, 36 of the 37 Federal Reserve banks and branches accept auction tenders, with the Helena, Montana branch the only exception.

Typically, between 75 and 85 bidders submit competitive tenders in Treasury auctions for securities to be held in the commercial book-entry system.³ Additionally, between 850 and 900 bidders submit noncompetitive tenders in Treasury auctions for securities to be held in the commercial book-entry system. Also, on average there are about 19,000 noncompetitive tenders per auction for securities to be held in the TREASURY DIRECT book-entry system.⁴

The 38 primary dealers account for a large proportion of the participation in Treasury auctions, as discussed in Section 3 of Appendix B. The Federal Reserve expects primary dealers to demonstrate their continued commitment to the market for government securities by participating in Treasury auctions. It should be emphasized, however, that auctions are open and that others besides primary dealers can and do participate, either directly, or through any government securities brokers and dealers that are registered with the Securities and Exchange Commission ("SEC") or through a depository institution.

Depository institutions and government securities brokers and dealers registered with the SEC may submit either competitive or noncompetitive tenders for their own account and for the accounts of customers. All other entities or individuals may submit either competitive or noncompetitive tenders only for their own accounts. Depository institutions, brokers, and dealers are required to submit customer lists when submitting bids for the accounts of customers. Customer lists for competitive bids must be submitted either with the tender or by the close of the auction. Customer lists for noncompetitive tenders submitted by mail must be received prior to the issue date, although customer lists for all other noncompetitive tenders must be received by the close of business on the auction date.

Prior to the auction of three-year notes on November 5, 1991, bidders in Treasury auctions had the option to pay in full at the time the tender was submitted or,

³ The commercial book-entry system for Treasury securities is operated by the Federal Reserve banks, acting as the Treasury's fiscal agents. It is a multi-tiered, automated system in which marketable Treasury securities are issued, serviced, maintained, and traded. Ownership is not evidenced by physical securities, but rather by computerized records, with the top tier of records maintained at the Federal Reserve banks. The Federal Reserve maintains book-entry accounts for depository institutions and other entities such as government and international agencies and foreign central banks. In their book-entry accounts at the Federal Reserve, the depository institutions may maintain their own security holdings and holdings for customers, which include other depository institutions, dealers, brokers, institutional investors, and individuals. In turn, the depository institutions' customers maintain accounts for their customers. Brokers and dealers that are not depository institutions are not permitted to maintain securities accounts directly with the Federal Reserve.

⁴ The TREASURY DIRECT system is designed primarily for those who wish to hold Treasury securities to maturity; no custodial or transaction fees are charged. As of September 30, 1991, 1.1 million investors held 2.3 million security accounts in TREASURY DIRECT with a par value of nearly \$64 billion.

in the case of notes and bonds, to present a guarantee from a commercial bank or primary dealer of five percent of the par amount tendered.⁵ The deposit requirements did not apply to primary dealers, depository institutions, states, political subdivisions or instrumentalities thereof, public pension and retirement and other public funds, international organizations in which the United States holds a membership, and foreign central banks and foreign states.

Effective with the November three-year note auction, the Treasury established a payment mechanism, called an autocharge agreement, which supplements the other existing payment mechanisms. The autocharge agreement is a written arrangement by a bidder and a depository institution that authorizes the Federal Reserve bank to charge the depository institution's funds account on the issue date for securities purchased by the bidder.

Auction schedule. The Treasury has a regular, predictable schedule for offering marketable securities, which is well known to market participants. The Treasury makes an announcement as far in advance as is practical any time there is a change in the usual pattern, so that the market can digest the information and prepare for the offerings.

The Treasury sells 13- and 26-week bills every week and 52-week bills every four weeks. Two-year and five-year notes are auctioned every month for settlement at the end of the month. Seven-year notes are issued on the 15th of January, April, July, and October. The quarterly financings, which settle on the 15th of February, May, August, and November, typically consist of three- and ten-year notes and a thirty-year bond. These regularly scheduled issues amount to about 157 separate securities auctions each year.⁶

⁵ Full payment for securities to be held in TREASURY DIRECT is required when the tender is submitted.

⁶ The Treasury also offers cash management bills from time to time to raise funds to cover low points in the Treasury cash balance. The maturity dates for cash management bills usually coincide with the Thursday maturities of regular weekly and 52-week bills. For example, cash management bills may be issued in early April, before the April 15 tax payment date, and mature later in April, when cash balances are at seasonal highs. Short-term cash management bills may be announced, auctioned, and settled in a period as short as one day, if necessary, to ensure that the government does not run out of cash. To shorten the time for the auction and reduce the cost of issuing short-term cash management bills, they usually are issued only in large minimum purchase amounts – \$1 million or more – and noncompetitive tenders are not accepted.

Longer term cash management bills are also issued from time to time. For example, the Treasury's borrowing requirement in the final calendar quarter of the year is typically larger than for the April-June quarter, when seasonally high tax payments are due. Cash management bills maturing after the April 15, 1991 tax date were issued in November 1990, for example, to manage Treasury borrowing in light of this

(continued...)

The details concerning an offering of marketable securities are announced about one week prior to the auction, and the settlement date occurs from a few days to about one week after the auction, depending upon holidays and other vagaries of the calendar.

Treasury auction rules. Treasury auction rules have, for the most part, been contained in the official offering circulars, public announcements relating to specific auctions, and single bidder guidelines.⁷ Other auction rules have been announced in separate press releases; they are not reiterated in individual offering circulars and announcements.

The rules regarding the \$1 million and \$5 million maximum awards on noncompetitive bids and payment requirements were discussed above. The most significant other auction rules concern limitations on awards, limitations on tender amounts recognized at single yields, requirements for bidders to report net long positions, single-bidder guidelines, and when-issued trading.

The 35 percent rule. Since 1962, the Treasury has limited the maximum amount of securities awarded to a single bidder in a Treasury offering. The primary reasons for the limitation are to ensure broad distribution of Treasury securities and to make it less likely that ownership of Treasury securities will become concentrated in a few hands as a result of the auction.

Under the restriction that has been in effect since September 1981, no single bidder is awarded more than 35 percent of the amount of a Treasury security that is offered to the public. The application of the 35 percent limit to any bidder includes consideration of that bidder's net long position in the futures, forward, and when-issued markets.

Also, while a bidder can submit tenders for more than 35 percent, the Treasury does not recognize amounts tendered at any one yield from a single bidder in excess of 35 percent of the public offering. This limit was adopted to prevent bidders from

⁶(...continued)
seasonal pattern.

⁷ Treasury has updated its offering circular to put in one place all of the basic ground rules for Treasury auctions and is releasing it simultaneously with this report for publication in the *Federal Register* for comment. The circular will be supplemented by an offering announcement for each separate offering. It will also be amended from time to time to reflect any changes in rules.

benefitting from submitting huge tenders in order to obtain large prorations of securities at the stop-out, or highest accepted, yield.⁸

Net long position reporting. For purposes of enforcement of the 35 percent rule, each competitive bidder is required to report on the tender form its net long position in the security being auctioned when the total of all of its bids for the security plus its net long position in the security exceeds the reporting amount specified in the offering announcement. Net long positions include positions in the futures, forward, and when-issued markets for the security being offered. In the case of a security that is being reopened, it also includes positions in the outstanding security.

Single-bidder guidelines. On June 1, 1984, the Treasury issued guidelines concerning the definition of a single bidder for the purpose of administering the limitation on noncompetitive awards. Since then, the guidelines have also been applied to administer the 35 percent rule. The definitions of single bidders include as criteria: (1) whether the parties who will acquire securities from the Treasury are related to one another, such as family members living in the same household or a parent corporation and its majority-owned subsidiaries; and/or (2) whether investment decisions of bidders are controlled centrally. For example, a money market fund and all other funds that have common management are treated as a single bidder for purposes of the guidelines.

The guidelines include a listing of categories that are used to determine whether two or more entities are related and/or under common management. The guidelines do not cover all situations, and interpretations by the Treasury often are necessary to apply the guidelines to particular situations.⁹

When-issued trading. Ordinarily, there is a period of almost two weeks between the time a new Treasury issue is announced and the time it is actually issued. The Treasury permits trading during this period, and the issue is said to trade "when, as, and if issued."¹⁰ When-issued trading is important to the distribution process for Treasury securities. Most importantly, it reduces uncertainties surrounding Treasury auctions by serving as a price discovery mechanism. Potential competitive bidders look

⁸ In a few cases that occurred immediately before the imposition of this rule on July 12, 1990, dealers had bid at one yield for more than 100 percent of the amount offered to the public.

⁹ The Treasury has been working to develop clarifications of its single-bidder guidelines and plans to circulate them as part of the proposed uniform offering circular.

¹⁰ Although pre-auction trading of bills has never been prohibited, pre-auction trading of notes and bonds was effectively prohibited from 1941 to 1975. It was permitted between February 1975 and July 1977, before being officially proscribed until August 1981, when Treasury decided to allow it. The only significant rule change since 1981 was an October 1983 Treasury announcement prohibiting pre-auction trading in securities awarded to noncompetitive bidders. This prohibition applies to all Treasury securities.

to when-issued trading levels as a market gauge of demand in determining how to bid at an auction. Noncompetitive bidders can also use the quotes in the when-issued market to assess the likely auction average yield.

Auction awards. The Federal Reserve banks review the tenders for accuracy, completeness, and compliance with Treasury rules and guidelines. The Federal Reserve banks consult with the Treasury prior to taking any action on questionable tenders that could materially affect auction results or that may be in violation of a Treasury rule. The Treasury reserves the right to reject any tender.

Once it has been determined that the tenders have complied with Treasury requirements, the Federal Reserve banks compile the auction summaries. The noncompetitive summary shows the total amount of noncompetitive bids received by each Federal Reserve district. The competitive bid summary shows the total amount bid at each yield. The summaries include information on specific bidders only when needed to apply the 35 percent limitation on the amount awarded or bid at a given yield by a single bidder or when specific bids appear irregular. This information is forwarded to the Treasury.

The Treasury first accepts noncompetitive bids in full. Competitive bids are then accepted beginning with the lowest yields until the offering amount has been reached or "covered." The amount awarded at the high yield is prorated based on the amount bid at that yield to obtain the offering amount.

Auction results are released to the public about one hour after the deadline for the receipt of competitive tenders, usually around 2:00 p.m., Eastern time.

2. Characteristics of the Secondary Market

The Treasury securities market is the largest, most liquid market in the world, and Treasury securities are generally considered to be the most secure financial instruments in the world. Daily trading volume in Treasury securities by primary dealers, excluding financing transactions, averaged \$85 billion per day in September 1991, according to data reported to the Federal Reserve Bank of New York ("FRBNY"). By contrast, the average daily trading volume of equities on the New York Stock Exchange ("NYSE") was \$6 billion.

Unlike securities traded in a centralized marketplace, such as an exchange, Treasury securities are traded largely in an over-the-counter market¹¹ that is

¹¹ Although all marketable Treasury notes and bonds, including STRIPS, are listed on the New York Stock Exchange, trading volume is a small fraction of total over-the-counter volume. Treasury securities
(continued...)

comprised of a network of dealers, brokers, and investors who effect transactions in Treasury securities over the telephone. The market is largely a wholesale market in which institutional investors, such as banks, thrifts, dealers, pension funds, insurance companies, mutual funds, and state and local governments operate. However, a significant number of small, retail investors also trade Treasury securities through brokers and dealers.

The liquidity, efficiency, and safety of the Treasury securities secondary market result directly from the creditworthiness of the issuer, the volume of securities issued, the large number and diversity of participants, the financial strength and integrity of those participants, and the continual willingness of brokers and dealers to participate actively in the markets. Relatively low transactions costs and efficient securities transfer and settlement systems also expedite activity and enhance liquidity.

Instruments traded in the secondary market. The majority of the activity in the Treasury secondary market involves trades in the cash market of the most recently issued Treasury bills, notes, and bonds (the "on-the-runs" or "benchmarks").¹² Also, as discussed above, during the period between the announcement and the issuance of a new Treasury security, there is a very active when-issued market.

During the when-issued period before an auction, dealers and customers contract to buy and sell the Treasury security in terms of yield quotes because the coupon and price are not yet known. After the auction results are released, trades are conducted in terms of price. Settlement, the exchange of the actual securities for payment, is made on the issue date, with the yields at which the pre-auction trades were executed converted into prices.

In addition to the standard cash market, including the when-issued market, a market for many other sophisticated instruments based on Treasury securities has developed over time. For example, STRIPS (Separate Trading of Registered Interest and Principal of Securities) and other derivative instruments (e.g., forwards, futures, options, and swaps) have become quite widespread.

¹¹(...continued)

have been traded on the New York Stock Exchange since it opened in 1793. In fact, U.S. government debt issued to finance the Revolutionary War was originally the principal type of security traded on the Exchange. Treasury securities continued to be traded actively on the Exchange until the early 20th century, when increased telephone use led to a sizeable over-the-counter market. Today, exchange-listed Treasury securities are traded mostly by foreign mutual funds that are required to trade through exchanges.

¹² Outstanding Treasury securities auctioned immediately prior to the most recently auctioned issues ("off-the-runs") are also highly liquid.

STRIPS. STRIPS are principal and interest components of selected Treasury notes and bonds that have been separated, or stripped, at the option of the owner under terms prescribed by the Treasury. STRIPS are often referred to as zero-coupon instruments, reflecting their similarity to non-interest-bearing securities with a fixed maturity and fixed value at maturity. STRIPS can be reconstituted by repackaging the principal component and all of the remaining interest components back into the original security.

Financial futures. Financial futures are standardized contracts that are made and traded on futures exchanges that set a price level for securities to be delivered on a specified future date. Markets for financial futures are an outgrowth of the traditional futures markets for agricultural commodities. Futures contracts are available for Treasury bills, notes, and bonds and are authorized by, and traded on, exchanges that are regulated by the Commodity Futures Trading Commission ("CFTC").

Forward contracts. Forward contracts are trades that settle on a date in the future beyond a normal settlement time frame and, in that regard, are similar to futures. However, while futures contracts are standardized, traded on exchanges, and usually closed out by offsetting transactions prior to delivery, forward contracts are normally custom-tailored and traded on over-the-counter markets, with delivery of securities contemplated on the settlement date of the contract.

Options. Options give the purchaser a right, but not an obligation, to buy or sell securities or futures contracts for securities at a given price for a set period of time. Standardized options for Treasury securities are traded on exchanges, but the over-the-counter market for Treasury options is the principal market. The over-the-counter market permits the counterparties to customize the options, which increases flexibility.

Swaps. In addition to other derivatives, investors often use interest rate swaps as part of their hedging and investment strategies for managing interest rate exposure. In most swaps, fixed-rate payment streams are exchanged for floating-rate payment streams. Countless varieties of swaps have developed, however, because such agreements permit market participants to swap any two interest streams that they deem commercially appropriate. While the trading activity for other derivative products generally is concentrated in the near-term months, interest rate swaps, by contrast, generally are for time periods of two to ten years.

Brokers and dealers. While there are approximately 1,700 brokers and dealers (including banks) trading in the secondary market for government securities, anecdotal evidence suggests that the 38 primary dealers account for the major share of the trading volume.

The primary dealers and other dealers often rely on interdealer brokers to trade in the market for Treasury securities. Interdealer brokers compile the best bid and ask

prices reported to them by the dealers who subscribe to their service and make this information available on computer screens. The identities of the dealers who submitted the price quotes are kept confidential, with the understanding that anonymous trading allows the dealers to protect their trading strategies. Dealers pay the brokers a commission for arranging trades.

Interdealer brokers display the bids and offers placed with them for bills, notes, bonds, and STRIPS, as well as Government-sponsored enterprise ("GSE") securities, on several screens. When a new bid or offer at a better price is placed with a broker, the new quote will appear on its screen in the dealers' trading rooms within seconds. Generally, brokers consider these bids and offers good until canceled. Brokers will, however, take bids and offers off the screen or make them subject to reconfirmation when an event occurs that may have a major impact on the market, such as the release of an important economic statistic.

There are currently seven interdealer brokers,¹³ three of which provide trading access for primary dealers only. Another three interdealer brokers allow access to their screens not only to primary dealers and "aspiring" primary dealers but also to other dealers who participate in the Government Securities Clearing Corporation ("GSCC") netting system.¹⁴ One interdealer broker goes one step further, by also including certain other government securities dealers, regional banks, pension funds, and others that the broker considers to be creditworthy trading partners. Through this broker, these market participants can obtain market information and can buy and sell Treasury securities without using the facilities of a primary dealer or GSCC participant. In addition, a newly formed electronic information dissemination service, GOVPX, now provides dealer price and volume information on Treasury securities to anyone who pays for the service.¹⁵

To effect a trade, an investor may refer to one or more of the available information services and call a dealer, or several dealers, for the most recent quotes and then place an order. The dealer trades with the customer as a principal for its own account or as an agent for the account of another investor.

¹³ The seven interdealer brokers are: Cantor Fitzgerald Securities Corp.; EJV Brokerage, Inc.; Garban Ltd.; Gnubrokers of Government, Inc., doing business as Fundamental Brokers Inc.; Hilliard Farber & Co., Inc.; Liberty Brokerage, Inc.; and RMJ Securities Corp.

¹⁴ The GSCC is a clearing organization that provides its members with automated trade comparison and netting services for Treasury and other government securities. More than 60 of the most active brokers, dealers, and banks in the government securities market are GSCC members. See discussion of GSCC in Appendix B.

¹⁵ See discussion of information access in the government securities market in Appendix B.

Settlement. Settlement, the exchange of securities for funds, usually occurs one business day after a buyer and seller agree on a trade, in the case of "regular way" trades. "Cash" trades settle on the trade date. Settlement is effected in the Treasury commercial book-entry system operated by the Federal Reserve through an electronic transfer message initiated by the seller or the seller's depository institution. This message causes securities to be debited from the seller's account and credited to the buyer's account while simultaneously causing the debiting of the payment from the buyer's account and the crediting of the funds to the seller's account. The commercial book-entry system enables Treasury securities trades to be settled quickly (within seconds) and relatively cheaply, thus contributing substantially to market liquidity.¹⁶

Financing techniques. The principal method of financing Treasury securities for brokers and dealers is repurchase agreements ("repos"). The repo market is huge, as is evident in the almost \$500 billion of repos outstanding at primary dealers, on average, in 1991.¹⁷

A repo is a contract comprising two distinguishable acts: the sale of an asset, often Treasury securities, and a forward agreement to purchase the same asset.¹⁸ Repo sellers obtain funds in exchange for securities. The seller agrees to repurchase the same securities at a given point in the future, which determines the amount of interest for the use of the funds. The repo contract sets both the sale and the repurchase price. The terms of repos are often overnight or a few days but can extend for longer periods. A reverse repo refers to the other side of a repo transaction. In a reverse repo, the repo buyer delivers the funds and receives the securities in exchange. At contract maturity, the buyer receives funds (including interest) and returns the securities.

Dealers rely on repos to finance their Treasury security inventories primarily because of the low cost, flexible terms, and administrative ease. Repo rates are usually the cheapest overnight interest rates for the seller because of the liquidity of the market and the characteristics of the underlying security. The chief alternative to this type of financing, commercial bank loans, is more expensive, and dealers typically rely on these loans only as a last resort.

¹⁶ In recent years, the GSCC has had a substantial impact on Treasury secondary market settlement. One of GSCC's most important functions is to "net" its members transactions. GSCC combines each member's total purchases and sales for each security with other GSCC members into a single net purchase or sale. This process greatly reduces the number of trades that have to be cleared through the commercial book-entry system and, along with the guarantee GSCC provides, substantially reduces counterparty risk for GSCC members.

¹⁷ Table 1.43, "U.S. Government Securities Dealers: Positions and Financing," *Federal Reserve Bulletin*.

¹⁸ Under a continuing term repo, the seller typically reserves the "right of substitution"; that is, the seller can take back particular securities it needs for other purposes and substitute similar collateral.

The major participants in the repo market are dealers, corporations, municipalities, financial institutions, and pension funds. Most dealers use repos primarily to finance or cover securities positions and to conduct "matched book" operations. A dealer that operates a matched book enters into a repo and matches it with a mirror image reverse repo. Most matched books are not perfectly matched in maturities, but instead include some managed mismatches. The dealer's profit is derived from the difference, or spread, between the interest earned on the reverse repo and the interest paid on the repo. Dealers also use reverse repos to obtain securities temporarily to complete other transactions, while other market participants typically use them to invest idle cash balances or to improve portfolio yield.

Repo brokers are sometimes used to facilitate these transactions. Dealers use repo brokers most often for term repos and reverse repos. Repo brokers are most important for arranging repos when securities are in short supply, as reflected by a rate that is lower than the rate for general collateral ("on special"). Brokers estimate that the daily volume of the overnight repo market that is transacted through brokers is approximately \$10 billion per day, which represents only a small percentage of the overnight repo market.

The largest, most creditworthy dealers also use the commercial paper market indirectly to finance their secondary market trading. Commercial paper is unsecured, short-term debt (usually 30 days and under).

Dealer income. Dealers profit from their market making activities in three ways: (1) through the difference in their bid/ask quotes (the "spread"); (2) from the net price appreciation of their inventories or the price depreciation of the securities they have sold short in the market, including profits from hedging and arbitrage; and (3) from their inventory financing activities, i.e., the difference between the interest return on the securities they hold and the financing costs of these securities. When the return on the securities held in inventory is greater than the financing cost, a "positive carry," or profit, exists. Conversely, a negative carry, or loss, exists when the financing cost is greater than the return on the securities.

3. Regulation of the Treasury Market

Regulation of issuance of Treasury securities

Authority of the Secretary of the Treasury. The Secretary of the Treasury (the "Secretary") is authorized under Chapter 31 of Title 31, United States Code, to issue Treasury securities and to prescribe terms and conditions for their issuance and sale. Specifically, the Secretary may issue bonds under 31 U.S.C. § 3102, notes under 31 U.S.C. § 3103, and certificates of indebtedness and Treasury bills under 31 U.S.C. § 3104.

In addition, under 31 U.S.C. § 3121, the Secretary may prescribe the form of such securities, and the terms and conditions for the issuance and sale of the securities. In 31 U.S.C. § 3121(a) the Secretary is authorized to "prescribe ... regulations on the conditions under which the obligation will be offered for sale"

The Secretary reserves the right, under the offering circulars for issues of Treasury securities, to accept or reject any or all tenders in whole or in part. The Secretary also reserves the right to award more or less securities than the amount of securities specified in the offering announcement.

Under the above specific provisions, the Secretary has authority to declare any bidder or bidder's customer ineligible to participate in any auction if a bidder or bidder's customer violates auction rules, makes an improper certification, or otherwise misrepresents information required to purchase securities at an auction.

Finally, the Secretary reserves the right to supplement or amend terms and conditions governing the sale and issuance of securities, if such supplements or amendments do not adversely affect existing rights of holders of securities. Public notice of any changes is provided.

Enforcement. As noted earlier, the Treasury and the Federal Reserve banks, as fiscal agents of the Treasury, receive tenders from bidders. Compliance and enforcement responsibility for the auction rules rests with the Treasury. As fiscal agents for the Treasury, the 36 Federal Reserve sites receiving and reviewing tenders have the primary responsibility for identifying tenders that are not in compliance with Treasury rules and regulations. Accordingly, the Federal Reserve has a responsibility to notify the Treasury when information in tenders suggests that Treasury rules may have been violated.

Treasury auction authority includes powerful, but limited, sanctions to punish violators of these rules. The Treasury's remedy for breaches of its rules is to exclude bidders from Treasury auctions. In addition, persons who commit fraud in the context of a Treasury auction remain subject to potential civil and criminal actions under Section 10(b) of the Securities Exchange Act of 1934 and Rule 10b-5 thereunder, the general anti-fraud provisions, as well as criminal actions under 18 U.S.C. §§ 1001 and 1005.

The Treasury reserves the right to reject any or all bids in an auction, and therefore, may bar, suspend, or limit a firm's participation in auctions. For example, in the wake of recent events the Treasury has prohibited Salomon from bidding in auctions on behalf of customers.

Neither the SEC nor any of the self-regulatory organizations ("SROs"), such as the NYSE and the National Association of Securities Dealers ("NASD"), is authorized

to enforce directly Treasury auction rules. However, the SROs do enforce compliance with rules applicable to all brokers and dealers registered with the SEC requiring that all purchases and sales of securities are recorded, and that confirmations are sent to customers. The SEC and the Justice Department are responsible for enforcement of the federal securities laws, which cover deliberate violations of auction rules accompanied by false statements to the Treasury and market manipulation. The Justice Department enforces federal antitrust laws.

Regulation of the secondary market

Participants in the secondary market for U.S. government securities, including previously unregulated brokers and dealers, are regulated under the authority of the Government Securities Act of 1986 ("GSA"). In addition, broker-dealers and banks are subject to regulation under the Securities Exchange Act and the banking laws, respectively. The GSA granted the Treasury authority to promulgate rules and regulations for government securities brokers and dealers concerning financial responsibility, protection of investor securities and funds, recordkeeping, and financial reporting and audits. The Treasury also was given responsibility for the development of regulations relating to the custody of government securities held by depository institutions.

In promulgating these regulations, the Treasury was required to consult with the SEC and the Federal Reserve. As a result of these consultations and the Treasury's analysis, most of the SEC regulations (e.g., customer protection, recordkeeping, reports, and audits) that applied to registered brokers and dealers were, with limited exceptions, adopted for firms registered pursuant to the GSA as government securities brokers and dealers.

Registration requirements and oversight of market participants. The GSA required, for the first time, previously unregistered brokers and dealers that limit their business to government and other exempt securities (except municipal securities) to register with the SEC and join an SRO. It also specified that firms registered as general securities brokers or dealers or as municipal securities brokers or dealers under Sections 15 or 15B, respectively, of the Securities Exchange Act must notify the SEC if they conduct government securities transactions.¹⁹ The GSA also required financial

¹⁹ The term "registered government securities broker or dealer" means a broker or dealer conducting a business exclusively in government and other exempted securities (excluding municipal securities) and that is registered pursuant to Section 15C(a)(A) of the Securities Exchange Act, 15 U.S.C. § 78o-5(a)(1)(A). The term "registered broker or dealer" means a broker or dealer conducting a general or municipal securities business that is registered pursuant to Sections 15 or 15B, respectively, of the Securities Exchange Act, 15 U.S.C. § 78o or 78o-4 and that filed notice pursuant to Section 15C(a)(1)(B) of the Securities Exchange Act, 15 U.S.C. § 78o-5(a)(1)(B), but does not include a municipal securities dealer that is a bank or separately identifiable department or division of a bank. A government securities broker
(continued...)

institutions (banks and S&Ls) that engage in government securities broker or dealer activities to notify their appropriate regulatory agencies of such activities.²⁰ The GSA required that the SEC and the Federal Reserve promulgate rules establishing the procedures and forms to be used by government securities brokers and dealers for the registration and notice process.

The GSA, rather than creating a separate agency to enforce the new regulations, relied, for the most part, on the existing regulatory structure when assigning oversight responsibility. For previously regulated entities, examination and oversight of government activities is conducted by the federal agency with which the entity has an existing regulatory relationship. Thus, financial institution government securities brokers or dealers are subject to oversight by the federal financial institution regulatory agency that has responsibility for other supervisory and enforcement activities, namely, the Federal Deposit Insurance Corporation ("FDIC"), the Office of the Comptroller of the Currency ("OCC"), the Federal Reserve, and the Federal Home Loan Bank Board ("FHLBB"), whose responsibilities under the GSA have been assumed by the Office of Thrift Supervision ("OTS"). Government securities brokers and dealers that do not fit within any of the categories of financial institution government securities brokers or dealers are subject to oversight by the SEC.

All of the government securities brokers and dealers that registered pursuant to the GSA have joined the NASD, making them subject to certain of its rules, as well as its examination and disciplinary authority.²¹ Firms that were registered as brokers or dealers prior to the GSA continue to be subject to oversight by the SEC and each of the SROs of which they are a member.

The regulatory structure that Congress established for government securities is somewhat different from that governing the secondary market for other types of securities under the Exchange Act. For example, the provisions of the Exchange Act that give the SEC and the SROs authority to develop surveillance systems to detect manipulative activity or other rules to deter manipulative activity are not applicable to the government securities market. Similarly, there is a disparity in the degree to which the normal rules and standards for sales practices apply. Standards such as just and

¹⁹(...continued)

or dealer is any entity, including a financial institution, that acts as a broker or dealer of government securities.

²⁰ In this context, the term "financial institution" means banks and savings and loans. 15 U.S.C. § 78c(a)(46). The definition of "appropriate regulatory agency" with respect to a government securities broker or dealer is set out at 15 U.S.C. § 78c(a)(34)(G).

²¹ Section 15A(f)(2) of the Securities Exchange Act specifies which of the NASD's rules are applicable to its members' government securities transactions. Generally, they are limited to rules necessary to ensure compliance with Treasury rules.

equitable principles of trade do not apply in the government securities market. However, the general anti-fraud provisions of the Exchange Act and the rules the SEC has adopted pursuant to that authority are applicable to all persons who engage in transactions in any security. Nevertheless, anti-fraud proceedings under Rule 10b-5 of the Exchange Act require proof of scienter,²² which is a higher standard in bringing what would otherwise be a routine disciplinary action under a specific sales practice rule.

Treasury rulemaking authority under GSA lapsed on October 1, 1991. To date, Congress has not acted to renew this authority. Treasury rules already promulgated remain in effect and are enforced by the appropriate regulatory agencies.

Government Securities Act regulations. In its rulemaking capacity pursuant to the GSA, Treasury has issued rules for government securities brokers and dealers. Many of the rules issued by Treasury incorporated the existing SEC regulations that applied to registered brokers and dealers before the passage of the GSA. In addition, with limited modifications, compliance by financial institution government securities brokers and dealers with existing regulations of their appropriate regulatory agencies was also deemed in most cases to be compliance with Treasury regulations.

Financial responsibility. The GSA regulations require that every government securities broker or dealer be subject to financial responsibility requirements. The GSA contains a specific mandate to promulgate regulations in this area.²³ As is the case with other sections of the regulations, a primary objective was to produce consistency in the level of regulation across different groups in the market and to avoid duplication of existing regulations where possible. Therefore, registered brokers or dealers must comply with the SEC net capital rule for purposes of compliance with the financial responsibility rules of the GSA regulations. Likewise, financial institution government securities brokers and dealers must comply with the respective capital requirements of their appropriate regulatory agencies for purposes of compliance with the GSA regulations.

With the passage of the GSA, financial responsibility regulation has been most significant for previously unregistered entities, because these firms were not, prior to registration, subject to any mandatory requirements regarding their capital. The Treasury capital rule differs from the SEC capital rule both in its risk measurement principles and ratio measurements. In the risk measurement area, the Treasury

²² The term "scienter," as applied to conduct necessary to give rise to an action for civil damages under the Securities Exchange Act and Rule 10b-5, refers to a mental state embracing intent to deceive, manipulate, or defraud.

²³ 15 U.S.C. § 78o-5 (b)(1)(A).

"haircut"²⁴ methodology provides a different system for recognizing the reduced risk of hedged positions. With respect to ratio measurements, the Treasury rule links a government securities firm's required liquid capital to measured risk because firms specializing in government securities generally bear insignificant risk from customer-related assets or liabilities and generally have low levels of unsecured debt.²⁵

To provide for effective consultation in order to balance regulatory standards among market participants, the Treasury, the SEC, and the FRBNY have established an informal study group to research and discuss the issues that need to be resolved to reach a uniform capital rule for both registered brokers and dealers and registered government securities brokers and dealers. A uniform capital standard applicable to all nonbank brokers and dealers is a desirable goal, and through cooperative efforts to date, progress has been made toward reducing the differences between the Treasury and SEC capital rules.

The financial responsibility regulations take into account the diverse categories of registered government securities brokers and dealers. To that end, the regulations for specialized government securities brokers and dealers contain an alternative capital treatment that can be elected by interdealer brokers. The regulations also assign different requirements to futures commission merchants that are government securities brokers or dealers and that are subject to the capital rule of the CFTC. These requirements are virtually identical to those for regular broker-dealers. The regulations also provide assurance that market participants have sufficient capital to support their positions and operational risks.

Customer protection: hold-in-custody repo rules. The most significant and far-reaching requirements of the GSA regulations pertaining to customer protection are the rules for hold-in-custody repurchase agreement transactions (hold-in-custody repos). The hold-in-custody repo rules strengthen customer protection by requiring that: (1) information be provided to investors, in writing, explaining the nature and specifics of the transaction; (2) specific disclosures be made concerning the risks associated with granting the broker or dealer the right to substitute securities and with the lack of coverage under either the Securities Investor Protection Act of 1970 or by the FDIC; (3) specific securities be clearly and separately held for, and a description of them disclosed to, the customer; and (4) securities used to collateralize a repurchase agreement be maintained free of lien.

These hold-in-custody repo requirements make mandatory the use of written repurchase agreements containing the required disclosures. These agreements are required to be executed prior to the broker or dealer conducting a repo transaction.

²⁴ "Haircuts" are measures of risk of a dealer's or broker's positions, reflecting market and credit risk.

²⁵ For a discussion of Treasury's capital rule, see 52 FR 19642, 19651.

Written agreements inform customers of their rights and liabilities in a repo transaction and reduce the possibility that they will misunderstand the terms of the transaction.

The requirement that firms maintain and segregate specific securities is intended to eliminate the duplicative use of securities by brokers and dealers, as well as the practice of segregating customers' securities in pooled or bulk form. In pooling, a broker or dealer sets aside a pool of securities with an aggregate value at least equal to the amount of the repurchase transactions, but specific securities are not identified as belonging to individual customers. The requirement to allocate and maintain specific securities under a hold-in-custody repo not only reduces the likelihood of the double use of securities but also provides the owner with a clearer legal claim to the securities.

Confirmations. Treasury regulations pertaining to hold-in-custody repurchase agreements mandate that the specific securities subject to the hold-in-custody repurchase agreement be listed on the confirmations issued to customers along with, among other information, the market value of those securities. Confirmations benefit customers by providing information with which they can promptly act or react in current transactions. Confirmations also enable customers to monitor the sufficiency and appropriateness of the securities provided by the counterparty. In addition, the Uniform Commercial Code assigns significant value to a confirmation in establishing a customer's interest in securities. Inclusion of market value on the confirmation ensures that the customer can verify that securities of sufficient value, including substitute securities, have been allocated to the transaction. This is particularly important because in some sectors of the government securities market, securities are normally allocated to repo transactions based on the par value of the securities, and a less sophisticated customer could be unaware that the market value could differ substantially from the par value. This could cause the transaction to be under-collateralized, and therefore, more risky for the customer.

Nonbank government securities brokers and dealers are also subject to SEC confirmation requirements (SEC Rule 10b-10) for their general purchase and sale transactions, and financial institution brokers and dealers are subject to their appropriate regulatory agencies' confirmation rules.

Recordkeeping. Treasury's recordkeeping requirements apply to registered brokers and dealers, registered government securities brokers and dealers, and financial institutions that are government securities brokers and dealers. In developing its regulations, Treasury relied heavily on existing recordkeeping rules of the SEC and the appropriate bank regulatory agencies. Thus, the regulations avoid overlap, duplication, and unnecessary burden. Therefore, Treasury's recordkeeping rules, with only limited modifications, are familiar to the registered and financial institution brokers and dealers.

For registered brokers and dealers, the only material difference from existing SEC rules are additional provisions to the books and records requirements pertaining to repurchase and reverse repurchase agreement transactions that are intended to ensure proper accountability for the cash and securities involved in such transactions.

Under the GSA regulations, registered government securities brokers and dealers are required to maintain and keep current books and records, preserve those records, and conduct quarterly security counts in accordance with SEC rules, with limited modifications. The differences between the respective SEC and GSA regulations relate primarily to the different financial responsibility requirements that apply to registered government securities brokers and dealers.

The GSA regulations require financial institutions that are government securities brokers or dealers to comply with the SEC recordkeeping rules pertaining to making, keeping current, and preserving records, unless they are subject to, and comply with, specific recordkeeping requirements of their appropriate regulatory agency. In addition, there are two other records, securities positions and associated persons records, that financial institution brokers or dealers must maintain and preserve. When developing the regulations for financial institutions that are government securities brokers or dealers, the Treasury adopted the recordkeeping requirements imposed by the OCC, FDIC, and the Federal Reserve Board. Within the group of financial institutions, only savings associations (including savings banks) must comply with the SEC recordkeeping rules. The reason for this is that neither the FHLBB nor its successor, the OTS, the appropriate regulatory agency for savings associations, has promulgated comparable securities-related recordkeeping requirements for these entities.

Reporting and audit. The financial reporting and audit requirements of the GSA for registered government securities brokers and dealers generally follow those of the SEC and the regulatory agencies. Except for interdealer brokers operating under the alternative capital treatment and futures commission merchants registered with the CFTC, registered government securities brokers and dealers file financial reports utilizing Treasury-prescribed forms pursuant to the GSA regulations. The format of reporting under the GSA regulations is substantially similar to that required pursuant to SEC rules. The GSA regulations require that interdealer brokers operating under the optional alternative capital rule and CFTC-regulated entities that are government securities brokers or dealers file reports pursuant to the SEC rules. Financial institution government securities brokers and dealers that are subject to the financial reporting rules of their regulatory agencies are exempt from this portion of the regulations.

APPENDIX B

ISSUES IN THE TREASURY MARKET

1. Short Squeezes

The term "squeeze" is used by market participants to refer to a shortage of supply relative to demand for a particular security, as evidenced by a movement in its price to a level that is out of line with prices of comparable securities – either in outright trading quotations or in financing arrangements.

A short squeeze can arise in a number of ways. A squeeze can develop during the when-issued ("WI") period before a security is auctioned and settled. During this period, dealers sell the soon-to-be-available security and thereby incur an obligation to deliver such security at the issue date. These dealers, now short in the WI market, must cover this position by buying back the security at some point in the WI market, in the auction, or in the post-auction secondary market. If the dealers who are short do not bid aggressively enough in the auction to be awarded sufficient supply, or if other demand unexpectedly materializes, these dealers may experience difficulty in covering their positions.

Such misses in the Treasury auction process by individual dealers are not uncommon. However, if a sizable number of dealers fail to cover their short positions in an auction, a squeeze can develop and the relative price of that particular security will rise. Yet, as the security's price rises relative to other issues with similar characteristics, the increasing price generally tends to create arbitrage opportunities that would bring supply and demand more closely in line.

A short squeeze can also result as dealers set up typical arbitrage trades ahead of an auction. For example, dealers may sell the outstanding security short ahead of the auction to prepare for their customers to roll into the WI security. If a number of dealers adopt a similar strategy, a short squeeze may develop.¹

Short squeezes are not only related to auctions; they may materialize independently of the auction process in secondary market trading and in the financing of positions as well. Such a situation might occur, for example, if aggressive participants acquired large positions in the secondary market. Other participants, not expecting such demand to develop, may have difficulty covering their short positions. Squeezes in outstanding issues may reflect various trading strategies that cause demand to center in a particular part of the yield curve.

¹ This situation was exemplified around the time of the May 1986 Treasury mid-quarter refunding as participants sold the outstanding 9¾ percent bond due in February 2016 to prepare for the roll into the WI 30-year bond. Demand for the 9¾ percent bond grew, however, as securities needed to cover short positions were not readily available to the repo market.

A squeeze also may be manifested in the financing, or repo, market. Dealers that have short positions, by definition, have sold securities they do not own. In order to deliver those securities on settlement date, these dealers can either buy the securities from another party or acquire them under a reverse repurchase agreement. When a specific issue becomes scarce relative to demand, dealers wishing to acquire that issue in the repo market must provide some sort of concession to those who own the securities to prompt them to make the securities available. When such a concession is granted, the scarce issue is said to be "on special." For the owner of the scarce securities, this means that these "special" issues can be financed (that is, delivered out against cash collateral) at a relatively low interest rate, while the borrower of the securities has to "pay up" to acquire the securities needed to satisfy its delivery obligation.

Squeezes in the repo market also can be created or exacerbated by market participants that hold a relatively large portion of a security. For example, a participant that holds a large amount of a scarce security can increase its scarcity value by financing a portion of the holdings away from the "special" repo market. That portion presumably would be financed at rates around the general repo rate, while the balance could be financed at very favorable depressed rates.

The directed placement of repo collateral with certain entities could help a market participant create or sustain an issue's scarcity. Some have cited the so-called tri-party agreement in this regard. Tri-party agreements generally involve an investor – often a pension fund, money market fund or corporate treasurer – that wishes to invest large sums of money overnight or for some brief period on a collateralized basis.² These agreements by the investor, the dealer, and the dealer's bank were developed in response to credit concerns about hold-in-custody tri-party repos and have been generally encouraged. One key feature in these or any other type of arrangement where collateral is directed "off the street" is the ability to finance scarce securities with the knowledge that the securities will not be lent back into the market to participants that have short positions to cover, thus sustaining the scarcity.

Financing market squeezes are not uncommon. In recent years, one or more actively traded Treasury securities have been "on special" on most days. In general, squeezes appear to result from relatively heavy demand from a number of market

² Under normal practice, the investor specifies the conditions which the collateral must meet and the range of funds it stands ready to invest each day. The investor works with a bank, which in turn takes instructions from the dealer firm for delivery of collateral and for payment of funds. Some investors find the market yield and flexibility of repo transactions attractive, but also wish to avoid the transactions and back office costs of taking delivery of securities in repos. Such participants may choose to enter into a tri-party agreement with a bank and dealer. Normally, the bank monitors the collateral provided by the dealer on the investor's behalf and segregates it into a special account to protect the investor's interest.

participants for a particular security, rather than occurring either through a calculated shortage engineered by a limited number of participants or by collusive behavior.

Squeezes reported in 1991 in the April and May two-year Treasury notes were manifested in both the cash and financing markets. The situation in the April two-year note developed after the Treasury's auction of that issue. Reportedly, several large participants purchased a large portion of this issue. The squeeze became particularly acute towards the end of May. In addition, the April two-year note reportedly became quite difficult to borrow in the financing markets. As a result, dealers and investors who held short positions in this security were forced to pay higher than expected prices to buy those securities back or to acquire such issues at special rates in the repo market, if available.

In contrast, the reported squeeze in the May two-year note developed at the time of the Treasury auction. During that auction, certain dealers were not awarded as many notes as they needed to meet their obligations to their customers. While WI trading and pre-auction market talk centered around an average rate of 6.83 percent, more aggressive bidding interest resulted (accepted yields averaged 6.81 percent), thereby closing out many participants from awards they had expected to receive in the auction.

Soon thereafter, the price of these May two-year notes rose in the secondary market and exacerbated the loss of those participants who were short the issue. Some participants may have chosen, however, to retain short positions in the hope that the price of the issue would fall (as owners of the security took profits) or that financing could be obtained. The high price persisted for a long period of time, and financing was expensive.

2. Debt Management Approaches to Alleviating Squeezes

As discussed in this report, the Agencies have decided that short squeezes can reach a level of severity that can cause the integrity of the entire market to be questioned. This can eventually result in higher costs to the taxpayer if some market participants drop out of the government securities market because they perceive the market as being unfair.

This section examines debt management options that could be used to alleviate short squeezes. The most obvious option is for the Treasury to supply the market more of the security that is subject to an acute, protracted squeeze. This could be done in a variety of ways. In addition to the Treasury making available additional supply of a security, another option is the setting up of a facility for the market to create more of a given security than was originally issued from the stripped components of other securities. This option is discussed at the end of this section.

The Treasury has concluded, and the other Agencies concur, that, while a policy of supplying more of a security subject to a squeeze could be difficult to implement, it is justified under certain circumstances. Uncertainties about the potential for prolonged shortages may weigh more heavily on the market than the concern that the Treasury might provide an additional quantity of a relatively high-priced security. In the event of an acute, protracted squeeze, in which a recently issued Treasury security is priced significantly higher in the market than near substitutes and financing rates also indicate that market participants are having difficulty borrowing the security in order to avoid fails to deliver, the Treasury will provide the market additional supply of that security, either temporarily or permanently, unless legal constraints, such as the debt limit or tax provisions, prevent it from doing so. Because of the near impossibility of determining whether a squeeze is the result of deliberate manipulation in time to correct it by intervention, the decision to alleviate a squeeze will not be based on the perceived intent of those holding long positions but rather on whether the pricing anomalies are serious enough to result in a disorderly market.

Issues in deciding to increase the supply of a security

The Treasury has, in the past, been reluctant to reopen securities outside of its normal financing schedule. There was a concern that, if the Treasury were to announce and implement a policy of reopening securities when it perceived price distortions, market participants might demand a higher yield from the Treasury on securities at auction, given the greater uncertainty about the eventual supply of the security. Moreover, it has been argued that traders and dealers know the risks of taking short positions and should not expect to be bailed out when the market behaves differently than expected.

Effect on prices and participants. The price of a given Treasury security can vary such that its yield at any particular time can be above or below the yield of near substitute securities. Normally, arbitrage activity will serve fairly promptly to remove inconsistencies in the price of near substitutes. However, in more severe cases, it may take time for the natural workings of the market to eliminate price anomalies.

Through a reopening policy, the Treasury will attempt to enhance the function of arbitrageurs by speeding the removal of certain pricing inconsistencies. Because of the Treasury's ability to create virtually any amount of a given security, a reopening policy to alleviate a squeeze cannot be defeated by market manipulators. This does not mean, however, that a reopening policy will be easy to implement in practice.

First, it should be noted that a reopening policy to alleviate squeezes in Treasury securities implies that the Treasury will intervene only when the price of a given security is perceived as being too high. Consequently, given an announced Treasury reopening policy, market participants know that any "winnings" on a bet that a new security will be priced higher than near substitute outstanding issues are effectively subject to a cap. On the other hand, market participants betting that the price of the new issue will be lower than that of near substitutes will not face such a cap on profits by Treasury policy. This means that a Treasury reopening will lean effectively in favor of arbitrageurs who hold short positions in the new issue, because their potential losses are capped by the Treasury, while no such protection is afforded those who are long the new issue.

Conversely, those holding long positions in the new issue not only have no such protection concerning the magnitude of their loss if their bet is wrong but face a limit on their gain. In fact, depending on how the reopening is implemented, a market participant betting that a new issue will be priced relatively high may be better off if the pricing difference remains modest. Otherwise, the Treasury may enter into the market and the pricing difference may completely disappear or even reverse. The effect of this change on the behavior of market participants is very difficult to gauge.

Clearly, supplying the market more of a particular security, either temporarily through lending transactions or more permanently through a sale, raises difficult issues of judgment. A decision to alleviate a squeeze by either a temporary or permanent issuance of more of the squeezed security would benefit some market participants and harm others. The Treasury might not know the causes of a pricing distortion and would not know how long the distortion would likely last. It would also not be clear how much additional supply of the security would be needed to break a squeeze. If the Treasury were to sell more than was needed, it is possible that the pricing relationships could reverse and the new supply of securities could be a relatively expensive form of borrowing. It is also possible that by the time a reopening decision had been made, the profits from a squeeze deliberately created may have already been taken.

It should also be noted that two factors can constrain the Treasury's ability to provide an additional supply of a security. The first is the debt limit, which at times limits the Treasury's ability to issue securities. The second is the federal income tax rules governing original issue discount.

The tax rules would come into play if the security being squeezed is trading significantly below its original issue price.³ If the price of the security is sufficiently below the original issue price, then the proposed tax regulations on original issue discount may effectively preclude the Treasury from issuing more of the security.⁴

When to reopen. It should be emphasized that the decision to reopen a security cannot be simply based on a mechanical rule. A commonly held view is that additional supply of a given security should be provided when its yield is significantly below the yield curve. While this may seem simple in concept, it is in fact more complex than it may initially appear.

The yield curve is not directly observable. It is a line drawn on a graph where the horizontal axis denotes time remaining to maturity and the vertical axis denotes yield. A point on the line is used to estimate the yield of a security with a given maturity. There are different ways to draw such a line. One way is to fit a curve through the most recently issued Treasury securities using statistical techniques. This method of course would not work to solve the present problem, since the question at hand is whether the most recently issued Treasury security is off the curve. Older issues must thus also be used to estimate the curve in order to determine whether a new issue is out of line.

³ In general, a security is subject to the original issue discount rules for tax purposes if it is issued at a price which is lower than the par value by more than a *de minimis* amount. Under Internal Revenue Code section 1273(a)(3), original issue discount is ignored if it is less than the number of complete years to maturity multiplied by 25 basis points. Thus, tax issues would arise if a two-year note were reopened at a price of 99.75 or less, because the security would have less than two complete years to maturity at the time of the reopening.

⁴ Under Prop. Reg. § 1.1275-1(e), two or more publicly offered debt instruments are not part of the same "issue" unless they are sold at substantially the same time pursuant to a common plan of marketing. If securities issued at a significant discount in a reopening were considered a different "issue" than the squeezed securities that share the same payment terms, the different tax treatment of the two issues would prevent the reopening from alleviating the squeeze.

Even if all Treasury securities with the same payment terms were considered to be part of one "issue" for tax purposes, Prop. Reg. § 1.1273-(2)(b)(1)(ii) defines the "issue price" that is used to determine whether Treasury securities are subject to the original issue discount rules as the average price of the debt instruments sold. Thus, if a large amount of securities were issued at a significant discount in a reopening, the average selling price of the new and old securities could fall below the *de minimis* amount, and the entire "issue" could become subject to the original issue discount rules.

Unfortunately, a yield curve estimated by using older issues raises other problems, because the securities used in the estimation will bear different coupons due to the different prevailing levels of interest rates at their issuance dates. Even assuming perfect arbitrage across the maturity spectrum and ignoring tax considerations for the moment, the yield on Treasury securities is not solely a function of time to maturity but also of the periodic coupon payment.

A Treasury note or bond is actually a package of payments that the Treasury promises to make at future dates. The government securities market determines what investors are willing to pay at the present time for these future payments. The yield of a given Treasury security is the single rate which, when used to discount all the future payments of a Treasury security to the present time, will produce values that sum to the current price of the security. Finance theory shows that, even given perfect arbitrage, this yield, in virtually all cases, will not be the same in equilibrium for Treasury securities that mature on the same date but carry different coupon rates. In addition, other factors, such as the lesser liquidity of seasoned issues, affect yield differentials among Treasury securities.

Tax considerations add to the complexity of comparing securities with different coupon rates. A Treasury security initially issued close to its par value but whose price has declined will have a tax advantage over a security that has the same yield but a higher coupon rate and is thus selling close to its par value. The reason is that the "market discount" on the first security will only be taxed at maturity, sale, or other disposition of the security,⁵ while the security with the higher coupon rate does not receive this deferral on the taxation of its return to the investor. Prices and yields on Treasury securities with different coupon rates will to some extent reflect this difference in taxation.

For these reasons, a simple mechanical rule is inadequate to determine whether the Treasury should provide additional supply of a given security. Analysis and judgment will need to be exercised each time there is an acute, protracted squeeze in a given security.

Methods of providing the market additional supply of a security

There are a number of methods which the Treasury could use to supply the market more of a given security, including (1) an auction, (2) an offering of additional supply in increments through the Open Market Desk of the FRBNY (a "tap"), (3) an issuance window, and (4) an offer to lend securities to government securities dealers using the FRBNY as fiscal agent.

⁵ See Internal Revenue Code sections 1276-1278.

As discussed above, there are difficult issues to be addressed in making a decision to supply more of a security to the market by any of these means. A fifth possibility, which does not pose these same difficulties, is to allow market participants to create more of a security than was originally issued from the components of debt already outstanding. This option is discussed in some detail at the end of this section.

Each of the four methods that require the Treasury to decide to make additional securities available has advantages and disadvantages. The Treasury will decide which method is appropriate given the specific market conditions prevailing when there is an acute, protracted squeeze. However, it should be noted that, as discussed below, in order for the Treasury to use the securities lending option, additional legislative authority is necessary.

Auctions. If the Treasury determined that a squeeze of sufficient severity existed, it could decide to offer an additional amount of the security through an auction. The timing of the auction would be affected by the already announced schedule of auctions, but it could be done fairly quickly, with issuance to take place on the day following the auction. In any case, the announcement of an auction to reopen a squeezed security would be considered a major event by the government securities market, and the announcement effect might be manifested almost instantaneously, as the price of the targeted security adjusted to the anticipated increase in supply.

In order to protect itself from having to accept unfavorable prices in this type of reopening, the Treasury might announce that it is offering up to a certain maximum amount of the security but reserves the right to award less, or none at all, if prices bid in the auction were deemed to be too low.

Reopening by auction is an aggressive government intervention. It is a straightforward, forceful way to deal with serious short squeezes. Consequently, the Treasury might not have to do this type of reopening very often once its willingness to reopen by auction was established.

However, reopening by auction is neither a very flexible nor a very subtle approach to dealing with squeezes. Also, it is not evident that the Treasury will be able to capture any of the pricing anomaly for the benefit of the taxpayer by resorting to an auction.

Tap issues. Another alternative to reopening a security through an auction would be for the Treasury to sell more of the security through the FRBNY's Open Market Desk. The Desk could sell a little of the security at a time until a sufficient amount had been sold to eliminate pricing distortions. This method of selling more of an existing security is commonly referred to as offering it "on tap," and the security so offered is called a "tap issue," using the financial market terminology of the United

Kingdom, where the Bank of England sells some of the U.K. Treasury's securities in this manner.⁶

There are different ways to operate a tap. Decisions that would need to be made include:

- How will the willingness of the Treasury to sell securities through a tap operated by the Open Market Desk be communicated to the market?
- Which market participants will be eligible to buy the offered security?
- How will the price at which the Treasury is willing to sell the security be determined?
- At what point will the Treasury decide to end the tap?

Offering the market additional supply of a security through a tap has some advantages over the auction technique, specifically enhancing the ability to move quickly and fine tune the amount needed to break a squeeze. However, tap offerings may not be the best method to sell securities quickly in large amounts, if that is what is needed to alleviate a squeeze. Also, a policy of offering securities on tap could lead to greater demands to fine tune the market than would a policy of reopening by auction.

Issuance window. In the initial auction announcement, the Treasury could commit to provide more of the security to any market participant at a yield that was fixed at a specified amount below that of a near substitute security that is identified. In effect, this notice would serve as a call option (an option to buy at a specified price) issued to the market, which would be in force for a set period of time.

The advantage of this method would be to give the initiative back to the market in enforcing a limit on the size of any price anomaly: the Treasury sets the maximum spread and market participants respond when conditions warrant. With the bounds publicly announced, any uncertainty about potential Treasury actions is reduced. However, determining the maximum spread would be difficult. Tax and operational issues would also need to be addressed.

⁶ In the United Kingdom, the Bank of England may buy some of the securities offered by the U.K. Treasury and offer them on tap. In this case, the U.K. Treasury has already received the funds from the Bank of England. This would be prohibited in the United States, because the Federal Reserve is prohibited from buying securities directly from the Treasury for its own account. Consequently, Treasury would receive funds from a tap issue only as the securities are sold and the funds from the purchasers are received.

Securities lending. One way of providing securities to alleviate a squeeze in a more flexible and less permanent manner is for the Treasury to lend to market participants an additional supply of a security subject to a serious squeeze.

Legal constraints limit the Treasury's ability to lend an additional supply of a security directly. The reason is that the Treasury's authority to issue debt generally can be for one of two purposes: to borrow funds to meet government expenditures or to buy, redeem, or refund outstanding debt.⁷ The Treasury does not have the authority to issue securities solely for the purpose of lending them in order to counter apparent price discrepancies. Consequently, before a securities lending program such as the one described below could be implemented, legislation authorizing it would need to be enacted.

Under the proposal, once the Treasury had determined the need to alleviate an acute, protracted squeeze through securities lending, the FRBNY's Open Market Desk, acting as the Treasury's fiscal agent, would implement the operational aspects of the program with market participants. If it were desired that the program not affect bank reserves nor add to the Treasury's cash balance, the securities lent could be collateralized by the borrower with other Treasury securities of similar market value pledged to the Treasury. In this case, in addition to pledging securities to the Treasury, the borrower would also pay a fee for borrowing the squeezed security. After the market problem had abated, the borrowers would return the security they had borrowed to the Treasury in return for their original securities. Alternatively, the Treasury could engage in repurchase transactions with government securities dealers and receive cash for the securities.

The securities lending approach has some significant advantages over auctions and taps. It would be a temporary measure to deal with a temporary market problem. It provides for a better possibility for the Treasury to capture some of the pricing anomaly and thus in effect make money for the taxpayer. Finally, like a tap, it is a more flexible approach than auctions to ending a squeeze.

There are also some disadvantages with this approach. Many of the same questions that arise with respect to operating a tap issue need to be answered to operate this type of securities lending program. The most significant issues to be resolved would be how to price the lending transaction and how to determine eligibility to borrow the security. Also, like a tap, implementation of a securities lending program could lead to expectations or demands that the Treasury fine tune the market to eliminate even small perceived price discrepancies.

⁷ 31 U.S.C. 3102-3104, 3111.

"Synthetic reopenings" using STRIPS. Another debt management idea to break squeezes is to let market participants effectively create more of a given security using the Treasury's Separate Trading of Registered Interest and Principal of Securities ("STRIPS") program. The underlying notion is to create a market mechanism to break a squeeze. The appeal of this method is that the market would determine how much of a given security was needed to break a squeeze. If this method could be made to work, market participants would have an additional arbitrage tool available to them to bring the pricing of various Treasury securities in line with each other. In this way, the problems with having the Treasury create an additional supply of a security subject to a squeeze would be avoided.

Background on STRIPS program. In February 1985, the Treasury implemented a facility to allow certain Treasury securities to be separated into their interest and principal components on the commercial book-entry system for Treasury securities operated by the Federal Reserve banks. The system allows original issue 10-year Treasury notes and 30-year Treasury bonds to be separated into these components. The amount of a note or bond that is stripped must be such that both the principal component and each semiannual interest payment is divisible evenly by \$1,000.

Each Treasury note or bond issue has a unique CUSIP number assigned to it. When an issue is stripped under the current STRIPS program, the principal component is assigned another CUSIP number that is unique for that principal component, and each interest payment is assigned a "generic" CUSIP number that is given for all stripped interest components that come due on a specific date.⁸ Once stripped, the components are transferred separately on the book-entry system in multiples of \$1,000.

In May 1987, the Treasury enhanced the STRIPS program by allowing components to be reconstituted into the original note or bond. In order to reconstitute a stripped note or bond, a market participant must acquire the principal component, or corpus, of the note or bond to be reconstituted in an amount evenly divisible by \$1,000 that will produce interest payments that are also evenly divisible by \$1,000. The market participant must also acquire all the remaining stripped interest payments in an amount that corresponds to the principal amount to be reconstituted.⁹

Since stripped interest and principal components are each firm promises by the Treasury to pay fixed amounts at specific dates in the future, there is no economic

⁸ Generic CUSIP numbers for stripped interest components were instituted on July 29, 1985. Since in most cases more than one Treasury security that is eligible to be stripped under the STRIPS program pay interest on the same dates, it is usually not possible to identify a stripped interest component with a particular note or bond.

⁹ Note that while the corpus must come from the security that had originally been stripped, the interest components need not come from that security.

difference between stripped interest and principal components.¹⁰ Consequently, it would appear that one way to enhance the STRIPS program and allow the market to create more of a particular security for which there is strong demand is to eliminate the requirement that, in order to reconstitute a given security, the principal component derived from the security to be reconstituted must be presented as part of the package of payments. The CUSIP number of a security the Treasury has issued could be assigned on request to a package of stripped components that exactly match all interest payments and the principal payment of that security.¹¹ If this were allowed, it would be possible for the market to create more of a given security than was originally issued without requiring the Treasury to sell more securities. The timing and the amount of total payments that the Treasury has contracted to pay at original issuance would not have changed. The market would effectively decide how much of a given security to create and thus could break a squeeze through this mechanism.

This idea has substantial theoretical appeal; however, there are some formidable practical difficulties.

Tax issues. A reconstitution of a note or bond currently selling at a discount from par may result in less current tax revenue. The subsequent purchaser of the reconstituted security would be able to characterize the discount from par as market discount and obtain deferral of the tax on that amount until maturity, sale, or other disposition of the security. However, a portion of the discount at which the stripped components (corpus or interest) were acquired by a taxpayer is includible in current income, since the entire amount of this discount is characterized for tax purposes as original issue discount. Consequently, reconstitution has the potential effectively to convert some original issue discount into market discount, which lowers the tax burden on the subsequent purchaser by allowing deferral of income.

¹⁰ In the U.S., the tax treatment of stripped interest and principal components is identical. Each time these components are sold, they are viewed as newly issued discount instruments for purposes of determining original issue discount. A portion of the original issue discount is includible in the taxable income of the holder each year. It is not possible to obtain market discount treatment for a stripped component. Market discount is only includible in taxable income upon maturity, sale, or other disposition of the security acquired with such discount. See Internal Revenue Code sections 1276-1278.

¹¹ By way of example, assume a Treasury note that has an 8 percent coupon payable every six months and has five interest payments remaining. The payment stream of this security for \$100,000 of principal would be four payments, at six month intervals, of \$4,000 and a final payment of \$104,000 (\$100,000 of principal and \$4,000 of interest). Under the current reconstitution program, five generic interest components of \$4,000 each coming due on the correct dates and the correct principal component in an amount of \$100,000 would have to be assembled in order to reconstitute the note. The enhancement suggested above would allow the last payment of the package of \$104,000 to be composed entirely of a stripped interest component (or a principal component from a different security) in that amount coming due on the appropriate date.

The reconstitution program outlined above raises the possibility of significant tax revenue losses if the market were to seize the opportunity to create additional supplies of low coupon bonds selling at a discount. A solution to this problem, without resorting to significant changes in tax law concerning the tax treatment of original issue discount and market discount, would involve some restrictions on the ability to reconstitute securities without the correct corpus.

One possible solution to this problem would be to limit the securities that can be synthetically reconstituted to those that have been issued within a limited period, for example, six months, prior to the reconstitution date. These securities are unlikely to be selling at a large discount unless there was a significant increase in interest rates shortly after the security was issued. Also, even with this restriction, the ability of the market to resolve squeezes would be enhanced, since squeezes usually develop for recently issued securities, not seasoned issues. Another possibility would be to allow only those securities to be reconstituted synthetically that are not selling currently at discount from par greater than a specified amount.

An additional tax complication that requires further study derives from the realization rule in Internal Revenue Code section 1001(c). Because the proposal involves the transformation of an interest component into the principal of the reconstituted security, it is possible that the issuance of the new CUSIP number for the bundle of payments would be a realization event for tax purposes under section 1001. In any case, the tax rules in this regard would need to be clarified.

Legal and accounting issues. There may be legal obstacles with respect to the Treasury setting up a facility for synthetic reconstitution. It is not clear what the treatment of the synthetically reconstituted security would be for the purposes of the debt limit and for appropriation purposes.

The Treasury has a permanent indefinite appropriation to pay interest on the public debt.¹² Repayment of principal is not treated as a budget outlay, which requires an appropriation, but as a financing transaction. Redemption of principal is a negative means of financing, while the issuance of the security is a positive means of financing. The amount of financing that can be accomplished through the issuance of securities is restricted by the statutory limit on the public debt.

The implication of the conversion of interest components into the principal of a note or bond is not clear under the public debt statutes, which were enacted in their basic form long before the idea of stripping and reconstituting securities was conceived. It might make most sense from the government's point of view to ignore the conversion for purposes of determining the debt subject to limit and interest paid on the public

¹² 31 U.S.C. 1305.

debt, since nothing has happened to the total amount the Treasury has contracted to pay in originally issuing the securities. Achieving this result may require amending the public debt statutes and other laws.

Whatever the legal characterization of the conversion, significant changes would have to be implemented to the Treasury's public debt accounting systems in order to keep track of interest and principal payments. Currently, these systems verify the amount of interest paid on each security, or loan, by reference to the principal outstanding of that particular security. If the interest payment from another security were to become an addition to the outstanding principal of a shorter maturity security, modification to this method of accounting for interest and principal payments would have to be made. Before such modifications could be even characterized, the legal implications and the budget and accounting rules with respect to synthetic reconstitutions would have to be determined.

Timing issues. The most serious constraint on the utility of the synthetic reopening proposal is the availability of sufficient strippable interest and principal components. Only with significant modifications to the current financing schedule and payment dates for new Treasury securities could this proposal become an effective means for combatting squeezes and market manipulation in all segments of the market. However, major changes to the financing schedule would create additional operational and cash flow problems for the Treasury.

First, in order for a synthetic reopening/reconstitution program to become operational, the STRIPS program would need to be expanded to allow stripping of all marketable Treasury notes and bonds. This modification would pose few problems for the Treasury, aside from the need to expand administrative capacity of the STRIPS program.

The larger problem is that without major changes to the financing and payment schedule, the potential for synthetic reopening or reconstitution of different Treasury securities would differ markedly depending on the ultimate maturity date of each security. For example, under the current financing schedule, synthetic reconstitution would be impossible for new five-year and seven-year notes and 30-year bonds. For two-year notes, the potential increase in overall supply from synthetic reopenings would be highly variable, depending on the month of maturity. The potential to create new 10-year and three-year notes would be much greater.

The underlying reason for this disparity is quite simple: securities that share maturity and interest payment dates with longer-term securities can be replicated much more easily with stripped components of other securities. For example, a newly issued 30-year bond, the longest maturity Treasury security currently offered, does not share its maturity date with any other marketable Treasury securities; consequently, its principal component and last interest payment component cannot be replicated by

using components originally stripped from other Treasury issues.¹³ Also, seven-year notes are the only coupon securities that mature and pay interest on a January 15, July 15, April 15, October 15 schedule, and therefore no strippable components from other securities exist to replicate their payment stream.

For two-year and five-year notes, principal and semiannual interest payment dates occur on the last day of each month, unlike three- and 10-year notes and 30-year bonds, which make payments in the middle of the month. This means that the five-year note does not share its maturity date with any other security, and therefore cannot be replicated. While every two-year note has a payment schedule that is consistent with one or more five-year notes, until 1994, only the *interest* payments, not the principal components, of five-year notes would be available for stripping and reconstitution as two-year notes. This interest amount is a fairly small, though growing, amount in relation to the issue size of recent two-year notes. In contrast, the potential to reconstitute synthetically three-year and 10-year notes, which are issued at the Treasury's quarterly refundings, would be much greater because they share payment dates (February 15 and August 15 or May 15 and November 15) with 30-year bonds.

To make reconstitution easier for most notes and bonds, it would clearly be necessary to standardize payment dates so that each security matured on a common payment date with other securities. This would require extensive modifications to the current Treasury financing schedule, which would take years to have their full effect on the potential to reopen synthetically any particular security. In the transitional period after such changes were made, a progressively larger amount of strippable components would be available as more securities were issued under the consistent payment schedule. For longer term securities switched to a new payment regime, it would be years before adequate strippable components existed to allow synthetic reopenings to mitigate a squeeze.

In addition, modifications to the current financing schedule might create cash management problems for the Treasury. There are currently 20 payment dates per year for interest and principal on Treasury notes and bonds. To be effective, the synthetic reopening scheme would probably require the Treasury to auction securities of *all* maturity lengths on a quarterly, monthly, or semi-monthly schedule. (Alternatively, the Treasury could issue securities on different auction schedules but with standardized interest payment and maturity dates. This would require issuing some securities with accrued interest.) If the financing schedule were modified in this way to accommodate synthetic reopenings, it would smooth out debt related cash outflows from month to month. However, this might create serious cash management problems in the short term, since the Treasury would still need to fund the large interest and principal amounts associated with past quarterly refundings. In other

¹³ Note that the synthetic reconstitution approach cannot be made to create an additional supply of the most recent issue of the longest maturity security that the Treasury offers.

words, even moving to a smoother financing pattern would create transitional cash flow irregularities that might persist for years.

More volatile Treasury cash balances would create problems for the Federal Reserve in implementing monetary policy. The Treasury tries to maintain a stable cash balance at the Federal Reserve of about \$5 billion. Additional amounts of cash are held in Treasury Tax and Loan ("TT&L") accounts at commercial banks and other financial institutions. The total capacity of TT&L accounts is about \$35 billion, however, and large, uneven cash inflows occasionally spill over into the Treasury's account at the Federal Reserve. When this happens, reserves are taken out of the banking system, and the Federal Reserve must undertake open market transactions in order to offset this drain.

In summary, the synthetic reconstitution idea, while having substantial theoretical appeal, has some large practical difficulties associated with it. Even assuming that all the tax, legal, and accounting issues could be resolved, the proposal implies some major changes in Treasury's debt issuance schedule. This has implications beyond transitory market problems associated with squeezes. Of course, a synthetic reconstitution program could be implemented without debt issuance schedule changes, but the ability of such a program to facilitate the breaking of market squeezes would be much more limited.

3. Treasury Auction Issues

A. Auction Technique

This section examines simple descriptions of auction organization and discusses in more detail two specific proposals for reform of the auction process. While much of this discussion is in theoretical terms, it should be understood that market specifics make it difficult to translate theory into practice, with the goal of assessing the efficacy of any auction reform.

For example, unlike most of the simple theoretical constructs that appear in the economics literature, the Treasury offers *multiple* units of the auctioned security, with open trading in those securities preceding (in the when-issued market) and following (in the secondary market) the issuance of securities. Another deviation from common theoretical assumptions is that investors can adjust their behavior in many ways, such as by varying the amount of information collected, by altering the volume of bids, or by placing bids indirectly through dealer intermediaries. These considerations are important in the policy context, and this section attempts to address them as well as presenting a basic theoretical framework for assessing auction methods.

Auction methods

There have been many important contributions to the academic literature on auctions, including early efforts by William Vickrey and Milton Friedman, as well as significant later work by Paul Milgrom, among others.¹⁴ This research has classified the types of auctions, modelled the bidding strategies rigorously, and ranked the outcomes by various criteria. A number of similarities among auctions have emerged, as well as equivalence propositions concerning the revenue to the seller. Unfortunately, members of the financial and academic communities describe auction formats by a variety of names, some overlapping and others conflicting. To reduce confusion, this section will use explicit, if somewhat unwieldy, names for each auction type.

¹⁴ The early references include William Vickrey, "Counterspeculation, auctions, and competitive sealed tenders," *Journal of Finance*, Vol. 16 (March 1961), pp. 8-37, and Milton Friedman, "Comment on 'Collusion in the auction market for Treasury bills,'" *Journal of Political Economy*, Vol. 72 (October 1964), pp. 513-514. Recent work is summarized and reviewed in R. Preston McAfee and John McMillan, "Auctions and bidding," *Journal of Economic Literature*, Vol. 25 (June 1987), 699-738; Paul Milgrom, "Auctions and bidders: a primer," *Journal of Economic Perspectives*, Vol. 3 (Summer 1989), pp. 3-22; and Paul Milgrom and Robert J. Weber, "A theory of auctions and competitive bidding," *Econometrica*, Vol. 50 (September 1982), pp. 1089-1122. A less rigorous overview with applications to Treasury securities is provided by Loretta J. Mester, "Going, going, gone: setting prices with auctions," *Federal Reserve Bank of Philadelphia Business Review*, (March/April 1988), pp. 3-13.

William Vickrey originated the standard auction taxonomy, classifying auction types based on the order in which prices were quoted, as well as the auction forum. First, awards can be made at prices that are progressively lowered (or, equivalently, at yields that are raised) until all of the goods or securities are sold; alternatively, the bids can be arranged in ascending order by their price and a single price determined that just places the total issue. Second, the auction can be conducted with sealed bids entered any time up to a deadline and subsequently opened by the auctioneer; on the other hand, the auction can be conducted with open bids put forth by participants in an open gathering or some other means of direct communication with the auctioneer (such as by telephone). This two-by-two classification scheme yields four auction types, described below.

Beyond these categories, models can be stratified further by the assumption concerning bidders' information about the value of the auctioned object. In the "private-values" case, bidders make subjective decisions as to the value of the object on the auction block, independent of each other. In the "common-values" case, each participant attempts to measure the item's value by the same objective yardstick. The auction of a unique piece of art is the prototypical private-values example, while a Treasury auction – with each bidder guessing at the security's resale value – matches the common-values assumption.

Multiple-price, sealed-bid auction. The Treasury's current auction methodology falls into this category, which in the financial community is termed an English auction (except by the English, who call it an American auction). Bidders spell out their intentions on tender forms that must be turned in before an established deadline. An individual sealed bid, known only to the tenderer and to the auctioneer, reports the quantity and price for the auctioned security that the bidder is willing to pay.¹⁵ The auctioneer then ranks those bids by tendered price (or equivalent yield) and makes awards at the highest prices covering the total auction size. Thus, participants pay differing prices reflecting the strength of their bids, with the surest winner the one furthest above the market consensus. This type of auction is called a "first-price" auction when a single unit is for sale because it is the first, or highest, price that is accepted.

In this case, winning is losing, as entering the highest bid signals that the bidder's valuation exceeds that of all other interested parties. Because all participants, in effect, are guessing about the same common value – the price at which the security will trade after the auction – a high bid signals a heightened probability of subsequent loss for that bidder. This is the "winner's curse" and gives bidders an incentive to rein in their

¹⁵ A bidder's intention will be measured here in terms of the price he or she is willing to pay for the security rather than the equivalent yield he or she is willing to earn on the security.

enthusiasm. The optimal strategy is to shade a bid toward the perceived market consensus.¹⁶

The risk of the winner's curse puts a premium on market information entering the auction, and this incentive shapes bidders' behavior before and at the auction in three major ways. First, when-issued trading before the auction allows a market consensus about auction pricing to coalesce. Second, a core of bidders at the auction routinely exchanges information about probable market conditions. Third, participants who are unable or unwilling to commit the resources needed to collect market information pool their bids, as a group of investors is more likely to have a clearer view of the market consensus and is less likely to place off-market bids. The pooling of bids is one service provided by primary dealers, who collect customer business and place large-scale orders.

Uniform-price, sealed-bid auction. In this type of auction, the auctioneer collects sealed bids, arranges them by price, and makes awards at the single price that just places the entire issue. This type of auction is called a "second-price" auction when a single unit is sold because the price charged would be that of the highest failed bid, or the second-best price. It is often called a "Dutch" auction in the financial press and has recently gained some prominence as a potential substitute for current Treasury practice. Aggressive bidders receive sure awards but pay a price closer to the market consensus. As a result, there should be less of the shading of bids that marks the response to the winner's curse. With the threat of awards above the consensus reduced, there is less of a need for large bidders to compare notes before the auction and customers might be more willing to place their business directly by bidding at the auction rather than going through a primary dealer.

Descending-price, open-outcry auction. This procedure has been used to auction flowers in the Netherlands; hence, academics refer to it as a Dutch auction. Bidders congregate in one room, or its electronic equivalent, and the auctioneer calls out a sequence of decreasing prices. In an auction of one unit of a good or security, the auction stops when one bidder is willing to pay the price called out. For multiple units, the eager bidder would be awarded the security and the auction would continue, selling the remaining securities at progressively lower prices. In fact, the strategic decision is identical to that of the multiple-price, sealed-bid auction: the optimal bidder does not want to be too aggressive and stop the auction well above the likely market consensus, but rather, will shade his or her bid to avoid the winner's curse.¹⁷ As a result, investors have the same incentive to trade information and to pool bids by placing customer orders at primary dealers.

¹⁶ This strategy is explained in James L. Smith, "Non-aggressive bidding behavior and the 'winner's curse'," *Economic Inquiry*, Vol. 19 (July 1981), pp. 380-388.

¹⁷ This strategic equivalence was first noted by Vickrey, *op. cit.*

Ascending-price, open-outcry auction. The auctioneer could announce an ascending sequence of prices to a group of bidders, who would submit their bids at each price. The auction would stop when just enough bids were received to sell the total issue of securities or total units of the good for sale. One form of this auction category is the method commonly used to sell, for example, works of art, when a single unit is on the block.¹⁸

In selling multiple units of securities, the auction would begin as a price was called out and all interested parties submitted their quantities demanded. The volume of bids at that price would be announced and, in successive rounds, the price would be raised until the volume demanded was smaller than the size of the issue. When that point was reached, the auctioneer would know that the price previously called was the highest price consistent with selling the entire issue. In other words, the second highest price clears the auction market. Bidders who bid above that market-clearing price plus some fraction of the bidders at the market-clearing price would receive awards. Those partial awards to the bidders that had not moved up to the highest price either could be based on a common fraction of the bids of all members of that group or could be allotted to those who were electronically timed as having placed their bids soonest at the market-clearing price.

From the viewpoint of an investor, this increasing sequence of prices lessens the possibility of the winner's curse, as the public announcement of bids provides information about the security's common value. That is, the presence of other bidders provides support that a bidder is not alone in valuing the security highly. Even if an investor truly valued the security far above his or her competitors, the bidding would cease before the price moved very far from the consensus.

Potential changes to the Treasury auction method

Milton Friedman's proposal. Recent events have kindled enthusiasm for reform of the auction process. In a recent contribution, Milton Friedman has repeated a proposal he advanced in 1959 concerning the auction of Treasury securities.¹⁹ Essentially, Friedman argues for a uniform-price, sealed-bid auction, commonly called a Dutch auction. In the one alteration to current practice, the Treasury would no longer award securities at the price equivalent to the yield bid but instead charge a uniform price (award a uniform yield) to winning bidders.

¹⁸ Academics term this an English auction. Indeed, in the private-values model (which is not analyzed here), another equivalence proposition holds: what has been popularly referred to as a Dutch auction is strategically identical to what academics refer to as an English auction. When there is a time limit on bidding, it is called a Scotch auction.

¹⁹ Milton Friedman, "How to sell government securities," *Wall Street Journal* (August 28, 1991).

Friedman asserts that the switch would end cornering attempts by eliminating the profit potential in market manipulation. And, perhaps paradoxically, he also argues that total revenue to the Treasury would be higher by surrendering the ability to "price-discriminate" or charge bidders different prices based on their bids.

Friedman argues that the current Treasury technique reduces demand at auctions, as well as making it more price sensitive relative to the demand of the ultimate buy-and-hold investor. As explained above, this is the rational response to multiple-price awards: the investor is reluctant to expose his or her true valuation to a seller (the Treasury) whose stated intention is to garner the highest price possible. But with this induced difference in demands in the primary and secondary markets, a potential market cornerer can buy at the auction just above the market consensus and sell in the secondary market to a larger group of investors.

Moving to a uniform-price award method permits bidding at the auction to reflect the true nature of investor preferences. This should allow investors to bypass the dealer intermediaries and bid directly in the auctions. In the case envisioned by Friedman, uniform-price awards would make the auction demand curve identical to the secondary market demand curve. This integration of the auction and secondary markets would eliminate the incentive to corner an issue, because any cornerer who bids securities away from investors at an auction would not find buyers willing to pay a higher price in the secondary market. Thus, under Friedman's assumptions, the cornering motivation would be eliminated by removing the potential for profit.

This result requires that the switch in auction technique completely unifies the primary and secondary markets. In other words, Friedman assumes that dealers exist solely to bear the bidding risk because of the Treasury's discriminatory pricing. However, even after the adoption of uniform-price awards, presence at auctions may still be limited to a segment of the investor populace, perhaps to those who are more price sensitive. Participants at an auction face uncertain outcomes, since they may not be awarded securities if they have not appropriately cast their bids. Those particularly adverse to this quantity risk well may delay purchase to secondary trading. Those who sell the auctioned securities short in the when-issued market may prefer to cover their positions quickly at the auction. Furthermore, direct bidding requires incurring the costs of arranging for the placement of bids and the payment of awards – the prospects for which depend on the pace of automation and changes in the regulatory environment. As a result, the infrequent purchaser may remain in the secondary market. In general, if dealers provide any service in the distribution of securities, then a wedge will remain between the auction and secondary-market demand schedules. A sufficiently large wedge provides an opportunity for market manipulation.

With demand at the auctions still differing somewhat from that in secondary trading and with the Treasury continuing to solicit sealed bids, Friedman's proposal would not discourage attempts to corner the market. For example, under Friedman's

"Dutch" auction regime, a market manipulator could place bids for a substantial fraction of an issue well above the market consensus price, ensuring significant awards, but would pay only that price required to allocate the remaining portion of securities to unsuspecting competitors. However, even if the threat of manipulation remains, the lessened importance of bidding near the market consensus should reduce the desire to share information and the associated pre-auction discussion and pooling of bids that could provide cover for market manipulation.

With regard to revenue, Friedman would have the Treasury surrender part of the revenue from its current auction practice – that earned from charging winners the price that they bid rather than a common price – in the expectation that added investor demand and more aggressive bidding would more than replace that loss. This assertion can be spelled out using Henry Goldstein's 1962 analysis.²⁰ As figure B-1 shows, part of the Treasury's total revenue owes to its charging winners the price that they bid, which for the current practice is measured by the area under the demand schedule labeled "multiple-price." That price discrimination, however, discourages some demand, as investors shade their bids for fear of the winner's curse. Adopting Friedman's uniform-price system turns part of that surplus back to the bidders, thus shifting out the demand schedule to that labeled "uniform-price." Under a multiple-price scheme, the Treasury works its way down the inner demand schedule, awarding securities at lower prices to place the total issue (marked by the vertical dashed line). Under the uniform-price scheme, one price, depicted by the horizontal line, would exhaust the issue. The consequences for revenue depend on whether the area of the first triangle, the loss from the inability to price discriminate, outweighs the area of the second triangle, the gain from added demand.

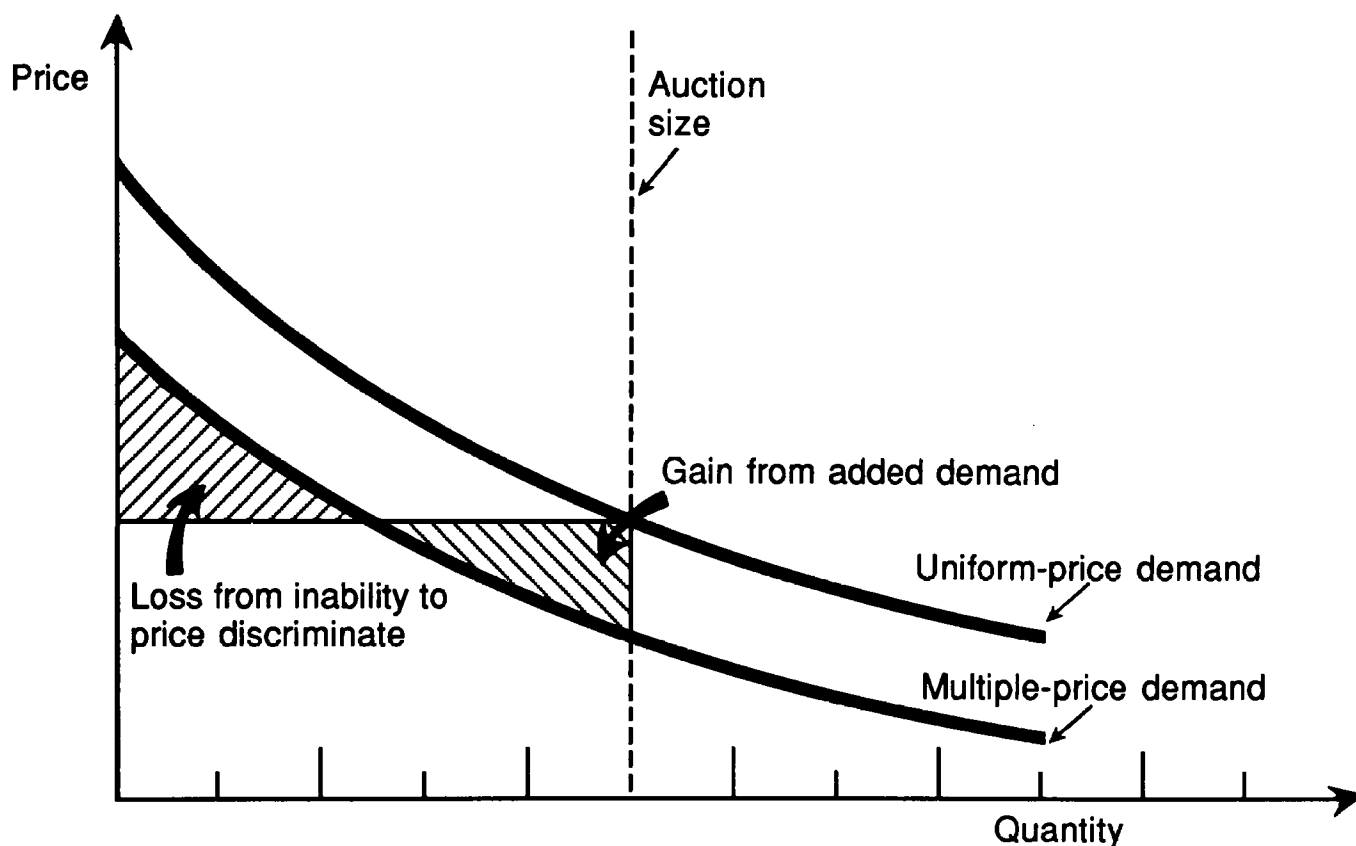
The Friedman proposal has some support in the economics literature, as analysts working with explicit models of bidder behavior in a Treasury-like regime, rather than simple demand schedules, generally find that a uniform-price scheme does produce higher revenue for the seller.²¹ Friedman himself, in 1962, made a persuasive argument that revenue would increase.²²

²⁰ Henry Goldstein, "The Friedman proposal for auctioning Treasury bills," *Journal of Political Economy*, Vol. 70 (August 1962), pp. 386-392.

²¹ Early support for Friedman's contention can be found in Vernon L. Smith, "Bidding theory and the Treasury bill auction: does price discrimination increase bill prices?" *Review of Economics and Statistics*, Vol. 48 (1966), pp. 141-146. Exact conditions under which revenue increases in a model closer to current practice are given in Sushil Bikhchandari and Chi-Fu Huang, "Auctions with resale markets: an exploratory model of Treasury bill markets," *The Review of Financial Studies*, Vol. 2 (1989), pp. 311-339. Also see Theorem 4 in Robert J. Weber, "Multiple-object auctions," in Richard Englebrecht-Wiggans, Martin Shubik, and Robert M. Stark, editors, *Auctions, Bidding, and Contracting: Uses and Theory*, New York: New York University Press, (1983), pp. 165-191.

²² Correspondence quoted in Goldstein, *op. cit.*

Figure B-1



Dealers devote considerable energies to the auction only to sell those securities almost immediately to customers – and most profit from doing so. Part of those resources devoted to that distribution could accrue to the Treasury if it could directly deal with those customers. A uniform-price auction, since it is less penalizing to the uninformed, may be the best vehicle to attract those people. Nonetheless, the little empirical evidence available is considerably more ambiguous than this theorizing would suggest. In the few instances in which organizations have run the two types of auctions virtually side by side, neither has come out as clearly resulting in higher revenue to the seller. Friedman's proposal may mark an improvement on current Treasury practice. However, it might not deter manipulative bidders from profiting from the inherently closed nature of sealed bids, which does not give other participants a chance to react.

Open-outcry, ascending-price auction. In contrast to the sealed-bid framework, applying an open-outcry bidding system would let participants react to surprise bids during the auction. If the Treasury were to conduct an open-outcry, ascending-price auction, registered dealers and other financial institutions would connect by phone

(with appropriately designed security) to a central computer. Those not pre-registered could appear at their local Federal Reserve bank with sufficient documentation to be included as bidders. These gathered bidders would state their demands as the auctioneer announced an increasing sequence of prices.²³ Prices called out at the auction would climb to the point where total demand was just below the issue size. At that point, the previously announced price would mark the single, market-clearing price that placed the entire issue.

A bidder (or bidders) attempting to corner this type of auction would effectively disclose its intentions to its competitors, as it would continually bid in size as the Treasury auctioneer raises the price. This allows those not party to the attempted market manipulation – particularly those short the security in the when-issued market – to bid along with the manipulators. Hence, the bidders may fail in cornering the security or, at the least, would find it a more expensive proposition.

In a sealed-bid auction, by contrast, the bulk of the increase in price comes at the announcement of surprising awards – when other bidders realize that they have not been awarded securities as expected and react by bidding up the price in the secondary market. In a real-time auction, that reaction occurs when the bidding is still open, and thus the Treasury garners part of the profits of the attempted corner. Indeed, auction theory suggests that, in general, Treasury revenue would not suffer and indeed might increase in the switch to an open-outcry, ascending-price system. Since awards are made at a single price and a bidder is aware of the strength of the competition, the possibility of a winner's curse is eliminated.

Of course, a real-time auction may pose a daunting technical challenge and, unlike Friedman's uniform-price, sealed-bid auction, would require a substantial development cost. The goal of equal access to the Treasury auction requires that every effort be made to decentralize the system: anyone willing to pay the fixed expense of a properly configured terminal for bidding should be allowed to participate in the auctions. At the same time, each bidder would need to be screened to ensure payment if their bid were to be successful. If the fixed cost of entry were too large, then participation at the auction would be limited, perhaps perpetuating a two-tiered distribution system for the securities and all the attendant risks. If access were too open, then the physical demands of directing a large volume of electronic messages in a narrow span of time could prove prohibitively expensive. The private sector provides some precedents, but those efforts are small relative to what is required to automate the Treasury auction.

²³ Announcing an ascending sequence of prices would bolster demand at the auction. Recalling Vickrey's result discussed earlier, starting high and progressively lowering the price (a descending-price, open-outcry auction) raises the specter of the winner's curse that results in bid shading.

B. International Comparison

Methods of sale of government securities: OECD countries

Central government debt managers in the countries that belong to the Organization for Economic Cooperation and Development ("OECD") largely have been moving toward selling government securities domestically in auctions since the early 1980s. Prior to that time, government debt managers had relied heavily on selling bonds through underwriting syndicates, private placements, and sales to financial institutions on a fixed-price subscription basis. The increased financing requirements of the governments in the OECD countries in the 1980s and the more competitive capital markets generally contributed to the movement toward competitive market pricing of securities.

Methods of sale of central government securities in the OECD countries are summarized below and presented in more detail in the country-by-country descriptions following this summary. Several of the OECD central governments borrow in foreign currencies abroad for balance of payments reasons. These borrowings, which largely are done through underwriting syndicates and private placements, are not discussed in this paper. Table B-1 presents data on the size of the central government surplus or deficit for the most recent fiscal year, the size of the central government debt held by the public (excluding holdings of central banks and government accounts, such as social security trust funds), debt as a share of gross domestic product or gross national product, and market trading volume statistics for a recent period in 1991. These data are indicators of the magnitude of the government's financing in absolute terms and relative to the size of the country's economy and the liquidity of the domestic bond markets.

A number of countries have used sales of marketable U.S. Treasury debt securities by multiple-price/yield, sealed-bid auctions as a model. Currently, such auctions are used exclusively in Australia, France, and New Zealand to sell marketable securities.

Other central governments that use multiple-price/yield auctions to sell portions of their marketable debt are: Belgium, for securities issued to institutional investors; Canada, for all marketables, except about one-quarter of long-term bonds which are sold by fixed-price subscription (the rest of these bonds are sold at multiple-yield auctions); Germany, for medium-term notes since July 1991 and for a portion of longer term bonds since July 1990; Italy, for short-term bills denominated in lire; Japan, for short-term bills and longer term notes and bonds, including 60 percent of 10-year bonds, which account for a major proportion of Japanese government borrowing; and the United Kingdom, for bills and longer term debt (gilts). The Netherlands used

multiple-price auctions for long-term bonds but changed in 1991 to selling long-term bonds on tap.

Several of the governments use sealed-bid, uniform-price auctions, in which all securities are awarded at the highest yield (lowest price) of accepted tenders, to sell portions of their debt. OECD countries using uniform price auctions are: Denmark, for short-term bills; Italy, for bills denominated in European Currency Units and bonds maturing in two to 10 years (longest sold); and Switzerland, for bills, notes, and bonds. The United Kingdom uses the minimum price tender method of selling gilts, a modified form of uniform price auction. Uniform-price auctions have been used only seldom in the Netherlands in recent years.

Trading on a when-issued basis before an auction of securities occurs in Canada, France, Germany, Italy, and the United Kingdom. In the Netherlands, where tap issues remain open for a relatively short period of one or two weeks, when-issued trading may occur before a tap issue is closed.

Tap issues are used by a number of OECD countries to sell nonmarketable savings instruments to small investors. In a tap issue, the government announces the interest rate and maturity of the security, sets the price, and allows the market to subscribe. Tap issues may remain open for short or long periods of time, depending upon the government's financing needs and market conditions.

Marketable securities are sold on tap by: Australia, to sell marketable government securities in small amounts to small investors; Denmark, for notes and bonds – the most important instruments sold domestically; Germany, for the portion of long-term bonds that is not sold by competitive price auction or underwriting syndicates and for sales of five-year special notes to individuals and charitable organizations; the Netherlands, for most long-term issues; and the United Kingdom, to sell the portion of gilts that remain unsold from minimum price tender sales or to sell additional amounts of existing issues placed with the Bank of England.

Sales of central government securities are conducted domestically through underwriting syndicates and private placements in several of the OECD countries. In an underwriting syndicate sale, the country negotiates with the syndicate with regard to volume and price of the security, as well as timing. Negotiations of private placements are similar, but they usually are brought to a government debt manager by an intermediary that does not act as principal in the transaction, and securities are distributed to fewer investors. It is standard procedure for the government to pay fees in syndicate and private placement sales.

Underwriting syndicates are used by: Germany, to sell the portions of long-term bonds that are not sold by multiple-price auction or on tap; Japan, to sell the 40-percent portion of 10-year bonds that is not sold at auction and to sell small amounts

of five-year bonds; and Switzerland, to sell securities maturing in three to 10 years. In the case of Japan, the price for the syndicated underwriting is the price that results from the auction of the 10-year bonds, which immediately precedes the placement of the underwritten portion of an issue.

Several OECD countries sell marketable securities in several tranches to increase the overall size of issues for the purposes of enhancing market liquidity and preventing price distortions. The sales may be through reopenings of securities that are auctioned or through issues that remain on tap. This technique is used by Australia, Belgium, Denmark, France, the Netherlands, New Zealand, Switzerland, and the United Kingdom.

In many of the OECD countries, the central banks have arrangements with the equivalents of U.S. primary dealers, through which they conduct monetary policy. These same dealers usually are the major market-makers for government securities, although that is not necessarily the case. In some other countries, the Ministry of Finance/Treasury selects primary dealers specifically to distribute government securities. Firms in OECD countries generally, however, must have a primary dealer designation, be approved by the central bank, or belong to a stock exchange to bid without a deposit in government security auctions.

There are no primary dealers in Denmark, Germany, Japan, the Netherlands, or New Zealand. In Japan, central bank open market operations are conducted through several money market brokers, who are not part of the underwriting syndicate. In New Zealand, open market operations are conducted through entities that register with the Reserve Bank of New Zealand to bid in auctions of government securities. Australia, Belgium, Canada, France, Italy, and the United Kingdom have primary dealers.

There is no uniformity of structures for regulation of the government securities markets among the OECD countries. In Canada, Germany, and Switzerland, there is central government prudential regulation of depository institutions and provincial or state supervision of securities trading. The Bank of England provides prudential regulation of depository institutions, while the Securities and Investments Board supervises the protection of investors. In Australia and New Zealand, the central banks provide prudential regulation of depository institutions, but there is no specific regulation of the government securities market. The Japanese Ministry of Finance and the Danish Supervisory Authority for Financial Affairs provide centralized regulation of the government securities markets in their respective countries, while the Amsterdam Stock Exchange provides centralized regulation of the government securities market in the Netherlands.

Table B-1

**OECD Country Debt Statistics
In U.S. Dollar Equivalents**

<u>Country</u>	<u>Surplus or Deficit FY'91 (Billions)</u>	<u>Privately-held Government Debt 12-31-90 (Billions)</u>	<u>Debt to GNP/GDP (Percent)</u>	<u>Turnover Rate 1991</u>
Australia	-8.4	37.4	12.8%	390 mil./day
Belgium	-12.7	233.0	109.6	1.4 bil./day
Canada	-26.3	265.5	45.9	173.6 bil./month
Denmark	-6.5	83.8	60.0	21.4 bil./month
France	-18.4	350.1	27.5	9.8 bil./day*
Germany	-40.0	381.3	22.0	n.a.
Italy	-128.4	1,168.6	99.2	3.8 bil./day
Japan	-22.5	765.2	24.0	82.5 bil./day
Netherlands	-12.6	196.4	70.0	9.8 bil./month
New Zealand	-2.2	73.7	63.5	5.0 bil./month
Switzerland	-1.2	11.1	4.3	n.a.
United Kingdom	+1.0	314.0	28.9	8.8 bil./day
United States	-268.7	2,492.0	43.9	122.5 bil./day

* Medium- and long-term (original issue) OAT bonds only.

Sources: Data for each country from respective government.

OECD Countries: Techniques to Sell Central Government Debt Internally

Australia

General Comments

The Treasury is responsible for government debt management and the Reserve Bank of Australia is its fiscal agent. There is no permanent lending by the RBA to the government although a short-term overdraft facility at market-related interest rates is available. Australia had surpluses in FYs 1988-91 (ended 6/30/91). This year the economy has been in recession, and a deficit of US\$8.4 billion equivalent is estimated in the 1991-92 budget.

The types of debt instruments issued are: short-term notes (5-, 13-, and 26-week maturities) sold weekly, and short- (1 to 3 years), medium- (3 to 5 years), and long-term (over 5 years) bonds. Australian government securities are in book-entry form.

There are two groups of authorized dealers, with which RBA conducts open market operations. First, 8 "authorized short-term money-market dealers" have a contractual relationship with RBA to provide liquidity to the government securities market. RBA conducts most open market operations through short-term market-makers. Second, there are 18 "reporting bond dealers" through which RBA conducts OMO in bonds. The reporting bond dealers have no privileges or obligations regarding issuance of government debt. The government securities market is informally regulated by the RBA.

Auction

All government securities have been sold through multiple-yield auctions since 1982. Bids are accepted from parties registered for this purpose with RBA. Any potential bidder that can establish its financial capability can bid without deposit. The minimum competitive bid is US\$77,800 equivalent.

No limit is set on awards to one entity, nor is there any restriction on the number of bids any entity can submit. Usually reopen outstanding issues rather than issuing new ones. Bids usually amount to 3 to 4 times the amount offered. There is no when-issued trading.

Other Sale Methods

Australian government savings bonds were issued on tap until 1987. The government no longer issues bonds targeted specifically at household savings.

The RBA stands ready to fill small orders for marketable government securities (US\$780 to US\$39,000 equivalent) from its own portfolio at a price prevailing in the market, plus a small service charge. Small amounts can be sold to the RBA under the same terms.

From time to time the government, through RBA, has repurchased outstanding bonds for cancellation or has exchanged current issues for older bonds to improve the overall liquidity of the market.

OECD Countries: Techniques to Sell Central Government Debt Internally

Belgium

General Comments

The Ministry of Finance is responsible for public debt management, and the National Bank of Belgium is its fiscal agent. The government may borrow up to US\$485 million equivalent for day-to-day cash management from NBB. In FY 1990 (ended 12/31/90) the budget deficit totaled US\$12.69 billion equivalent.

The types of debt instruments issued are: short-term bills (3-, 6- and 12-month), long-term public subscription bonds and "linear" bonds maturing in 3 to 15 years. The bills and linear bonds are issued in book-entry form to institutional investors and dealers. Public subscription bonds are in paper form. Most trading is on stock exchanges.

The MOF has selected 14 primary dealers to bid in auctions and make secondary markets in short-term bills and linear bonds. Immediately after an auction, they have the sole right to purchase, on a noncompetitive basis at the auction average, additional amounts of the securities. Primary dealers and other intermediaries may be used by NBB to conduct open market operations. The Securities Regulation Fund, established under the authority of the MOF and the NBB regulates participants in the government securities market.

Auction

Short-term certificates and "linear" bonds have been sold by multiple-yield auctions since January 1991. "Linear" bonds are issued monthly as reopenings of bonds with the same maturity, interest rate, and identifying number. Bids are accepted without deposit from parties registered for this purpose with the NBB.

No limit is placed on awards to any one entity, nor is there a limit on the number of bids that can be submitted. The minimum bid is for US\$322,000 equivalent for bills and US\$1.6 million equivalent for linear bonds. There is no when-issued trading prior to the auction.

Other Sale Methods

Long-term public subscription bonds are sold 3 or 4 times per year. The coupon and maturity are set by the MOF and subscriptions are taken for about two weeks. The bonds are targeted to smaller investors. The minimum purchase amount is US\$322 equivalent. MOF pays banks a commission for selling them to the public.

OECD Countries: Techniques to Sell Central Government Debt Internally

Canada

General Comments

The Department of Finance is responsible for debt management, and works closely with its fiscal agent, the Bank of Canada to develop policy. The budget deficit has been stable at about US\$26 billion equivalent for the last 5 years.

Bonds are bullet maturities with fixed rates and are redeemable at maturity. Bonds mature in 2 to 30 years. Canada auctions each week 3- and 6-month bills and year bills. About 90% of bonds are in book-entry form in the Canadian Depository for Securities. Bills are in bearer paper form.

Marketable government bonds are sold only to a group of primary distributors, including commercial banks (5) and investment dealers (55). Primary distributors and all Canadian banks can bid for bills. The Bank of Canada conducts open market operations through 10 jobbers, a subset of the primary distributors. Most trading is over the counter, although some is done through securities exchanges.

Bank dealers in government securities are regulated by the Canadian federal banking regulator. Other government securities dealers are regulated by provincial securities commissions, the key one of which is the Securities Commission of Ontario.

Canada began selling index-linked bonds in November 1991.

Auction

About 3/4 of marketable bonds and all short-term bills are sold in multiple-yield auctions. Awards, including awards for customers, are limited to 20 percent of amount offered of bonds and one-third of the amount offered of bills. When-issued trading begins when an issue is announced for auction. No commissions are paid for bonds and bills sold by auction. Canada is moving toward using auctions to sell all marketable securities.

Other Sale Methods

Fixed-price subscription offerings are used for about 1/4 of marketable bonds; the coupon and price are announced 1 1/2 days before the deadline for subscriptions. The Bank of Canada buys any portion of an issue that the primary distributors do not buy. A commission is paid on bonds sold via the syndicate.

Canadian savings bonds are sold and the outstanding stock is also repriced each October. They are puttable at any time with accrued interest. Fees are paid for sale and processing of Canada Savings Bonds.

OECD Countries: Techniques to Sell Central Government Debt Internally

Denmark

General Comments

Debt management is the responsibility of the Ministry of Finance, with the central bank as fiscal agent. The budget deficit has widened in recent years, and is estimated at US\$6.5 billion equivalent in 1991. The government has a cash account with the central bank, which makes it possible for government borrowing to lead or lag the government's borrowing needs.

Main types of securities issued to the public are: fixed and floating rate bonds (5-10 years); notes (1.1 to 2.2 years); and bills (3 and 6 months). Government securities are in book-entry form.

In the domestic market there are no primary dealers or private underwriters for government bonds. Trading is over-the-counter and through the Copenhagen Stock Exchange. The government borrows in foreign currencies abroad for exchange stabilization purposes and uses underwriting syndicates to place the securities. Foreign investors participate in the domestic market.

The central bank conducts open market operations through the Copenhagen Stock Exchange. Participants in the government securities market are regulated by the Supervisory Authority of Financial Affairs.

Auction

Domestically, bills are sold through uniform-price auction quarterly. Also, the central bank purchases them and sells them on tap. Banks and non-bank dealers that are connected to the Danish Securities Center, a private non-profit depository clearance and settlement system, can submit bids in auctions. There is no limit on awards to a single bidder. Trading is not permitted prior to the auction.

Other Sale Methods

Treasury notes and bonds are sold on tap. New issues are sold by the central bank through the Stock Exchange. Banks and security brokers accept applications which are passed on to the Stock Exchange like orders for secondary market purchases. The National Bank, acting on behalf of the Treasury, may set new issue yield at its discretion during Stock Exchange sessions. A new note issue is usually sold on tap for nine months after original issue. There are no regulations as to the length of the tap period for bonds. There is a tax-related minimum interest rate rule, which may require closing a tap issue if market yields rise.

OECD Countries: Techniques to Sell Central Government Debt Internally

France

General Comments

The Ministry of the Economy and Finance is responsible for debt management, and the Bank of France is its fiscal agent. Budget deficits widened in the 1980s, and the deficit amounted to US\$18.4 billion equivalent in 1990. The Bank of France does not lend directly to the government.

The Treasury has selected 15 primary dealers (SVTs) that are responsible for bidding in auctions, making markets, and providing screen quotations to the public. There are also 2 reporting dealers (CVTs). The primary dealers established an interdealer broker in 1987; only SVTs and CVTs have access to it. The Bank of France executes open market operations through a group of 26 interbank market agents that are selected separately by the Bank.

All marketable securities are in book-entry form. Participants in Treasury auctions must have an account at the Bank of France or bid through an institution that has an account at the Bank of France. Secondary market trading is over the counter. The government does not pay commissions to purchasers of marketable securities. Bank participants in the government securities market are regulated by the Banking Commission. The Stock Exchange Operations Commission supervises other participants in the government securities market.

Auction

Multiple-price auctions are used to sell coupon securities which pay interest annually and principal at maturity. The "fungible" OAT bond, which is the most important security from the standpoints of new issues and trading, matures in 4-30 years and is reopened in new tranches to increase the size of each issue and enhance liquidity. Until midday the day after an auction, each SVT is permitted to submit noncompetitive bids for the most recently auctioned OAT bond at the auction average price in an amount up to 30% of its average awards in the previous 3 OAT bond auctions. The minimum purchase in the auction is US\$9.8 million equivalent. The Treasury also auctions 2-year and 5-year fixed rate bonds in a minimum of US\$196,000 equivalent.

Multiple-rate auctions are used to sell short-term bills (maturing in 13, 26, and 52 weeks) issued at a discount. The minimum purchase amount in the auction is US\$196,000 equivalent.

When-issued trading begins when a security is announced.

Other Sale Methods

There are US\$5.9 billion equivalent of 5-year nonmarketable savings bonds outstanding. No effort is made to promote sales of savings bonds.

OECD Countries: Techniques to Sell Central Government Debt Internally

Germany

General Comments

Ministry of Finance is the issuer and Bundesbank is its fiscal agent. German budget deficits have been widening in recent years, and in FY 1991 is estimated at US\$40.0 billion equivalent. Temporary cash advances of up to US\$4 billion equivalent are regularly made from the Bundesbank to the government.

The most important debt instruments are longer term bonds, called Bunds, and 5-year special notes. Very little financing is done in short-term maturities under one year. All new public debt is in book-entry form.

A 110-member consortium of banks (including 49 affiliated with foreign banks) comprise the syndicate for negotiated placements and the eligible bidders in auctions. Consortium members are selected by the Bundesbank, acting as MOF's agent. The consortium members are also used by the Bundesbank to execute open market operations and to sell government securities on tap. Noncompetitive bidding is through consortium members.

Public debt securities are traded on stock exchanges. The Federal Banking Supervisory Office licenses all entities that trade securities for the accounts of third parties. The eight regional stock exchanges, which are under the supervision of the state (Laender) governments, are SROs and have broad authority to regulate market participants and trading.

Auction

Medium-term notes, mostly with 4 years to maturity, have been sold in multiple-price auctions since May 1991. A portion of each sale of Bunds has been auctioned since 1990. When-issued trading begins with the announcement of an auction. There is no limit on awards to any one entity. There is no commission paid to entities that are awarded securities in an auction.

Other Sale Methods

Bunds usually have 10 years to maturity. Since July 1990, Bunds have been sold in 3-part sales: (1) negotiated through syndicate, 32%; (2) multiple-price auctions, 39%; and (3) Bundesbank market-tending portion, 29%, distributed when the price is favorable to the government. Syndicate allocations have been based on auction awards since October 1991. Commissions are paid to the syndicate for the underwritten portion of securities and those sold on tap.

5-year special notes are issued on tap only to individuals and charitable organizations; when an issue is completed, it is traded in the secondary market.

Private placements of short-term paper have been used in the past, but were not done in 1991.

OECD Countries: Techniques to Sell Central Government Debt Internally

Italy

General Comments

The Treasury Ministry is responsible for debt management and the Bank of Italy is its fiscal agent. Italian budget deficits widened in the 1980s, and the deficit was the equivalent of US\$128.4 billion in 1990. The government may borrow directly from the Bank of Italy. Only 4% of the public debt is foreign-owned.

The government issues: short-term Treasury bills in lire and in ECU; medium and long-term variable and fixed rate bonds in lire and ECU. Short-term bills and longer term bonds indexed to short-term rates account for over 70% of the public debt. The longest maturity is 10 years. More than 90% of marketable government securities are in book-entry form through the Central Depository System run by the Bank of Italy.

Most trading is on a wholesale screen-based market, whose participants are regulated by the Bank of Italy. There are 23 primary dealers selected by the Bank of Italy, which uses them together with other market participants to execute open market operations.

Membership in the screen-based market is voluntary. There are entities acting as dealers that are not subject to any regulatory regime.

Auction

Short-term bills denominated in lire are auctioned in multiple-price auctions. The Treasury sets no minimum acceptable price for multiple-price auctions. A set amount is reserved for noncompetitive awards. Treasury bills denominated in ECU are sold in uniform-yield auctions. Treasury bonds in lire and ECU maturing in 5 to 10 years are sold in uniform-price auctions. The government sets the maximum acceptable yield (minimum price) in uniform yield/price auctions.

Trading begins when new security issues are announced by the Treasury. Minimum competitive bids in all auctions are US\$88,550 equivalent of lire or US\$73,350 equivalent ECU. While there is no cap on the value of awards, no entity may submit more than 5 bids per auction. Noncompetitive bids are not accepted in uniform price/yield auctions. Participation in the auction is limited to banks, credit institutions, insurance and financial companies and stockbrokers.

Other Sale Methods

About 9% of the public debt is in the form of small investor savings certificates and deposits in the Post Office System. Once a significant contributor to public financing, this System has declined in importance in recent years.

OECD Countries: Techniques to Sell Central Government Debt Internally

Japan

General Comments

The Ministry of Finance is responsible for debt management and the Bank of Japan is its fiscal agent. Budget deficits have been declining since the mid 1980s. The 1990 deficit was US\$22.5 billion equivalent.

The Japanese government bond market is the second largest in the world. Most trading is in an OTC market, though some transactions are on the eight stock exchanges. About one-third of OTC trading volume is done through one brokers' broker, which is owned by its members.

MOF sells short-term bills and intermediate- and long-term bonds. Monthly sales of 10-year bonds account for 80% of government debt outstanding and are the most actively traded issues in the secondary market. All marketable Japanese bonds are in book-entry form.

There are no firms designated as primary dealers, although the market and the underwriting group are dominated by several large participants. The Bank of Japan uses several brokers, which are not part of the underwriting syndicate, as intermediaries to execute open market operations.

The government securities market is regulated by the Ministry of Finance.

Auction

Multiple-price auctions are used for securities maturing in 2, 3, and 6 months and 2, 3, 4, and 20 years. When-issued trading is illegal at any price prior to the auction and is illegal at a discount in the immediate post-auction period. For 10-year bonds, 60% are awarded in multiple-price auctions and 40% are distributed through an 833-member syndicate (includes 675 banks and 158 securities firms). Awards are limited to 30% of amount auctioned; thus, 18% of the total of a 10-year. The government pays commissions to purchasers in the auction and to the underwriting syndicate.

Other Sale Methods

The remaining 40% of each 10-year bond is sold through the syndicate, which obtains the bonds at the average of accepted competitive tenders.

5-year bonds are placed fully through the underwriting syndicate, but comprise only a small proportion of total issues.

Government compensation bonds to war-surviving families. Such nonmarketable bonds account for only about 1% of government bonds outstanding.

OECD Countries: Techniques to Sell Central Government Debt Internally

Netherlands

General Comments

The Ministry of Finance is responsible for debt management and the central bank is its fiscal agent. Budget deficits have been declining since the mid 1980s. The deficit amounted to US\$12.8 billion equivalent in FY 1991. The central bank may lend temporarily directly to the government in limited amounts. It also purchases government securities through open market operations. The MOF often purchases and sells government bonds to stabilize prices.

Bonds maturing in 10 years accounted for 75% of MOF borrowing in 1990/91. Short-term bills were not sold in 1990/91. Subscriptions on original issue are limited exclusively to members of the Amsterdam Stock Exchange (banks and securities broker/dealers). Foreign investors hold 23% of Netherlands government securities. MOF emphasizes debt lengthening and does not borrow in foreign currencies or sell indexed or variable rate securities.

Government securities are available in bearer definitive and registered forms.

There are no primary dealers. The market for government securities is regulated by the Amsterdam Stock Exchange.

Auction

During the late 1980s through early 1991, MOF sold bonds in multiple-yield auctions. Since March 1991, however, government bonds have been sold on tap exclusively.

Other Sale Methods

Bonds are all sold on tap. An issue stays open for one or two weeks. There may be when-issued trading before the issue is closed. The government may change the price during the tap period. No fees are paid by MOF to subscribers to tap issues. The minimum purchase amount is US\$1.5 million equivalent.

Private placements of long-term bonds account for most of the rest of government borrowing. Intermediaries in private placements receive fees from the MOF.

Nonmarketable savings bonds are not offered by the government.

OECD Countries: Techniques to Sell Central Government Debt Internally

New Zealand

General Comments

The Treasury is responsible for debt management and the Reserve Bank of New Zealand is its fiscal agent for internal borrowing. New Zealand had surpluses in FYs 1988-90 and a surplus of US\$1.0 billion equivalent in 1991. Nearly half of the debt is owned by foreign investors. The government may borrow from RBNZ.

Securities include short-term bills (32% of internal public debt) and government stock maturing in up to 10 years (57% of internal public debt). Outstanding issues are reopened to foster market liquidity.

All bidders in auctions must be registered with the RBNZ or bid through an entity that is registered. The RBNZ conducts open market operations, including issuing 63-day RBNZ bills, through dealers that are registered with RBNZ as counterparties for open market operations. There are no primary dealers. All marketable debt is in book-entry form. Tenders in auctions are in paper form.

There is no specific regulation of the government securities market. The RBNZ provides prudential regulation of banks.

Auction

All marketable securities are sold in multiple-yield auctions. There is no limit on the proportion of an auction that can be purchased by any bidder. When-issued trading begins when a security is announced. No commissions are paid by the Treasury to purchasers in auctions. The government does not set a maximum acceptable yield.

Other Sale Methods

Nonmarketable Kiwi bonds are sold to retail investors on tap. They are puttable at a discount, and the minimum purchase is US\$600 equivalent. Fees are paid to institutions that handle Kiwi bond transactions. Kiwi bonds account for 3% of internal public debt.

OECD Countries: Techniques to Sell Central Government Debt Internally

Switzerland

General Comments

The Federal Department of Finance is responsible for debt management and Swiss National Bank is its fiscal agent. The Swiss central government borrows little and the public debt is small. Most governmental activity is carried out by the cantons, or states. Foreign participation in the government securities market is small. The amount is unknown, because all securities are in bearer form.

There are no primary dealers. The Swiss central bank rarely conducts open market operations.

The government issues a variety of securities including 3- and 6-month bills, medium-term notes and long-term bonds.

Trading is over-the-counter and through regional stock exchanges. There is no comprehensive government securities regulation. Banks are subject to the supervision of the Federal Banking Commission. The cantons regulate the regional stock exchanges. The cantons of Zurich and Basle, where the most important financial centers are located, license over-the-counter market participants as well as exchange participants.

Auction

Swiss Debt Register Claims maturing in 3 and 6 months are issued every two weeks through uniform-price auctions. Long-term bonds, which account for the majority of the debt, are sold from time to time through uniform-price auctions. No tender price limits are applied. The government gives a rough indication of the desired issue amount.

All categories of investors are authorized to participate in auctions. There are no limits on the amount that can be awarded to any bidder in an auction. When-issued trading is permitted prior to the auction. Noncompetitive bids are accepted, and usually are small relative to the size of auctions.

Other Sale Methods

Bills usually with maturities of 3 to 24 months are sold on a discount basis only to commercial banks. The price is set by the central bank and banks subscribe for a fixed overall amount.

Government notes with maturities of 3 to 10 years are sold through private placements on a commission basis.

OECD Countries: Techniques to Sell Central Government Debt Internally

United Kingdom

General Comments

The Treasury works closely with the Bank of England (fiscal agent) to develop debt management policy. The budget has been in surplus in recent years, with the surplus in 1991 US\$960 million equivalent. The government borrows directly from the Bank of England.

Bidding in gilt auctions is open to all investors, either on a competitive basis (minimum of US\$960,000 equivalent) or noncompetitive basis (bids from US\$1,920 to \$960,000 equivalent). The bulk of bids are submitted by primary dealers (18 gilt-edged market makers) either on behalf of customers or for their own account. The GEMMs ensure the liquidity of the secondary market by quoting continuous two-way prices in all gilts in all trading conditions; they have a direct dealing relationship with the Bank of England and exclusive access to interdealer brokers and gilt borrowing facilities.

Participants in the gilt-edged market are subject to prudential supervision of the Bank of England. The Securities Investment Board, which is under the Department of Trade and Industry, oversees protection of investors.

Auction

Multiple-price auctions are used for bills and longer-term debt (gilts). When-issued trading is allowed, beginning with the announcement of auction details. Bank of England has discretion not to allot more than 25% of the amount offered to an individual bidder if to do so would be likely to lead to market price distortion. The Bank of England does not set a minimum price, but securities may not be allotted if the price is unacceptably low.

Minimum price tender sales are used to sell gilts; bidding is open to all investors. The minimum price is set in advance for fixed-rate gilts. Gilts are allotted at a common price, either minimum price or price at which all gilts offered are sold (if higher). Tenders for index-linked stocks normally have no minimum price, but authorities do not usually allot at a price that they perceive to be below market. Any unsold gilts are bought by the Bank of England for sale on tap to GEMMs.

Other Sale Methods

Bank of England buys gilts that remain unsold from minimum price tender sales; these are subsequently sold on tap to the GEMMs. Guiding principle is that the Bank refrains from selling gilts into a falling market. There usually is a "fallow period" following an auction during which additional amounts are not sold on tap.

Gilts can be issued and placed directly with the Bank of England for sale to the GEMMs, in exactly the same way as above. Usually, in the form of tranches (small additional amounts of existing stocks), but sometimes in larger amounts.

Nonmarketable savings instruments are sold to individual investors through Post Offices.

C. Auction Automation

The current auction process

Submission of tenders. Bidders in Treasury auctions can submit tenders through the Federal Reserve banks and branches or directly to the Treasury's Bureau of the Public Debt. Competitive tenders must be received by the closing time for each auction, which is typically 1:00 p.m. Eastern Time on the day of the auction. Noncompetitive tenders must be submitted by 12:00 p.m. Eastern Time on the day of the auction or can be submitted by mail provided they are postmarked no later than midnight of the day prior to the auction and the tender is received on or before the issue date.

Procedures for submitting tenders currently vary among Federal Reserve districts. Bidders can send a facsimile message containing all required tender information (in a few districts), by sending an administrative message over the Federal Reserve's communications network containing all required tender information (in a few districts), or by sending representatives to the lobby of a Federal Reserve bank or branch to submit paper tenders (in all districts).

Some Federal Reserve banks with large competitive bidders in their district provide telephone access for use by the bidders' representatives to establish communications with the bidders' trading desks. Typically, these representatives first enter all the information required on the tender form except for the par amounts and yields (or discount rates in the case of Treasury bills) to be bid. In the closing moments of the auction, following instructions from their trading desks, the representatives enter the par amounts and yields and submit the tender form to the Federal Reserve bank.

Processing of tenders. Competitive and noncompetitive tenders are manually processed by Federal Reserve bank staff upon their receipt. This includes checking to ensure that each tender has been signed by an authorized official and that those submitting tenders for customers are duly authorized and are depository institutions or registered broker-dealers. Payment arrangements are also verified at this stage; if full payment does not accompany the tender, auction staff check that an autocharge agreement or a guarantee from a commercial bank or primary dealer of 5 percent of the par amount tendered is on file for the bidder if it is not a depository institution with a funds account.

At each Federal Reserve bank, competitive tenders are manually sorted by rates or yields. The tenders are checked to ensure that those received at one rate/yield from any one bidder do not exceed 35 percent of the public offering. Bidders who have tendered for over 35 percent of the public offering at one yield have these bid amounts cut back to the 35 percent maximum. Bidders that have indicated a net long

position greater than \$200 million in the auctioned security are noted at this stage. Noncompetitive tenders are totaled, and an initial check is made to ensure that noncompetitive bids would not exceed the award limits for a single bidder. A second, more thorough check for compliance with the Treasury's single bidder guidelines is made after the noncompetitive totals have been transmitted to the Treasury in the interest of timely auction processing.

Competitive bid totals are posted by yield to an auction summary report, together with the noncompetitive total.²⁴ While specific bids are generally not reported separately in the summaries, the tenders of bidders with net long positions greater than \$200 million are recorded on the auction summary report if the tenders suggest that the entity might receive 35 percent of the auction after including the pre-auction position and noncompetitive bids.²⁵ The tenders of bidders who have tendered for an aggregate total of more than 35 percent of the public offering are noted on the report. In addition, any tenders for more than 35 percent of the public offering at one yield from a single bidder (that have been reduced to the allowable bidding limit) are noted.

At each Federal Reserve bank, the auction summary report is signed by an authorized employee and transmitted by facsimile to the Treasury Department's Bureau of the Public Debt. At the Bureau of the Public Debt, the auction summary information is manually entered into an automated auction program, which computes the range of accepted bids based on the yields tendered by competitive bidders and the total amount of noncompetitive awards. The weighted average accepted yield for competitive tenders and any proration necessary at the stop-out (or highest accepted) yield, as well as supplementary auction statistics, are also computed. Two computers are used for verification purposes, both of which independently compute the auction statistics from the summary data. Manual backup procedures are also provided for additional flexibility. The appropriate Federal Reserve banks are contacted if the summaries are incomplete or if there are questions about particular tenders. Any questions regarding the 35 percent award limitation to a single bidder or the noncompetitive award limitations are also resolved before finalizing the auction results.

After reviewing the auction results, the Bureau of the Public Debt prepares the press release containing the information on the range of accepted bids, proration at the stop-out yield, and other pertinent auction statistics. This press release is transmitted to the Treasury press room and released to the public at approximately 2:00 p.m. on the day of the auction.

²⁴ Additional noncompetitive tenders may arrive by mail after this time.

²⁵ With this report, the Treasury is announcing that bidders may not submit both competitive and noncompetitive tenders in one auction.

Between the auction date and the settlement date (usually about five days) the tender and award information necessary for issuing securities to successful bidders is manually entered into a computer system that processes securities issued in the commercial book-entry system and in the TREASURY DIRECT system. On the settlement date, the securities are issued against payment.

The automation project

Strategy and project scope. The strategy for automating the auction process is first to automate the current auction process in order to move auction participants and administrators from the current manual process to an electronic, automated environment. The system-development phase of this effort is currently being conducted at two Federal Reserve banks, as fiscal agents of the Treasury. The Federal Reserve Bank of Kansas City is nearing completion on one phase of the project, described below. The core of the project is a centralized tender receiving and processing computer system called the Treasury Automated Auction Processing System ("TAAPS") which is under development at the Federal Reserve Bank of New York.

The first two phases are scheduled to be completed by the end of 1992. At that time, a telecommunications infrastructure will be in place, all participants will have the necessary terminal and communications equipment to submit tenders electronically, and the Federal Reserve banks and the Treasury will have the capability to process electronic tenders. Once this is accomplished, it will be possible to implement the open, iterative, ascending-price auction process described elsewhere in this report by modifying the operation of the existing system. The design requirements for this new auction process are still being formulated.

The automation project can be thought of as having four phases, as outlined below. The elements of each phase are described in more detail later in this section.

Phase 1: The electronic acceptance and processing of bids submitted nationwide by smaller bidders and depository institutions.

Phase 2: The electronic acceptance and processing of bids submitted nationwide by large aggressive bidders.

Phase 3: The automation of the Treasury's auction procedures on the centralized processing system.

Phase 4: Automation and centralization of issuance of securities to successful bidders through the commercial book-entry system.

Electronic bidding systems. Completion of Phases I and II will allow bidders to submit tenders either from a "Standard FedLine" connection, a "FaST Fedline"

connection, or computer interface ("CI") connections that meet the Federal Reserve System's Computer Interface Protocol Specifications standards.

The Standard Fedline is a software and communication application project that is ongoing at the Federal Reserve Bank of Kansas City. This system will provide a capability principally for smaller bidders and depository institutions to submit electronic tenders using a standard Federal Reserve System terminal for securities to be held in both the commercial book-entry and TREASURY DIRECT systems. This project is scheduled for completion by mid-1992.

The FaST Fedline is a software and communications application being developed at the FRBNY, as part of TAAPS, that is designed for use by large competitive bidders. Large competitive bidders require the capability to submit bids quickly in the last seconds before an auction closes on their own behalf and on behalf of their customers. The FaST FedLine software application, which will run on a personal computer, is being developed to meet these specialized requirements.

FaST FedLine terminals will be linked by telephone to the central TAAPS computer. When the Treasury announces an issue, a broadcast message will be sent to all FedLine terminals announcing the auction, and a description of the security, including issue date and maturity date, will be downloaded to the FaST FedLine terminals. At any time prior to the auction closing time, a bidder will complete an electronic copy of a tender form for the particular auction containing empty "fields" for security description, clearing bank information, and customer information. The bidder will be able to quickly fill in the FaST FedLine fields using "pop-up" menus linked to the bidder's database. The bidder will also be required to fill in a net long position field if necessary. The bidder will then be able to transmit the tender to the central computer at the FRBNY within seconds.

Tender acceptance. The central TAAPS host computer application will receive and process electronic tenders from the Standard FedLine, the FaST FedLine, and CI connections. It will also provide a mechanism for inputting data from paper tenders submitted to Federal Reserve banks over the counter and via mail. Though processing will be centralized, Federal Reserve districts will continue to serve their current customer base and maintain primary control of tenders submitted by their customers. Districts will continue to be responsible for reviewing their tenders and oversight of original issue processing for their district; the centralized system will be a vehicle for supporting these operations.

While Fast FedLine terminals will have direct communications connections with the TAAPS host computer at the FRBNY, Standard FedLine tenders will be routed through the Federal Reserve banks. All tenders and customer lists from submitting institutions will be printed upon receipt at the Federal Reserve bank and stored in a machine-readable format. Additionally, submitting institutions will receive an

acknowledgement indicating the tender was received. Once TAAPS is operational, a "tender forwarding" capability will be implemented to transmit all Standard FedLine tenders through the Federal Reserve's communication network to the TAAPS computer for centralized processing.

Once transmitted to the FRBNY, the electronic tenders will be stored at the primary computer and also at the contingency processing site at the East Rutherford Operations Center ("EROC"). Should there be a failure at the FRBNY computer, or communications failure of any kind, the FaST FedLine users will reestablish a communications connection with the EROC and continue transmitting tenders. It is expected that this recovery could be accomplished in less than five minutes. If FRBNY's primary centralized processing system fails, Standard FedLine users will have their electronic tender submission capability restored by establishing communications between the local Federal Reserve bank's computer and the contingency site at the EROC. This recovery is expected to take 30 to 45 minutes. If the local Federal Reserve bank's computer fails, Standard FedLine users will use manual backup procedures to submit their bids. To support contingency processing, the system's operators will be able to reassign a district's processing responsibilities to another district. For example, if Minneapolis were unable to process its tenders, Chicago could be reassigned to perform this function.

Tender processing. As tenders are transmitted to the central computer, a series of checks will automatically be performed on them. As a result, each tender will be added to one of two tender databases. The tenders that successfully pass all checks will be added to the "good" database; tenders that fail one or more checks will be added to the "questionable" database. TAAPS will send a message to each bidder's terminal advising the bidder that the tender has been received and stored and informing the bidder which checks, if any, the tender failed.

Some of these checks will simply involve examining the tender to determine whether all required information has been included in the tender and that tenders were received before the designated closing time. Some of the checks will require TAAPS to search its database of bidder information to determine that, for example, bids submitted on behalf of customers have been authorized and payment arrangements have been made. TAAPS will also flag any tenders that may require auction rule enforcement. This would include bids for more than 35 percent of the public offering at one yield, bids from related entities, and tenders submitted by one entity through multiple broker-dealers or depository institutions.

In order to screen bids for obvious data-entry errors, the TAAPS system will flag tenders that exceed a par amount that is a predetermined percentage above an amount based upon the bidder's prior submissions, and bids at a rate or yield that exceeds a predetermined band on either side of the when-issued market for that security. This

type of monitoring should catch errors such as a bid for a yield of 7.08 percent instead of 8.08 percent, or for \$5 billion instead of \$5 million.

All flagged bids will be reviewed by Federal Reserve bank staff. After consultation with the bidder and with the Treasury in these cases, the auction staff will have the ability – with the Treasury’s approval – to correct obvious keying errors (or allow the bidders to submit corrected tenders), reject questionable bids, or return them to the "good" database. Any tender that is changed must be reviewed and approved by the appropriate officials before being included in the auction, and complete documentation of these changes will be maintained.

After the process of reviewing tenders and resolving any questions is complete, the Treasury will be notified that district-level processing of tenders is complete. The Treasury auction staff will then execute a program that will use the information in the "good" tender database, aggregated by yield, to calculate the range of accepted bids and all relevant auction statistics. The Treasury will review the results, and then broadcast the auction results to all FedLine users and simultaneously issue a public press release.

Successful bidders in the auction will be notified of their awards via a message to their FedLine terminals. The TAAPS system will instruct the commercial book-entry system to issue the securities against payment to the successful bidders on the issue’s settlement date. TAAPS will also be able to accommodate the requirements of the new commercial book-entry system being implemented in the next few years.

Automation benefits

Speed and productivity improvements. The current process is labor intensive at all stages of the auction for the Treasury, the Federal Reserve banks, and the bidders. Automation should allow fewer people to conduct the auctions faster, as it will reduce significantly the amount of time devoted to manually entering data from tender forms, both for auction processing and for original issue of the securities. Bidders will be afforded the ease and convenience of electronic bidding, and savings will result for some bidders from eliminating the need to send messengers to submit tenders.

Electronic bidding should also reduce bidding errors. Bids communicated over a telephone and hastily transcribed by a messenger at the last moment may be inaccurate, illegible, or difficult to interpret. Bids entered at a terminal will not have these problems. While different types of errors, such as keying errors, may be introduced, the automatic screening procedures described above should mitigate these problems.

Wider participation in the auctions. Over 9,000 depository institutions have FedLine terminals connected to their local Federal Reserve banks. Upon completion of the project for electronic bidding by depository institutions, all of these institutions

will have the capability of electronically submitting competitive and noncompetitive bids for securities to be held in either the commercial book-entry or TREASURY DIRECT systems. Registered brokers and dealers and other large bidders will have the opportunity to install computer terminals for auction bidding purposes. Depository institutions with FedLine terminals – particularly those in remote locations – may find it easier and more convenient to submit electronic bids on behalf of TREASURY DIRECT participants than it is with current procedures.

More efficient monitoring of the auction rules. TAAPS will be able to collect, organize, and present information quickly about potential or actual rule violations to Federal Reserve bank and Treasury staff reviewing bids. For example, the computer will be able to sort tenders and customer lists by name independently of the dealer or depository institution through which the bids were submitted. This will make it easier to aggregate bids of related entities or of customers that bid through several dealers or depository institutions, which will facilitate enforcement of the 35 percent bid and award limitations and the noncompetitive award limitations.

Standardized auction procedures. With standard Federal Reserve terminals, standard FedLine applications, and centralized processing, all bidders and districts will have the same screens and procedures for submitting and processing tenders. Use of standard Federal Reserve terminals and communications facilities allows the use of existing mechanisms for distributing and supporting terminals, and the use of existing and planned Federal Reserve backup sites, systems and arrangements.

D. Auction Rule Enforcement

The Treasury's longstanding policies of encouraging widespread ownership of Treasury securities and limiting concentration of awards at auctions have led to the two primary auction rules, or policies: the 35 percent limitation of overall awards to a single bidder and the total dollar limitations on noncompetitive bidding.

Recent events, as well as the Treasury's examination of auction activity in light of disclosures by Salomon Brothers Inc ("Salomon"), have resulted in certain abuses and enforcement problems being uncovered regarding each of these rules. This section discusses the enforcement of current Treasury auction rules, including identified problems, possible causes, and potential solutions. Further discussion of policies that might address these issues, such as changes to auction rules and techniques, is contained in other sections of this report.

The 35 percent limitation

The 35 percent limitation on awards to single bidders in an auction is designed to prevent excessive concentration of ownership of a particular Treasury security as a result of an auction. A limitation of this kind has been in effect since 1962. Since July 1990, an additional Treasury rule has been in effect that limits the amount Treasury will recognize as bid by a single bidder at a single yield to 35 percent of the public offering.²⁶

Contrary to what is commonly suggested, the Treasury does not prohibit tenders for more than 35 percent of a particular auction amount or require bidders to certify that they have not done so.²⁷ The Treasury has, however, stated that bids at one yield for more than 35 percent of the public offering amount at any auction from a single bidder will be recognized only up to the 35 percent limit, and that the Treasury will not award more than 35 percent of the public offering amount to a single entity. While this policy encourages bidders to limit their bids voluntarily, it places a substantial degree of enforcement responsibility on the Treasury and the Federal Reserve banks that act as the Treasury's fiscal agents in conducting the auctions and referring any potential problems to the Treasury.

²⁶ This rule was a response to a strategy in which bidders would attempt to increase their prorated awards at the highest accepted yield in an auction. Large bidders would place bids well in excess of 35 percent of the public offering amount at what they guessed to be the highest accepted yield, assuming that they would be awarded some fraction of this amount. This strategy disadvantaged other bidders who could not risk being awarded much more of the securities than they intended to purchase.

²⁷ In fact, for Treasury bills, it is impossible for bidders to know precisely what the public offering amount will be prior to the announcement of the auction results.

In addition, the Treasury requires bidders to certify on the auction tender form that the bidder's or customer's net long position in the securities auctioned does not exceed \$200 million or to report on the form any net long position of more than \$200 million as of 12:30 pm on the day of the auction, one-half hour before the closing time for receipt of competitive tenders.²⁸ This requirement was designed to aid in the administration of the 35 percent limitation, allowing the Treasury to aggregate bidders' existing net long positions with potential auction awards in determining the maximum securities awarded to a particular entity. In recent years, the Treasury has reduced awards based on bidder's long positions in a number of auctions, although such action has not often been necessary.

Problems and abuses. The Treasury's enforcement of the 35 percent limitation on auction awards has generally been effective. The unauthorized customer bids submitted by Salomon that allowed it to purchase more than 35 percent in several Treasury auctions are the only instances of which the Treasury is aware since the 35 percent limitation has been in place in which a single bidder was awarded more than 35 percent of the publicly offered auction amount.

In the widely publicized Salomon case, several of the unauthorized bids submitted for customers by Salomon resulted in awards to Salomon in excess of 35 percent of the public offering amount. These include the February 21, 1991 five-year note auction, in which Salomon bought 57 percent of the notes through a bid for itself and two unauthorized bids in customer names, and the May 22, 1991 two-year note auction, in which Salomon effectively purchased 38 percent of the auctioned notes. Salomon has also admitted that it failed to report a sizeable long when-issued position in the May 1991 two-year note auction.²⁹ Had the position been duly reported, the amount awarded would have been reduced by the amount of the long position.

The noncompetitive award limitation

Securities awarded noncompetitively earn a yield equal to the weighted average yield of accepted competitive bids. Bidding noncompetitively assures an investor of receiving a desired amount of securities, with a market-based yield determined by the auction results. The noncompetitive award process was designed for smaller investors that do not have the resources or information to bid competitively. Noncompetitive

²⁸ With this report, Treasury is announcing that in order to reduce the reporting burden, it will not require bidders to report their net long positions at the time of the auction unless the total of the bidder's net long position plus its bid is greater than a significant amount of the auctioned issue.

²⁹ See Statement of Salomon Inc submitted in conjunction with the testimony of Deryck C. Maughan, Chief Operating Officer of Salomon Brothers Inc, and Robert E. Denham, General Counsel of Salomon Inc before the Subcommittee on Oversight, Committee on Ways and Means, United States House of Representatives, September 24, 1991.

bidding was never intended to serve as a substitute for competitive bidding by sophisticated and large bidders who have the resources, knowledge, and expertise to bid competitively. For this reason, and because the Treasury desires a predominantly competitive pricing system for its securities, noncompetitive awards to each bidder are limited. The noncompetitive award limits have changed over time and are currently \$1 million for bills and \$5 million for notes and bonds.

Every auction tender form states that noncompetitive tenders are not to exceed the specified amount allowable for a single bidder. In addition, the tender form indicates that a noncompetitive bidder may not have entered into an agreement with respect to noncompetitive awards prior to the closing time for receipt of tenders. This rule is intended to prevent an investor from obtaining more than the specified amount of securities at the average yield by arranging to acquire them from other investors who plan to bid noncompetitively.

Problems and abuses. There have been several instances of investors using noncompetitive awards for what appear to be arbitrage purposes. Market participants have discerned a tendency of prices of Treasury securities to be slightly higher than the average auction price immediately following the announcement of the auction results. This means that securities purchased noncompetitively at the average yield can be resold immediately after the announcement of the auction results in the when-issued market, often for a profit.

The pattern is similar in most of these cases that the Treasury has uncovered. An investment or trading firm submits bids for the maximum noncompetitive award in the names of a list of employees or customers. The bids are either pooled through a primary dealer, or spread throughout a number of different dealers. The securities are then resold immediately after the auction and before payment is required. Only if the securities are sold at a loss does the bidding entity require any payment from participants. However, in some cases, it may be that pool participants were actually required to put up a certain amount of margin towards the positions. Often the same list of participants is used repeatedly in different auctions.

The Treasury has investigated these schemes, and, in some cases, referred them to the SEC. Participants have maintained that they are not violating any specific auction rule, as they claim that all bids are properly authorized and that they have not made any pre-auction agreements regarding the securities. While the Treasury has not taken the position of prohibiting resale of noncompetitively awarded securities immediately following the auction, these activities do appear to have gone against the spirit of the noncompetitive award system, and, in some cases, may have violated the prohibition on pre-auction agreements.

In several other instances, related entities, such as multiple bank subsidiaries or branches within a single bank holding company, have submitted bids, either through the

same dealer or through other dealers, that combined exceed the noncompetitive bidding limits. In most of these cases, the entities do not appear to have been acting in concert to garner a larger share of noncompetitive awards, but rather were probably unaware of their affiliates' auction activities. In several of these instances, the potential problem was detected by the Federal Reserve and Treasury auction staff, and auction awards were appropriately reduced to conform to the single-bidder limitations. However, there have also been a few instances in which Federal Reserve bank and Treasury staff were not aware of the multiple bids and therefore did not limit the combined awards as would be appropriate.

Another potential problem is that primary dealers often submit auction tenders for the maximum noncompetitive amount for their own accounts. Treasury has not rejected noncompetitive bids in these cases, even though primary dealers also bid competitively and often take pre-auction positions in the securities being auctioned.

Underlying causes and potential solutions

Changes to the underlying auction technique or policies towards market "squeezes" could alleviate the problems discussed above because such changes would likely remove the benefits to evading either the 35 percent limitation or the noncompetitive limitation.³⁰ The major contributing factors to the enforcement problems and abuses under the current auction framework are discussed below.

Bidding by related entities. Despite the much-publicized Warburg/Mercury case, in which Salomon submitted an unauthorized bid in the name of an S.G. Warburg affiliate, the problem of bids from related entities has mainly arisen in the noncompetitive bidding area due to the thousands of noncompetitive bids that are submitted at each auction.

The wide array of corporate and partnership affiliations makes it difficult to determine which entities should be considered together as a single bidder for purposes of the 35 percent auction award and bidding limitations and the noncompetitive award limitation. A bank holding company, for example, may have numerous subsidiaries throughout the country that may not communicate with one another on a regular basis, and may submit bids through different Federal Reserve districts. Partnerships with essentially identical memberships and different family members are also considered to be a single bidder under the Treasury's guidelines.

³⁰ Under a uniform-price auction method, for example, the Treasury would probably maintain the noncompetitive bidding mechanism, as this would allow small investors to be assured of receiving the desired amount of securities. However, since all investors would receive the same yield, the incentives for noncompetitive relative to competitive bidding would be greatly reduced.

To date, most single-bidder issues have been handled on a case-by-case basis, usually after the auction has taken place. More systematic enforcement of the single-bidder guidelines would require the Treasury and the Federal Reserve banks to maintain a comprehensive database of corporate affiliations that could be used as a ready reference tool.

Bidder certifications. As mentioned previously, auction tender forms currently include several statements regarding noncompetitive purchases and a certification with respect to net long positions of bidders and their customers. Treasury currently has no satisfactory way of independently verifying the position certifications. The prohibition against pre-auction agreements regarding noncompetitive awards has also required some clarification.

The Treasury is clarifying these issues in the new offering circular, which also should eliminate any current ambiguity as to the appropriate usage of noncompetitive awards. While the Treasury has traditionally maintained that covering short when-issued positions with noncompetitive awards violates the auction rules, the auction rules will further disallow noncompetitive awards to bidders who also bid competitively in a particular auction and who hold when-issued, futures, or forward positions in the security being auctioned. This policy change should ensure that the noncompetitive bidding privilege is not misused by sophisticated traders and dealers rather than smaller, less sophisticated investors.

Lack of centralized surveillance system. The auction bidding system is very decentralized, with tenders being submitted at many locations around the country. Much of the enforcement of the auction award limitations is administered at the Federal Reserve banks. There is currently no automated surveillance system in place that would capture all tender information and perform a timely and comprehensive check that any multiple bids by the same or related entities do not exceed the bidding and award limitations in the short span of time available between submission of tenders and announcement of results. As a result, surveillance and enforcement of bidding limitations is currently very labor and time intensive.

As discussed elsewhere in this report, electronic bidding and automation of the auction process will alleviate many of the operational problems in auction rule enforcement. Automation would allow nationwide policing of any single-bidder problems and verification of customer bids and would facilitate a rapid response to such problems by auction administrators.

In the meantime, the Treasury and the FRBNY have already implemented a policy of spot-checking large customer bids for authenticity. Because of the verification policies in place or currently being developed, it is less likely that circumvention of the 35 percent limit through unauthorized bidding will be a problem in the future. The

Treasury and Federal Reserve staff have also strengthened the routine policing of any potential noncompetitive award problems.

E. Concentration of Auction Awards

The Treasury has pursued policies over the years to make Treasury marketable securities available to a broad range of investors and to diminish the likelihood that ownership of the securities will be heavily concentrated as a result of Treasury auction awards. Treasury actions to broaden distribution of Treasury securities in the auction include limiting awards to any one bidder to 35 percent of the amount offered to the public and making marketable Treasury securities available on a noncompetitive basis. The Treasury offers securities across the maturity spectrum in order to appeal to a wide range of types of investors and to balance the maturity structure of the outstanding debt.

It is advantageous for the Treasury to distribute new marketable securities to a number of auction participants, rather than to allow any entity, even through competitive bidding, to obtain all or nearly all of a Treasury security. If there were a market perception that awards in Treasury auctions may be to only one or a few entities, over the longer term, other potential participants in Treasury auctions may be discouraged from submitting tenders and Treasury borrowing costs could rise. The ability of any investor to purchase Treasury securities on original issue, directly from the Treasury or through a government securities dealer, ensures that sales of Treasury securities are perceived as fair by market participants. Distribution of securities to a number of market participants also has the advantage that the securities may be sold to a broader customer base than would be the case if auction awards were more concentrated.

Statistical evaluation of concentration of auction awards. The primary dealers, as a group, purchase large proportions of Treasury securities in auctions. This is not surprising, since the primary dealers are the major market makers for Treasury securities and they focus their capital and expertise on trading government securities. The primary dealers are expected by the FRBNY to be "consistent and meaningful participant[s] in Treasury auctions of new securities."³¹ This section of the study presents data on competitive awards to primary dealers, their customers, and other competitive and noncompetitive bidders for the period of January 1990 through the end of September 1991, using tenders submitted in Treasury auctions as the source of data. The data have been adjusted to count as awards to a primary dealer the awards on unauthorized bids submitted by Salomon.³²

³¹ Federal Reserve Bank of New York, Primary Dealers: Criteria and Procedures Applied to Firms Interested in Becoming and Remaining Primary Dealers, 1988.

³² See Statement of Salomon Inc, submitted in conjunction with the testimony of Warren E. Buffet, Chairman and Chief Executive Officer of Salomon Inc, before the Securities Subcommittee of the Senate Committee on Banking, Housing, and Urban Affairs, September 10, 1991.

Primary dealers bidding for their own accounts were awarded about 72 percent of Treasury bills, notes, and bonds awarded to private investors during the January 1990 through September 1991 period³³ (see Tables B-2 and B-3). Auction awards to customers of primary dealers accounted for about 5 percent of private awards of Treasury bills and about 15 percent of notes and bonds. Noncompetitive awards accounted for 20 percent of Treasury bill auction awards to private investors on average but less than nine percent of note and bond auction awards.

Awards in each auction were ranked as to amounts awarded to primary dealer firms and their customers. The top 10 firms and their customers combined took 50 percent of total private awards in bill auctions and 66 percent in note and bond auctions during the January 1990 through September 1991 period (see Tables B-4 and B-5).

One primary dealer and its customers were awarded 35 percent or more of the total offered to the public in 17 out of a total of 66 Treasury note and bond auctions. The 35 percent maximum was purchased by one primary dealer for its own account in 6 of the 66 auctions. Awards to the top three bidders (a primary dealer for its own account or another entity, not combined) averaged nearly 41 percent of total private awards in note and bond auctions between January 1990 and September 1991 (see Table B-6).

The figures on awards to primary dealers for their own accounts overstate the concentration of ownership of Treasury securities as a result of the auction, because primary dealers in the aggregate usually have large net short positions going into the auctions. Part of the primary dealers' market making function is to distribute Treasury securities in the when-issued market prior to the auction. Primary dealers in the aggregate had net short positions prior to every auction of notes and bonds in the January 1990 through September 1991 period. Net short positions averaged nearly 40 percent of auction awards to primary dealers for their own accounts during that period (see Table B-7).

Potential ways to lessen concentration. The squeeze in the May two-year note, following the auction on May 22, 1991, pointed up the need to review ways to lessen the potential for concentration of auction awards. In that auction Salomon and its customers were awarded 87 percent of the total amount offered. This highly concentrated auction result, while not unprecedented, was followed by unusual distortions in the cash and repo markets for that note. With these distortions in mind, the Treasury began a review of auction procedures following the May 1991 two-year

³³ Awards to private investors include awards on competitive and noncompetitive tenders and exclude noncompetitive awards to the Federal Reserve banks for the System open market account and official foreign custody accounts. Awards to foreign accounts held outside of the Federal Reserve are included with awards to private investors.

note auction and has made changes to lessen the potential for a repeat of the experience.

Steps that have been taken

1. The Treasury has changed auction rules since May 1991 by increasing the maximum amount of notes and bonds that can be purchased by a single bidder through noncompetitive tenders from \$1 million to \$5 million, effective with the three-year note auction on November 5, 1991.

In the auction of the three-year notes on November 5, 1991, the Treasury awarded \$852 million of noncompetitive tenders to the public, compared with the average of \$1.311 billion in the three-year note auctions between January 1990 and September 1991. In the 10-year note auction on November 6, \$614 million of noncompetitive tenders were awarded to the public, compared with the \$597 million average in January 1990 through September 1991, and \$937 million of 30-year bonds were awarded to the public on a noncompetitive basis in the auction on November 7, compared with an average of \$368 million. Thus, total noncompetitive awards to the public in November 1991 were slightly higher than average. The distribution of awards among the three securities in November appears to reflect an investor preference for the relatively higher yields on longer term securities at the time of the November auctions.

2. Also effective with the November three-year note auction, the Treasury allows all registered and noticed government securities brokers and dealers to bid for customer accounts, a privilege that previously had been granted only to primary dealers and depository institutions.

Possible further measures

1. The Treasury could require that an auction participant who bids for more than a specific amount of a bill, note, or bond (for example 10 or 15 percent of the amount offered to the public) bid directly at a Federal Reserve bank rather than submit its tender(s) through a dealer(s). The advantages of direct bidding are that it would: (1) eliminate the information advantage of a dealer who bids in large size for customers; (2) make it more difficult for dealers and customers to act in concert in an auction and in the secondary market immediately after the auction; and (3) make the auction more competitive and therefore attract potential bidders who may be discouraged from taking the risks involved in participating in an auction if awards can be expected to be concentrated.

The disadvantages would be that: (1) it would force a dealer that was planning to submit a large bid for its own account, or that had a large volume of customer bids, to advise its customers to take their business elsewhere or face a cutback in the

amount the customer wants to buy; (2) it would deny a customer the advice and other services of a dealer firm that the customer prefers; (3) in the current manual data processing environment, bidders would have to arrange to submit tenders physically to a Federal Reserve bank; (4) bidders would have to arrange for a payment mechanism with a depository institution; and (5) bidders might not have sufficient information on current market conditions to be able to bid competitively.

The Treasury has decided to facilitate direct bidding, rather than to require it. Requiring large bidders to tender directly might not achieve the desired end, but could instead provide impetus for retail accounts to purchase securities from dealers in when-issued trading and circumvent the auction entirely.

The FRBNY and the Treasury are working to automate Treasury auctions. When the automated bidding system becomes operational late in 1992, depository institutions and government securities brokers and dealers will be able to submit tenders electronically. In addition, the Treasury and the FRBNY plan to extend electronic bidding capability to other large bidders, who could arrange to pay for their securities through autocharge agreements. It is likely that large bidders would have existing banking relationships that could be expanded to include autocharge agreements. In addition, the Agencies are working on ways to encourage the expansion of coverage of information on prices and trading volume in the government securities market and to extend the availability of on-line, real-time interdealer broker information systems. The greater availability of information that is expected to result from these efforts should promote an increase in direct bidding.

2. The Treasury could lower the 35 percent award maximum. The 35 percent maximum award ensures that awards will be made to at least three competitive bidders, after taking into account noncompetitive awards. Lowering the maximum to 25 or 30 percent of the amount offered has been proposed and could result in distributing awards to a larger number of market participants, which potentially would encourage more entities to participate in the auction. A disadvantage of a lower maximum award limit would be that it could discourage aggressive bidding, which could tend to reduce demand for the securities and increase the cost of financing the debt.

3. The Treasury could increase the noncompetitive award limit further. As indicated above, the Treasury is reviewing the results of the recent increase in the noncompetitive award limit. It is too early to assess whether the change will result in a change in bidding behavior. An advantage of a higher limit might be that bidders would be willing to submit larger noncompetitive tenders, which could result in larger amounts being awarded to entities other than government securities brokers and dealers, thus potentially reducing the concentration of auction awards. A disadvantage could be a reduction in the size of the competitive pool that might impair efficient pricing in the auction.

Table B-2

Awards in Treasury Bill Auctions *
January 1990 Through September 1991
(Millions of Dollars)

	Primary Dealer	P.Dealer Customer	Competitive		Total Comp.	Private Non-Comp.**	Total Private
			Total	Other Direct			
13-week	\$428,186	\$32,509	\$460,695	\$26,868	\$487,563	\$145,559	\$633,122
26-week	417,449	24,998	442,447	14,421	456,868	114,895	571,763
52-week	154,753	11,008	165,761	7,895	173,656	19,789	193,445
Total	\$1,000,388	\$68,515	\$1,068,903	\$49,184	\$1,118,087	\$280,243	\$1,398,330

Percent of Private Awards

	Primary Dealer	P.Dealer Customer	Competitive		Total Comp.	Private Non-Comp.**	Total Private
			Total	Other Direct			
13-week	67.6 %	5.1 %	72.8 %	4.2 %	77.0 %	23.0 %	100.0 %
26-week	73.0	4.4	77.4	2.5	79.9	20.1	100.0
52-week	80.0	5.7	85.7	4.1	89.8	10.2	100.0
Total	71.5 %	4.9 %	76.4 %	3.5 %	80.0 %	20.0 %	100.0 %

* Based on auction date, not issue date. Excludes cash management bills.

** Excludes awards to foreign custody accounts and to the Federal Reserve for its own account.

Source: U.S. Treasury Department.

Table B-3

Awards in Treasury Note and Bond Auctions *
January 1990 Through September 1991
(Millions of Dollars)

	Primary Dealer	P.Dealer Customer	Competitive		Total Comp.	Private Non-Comp.**	Total Private
			Total	Other Direct			
2-year	\$174,133	\$32,769	\$206,902	\$20,406	\$227,308	\$29,389	\$256,697
3-year	61,731	12,786	74,517	1,947	76,464	9,176	85,640
4-year	23,362	4,989	28,351	1,180	29,531	3,384	32,915
5-year	87,058	18,540	105,598	2,384	107,982	8,594	116,576
7-year	46,654	5,985	52,639	1,807	54,446	3,387	57,833
10-year	53,453	17,566	71,019	1,536	72,555	4,183	76,738
30-year	59,226	12,047	71,273	1,966	73,239	2,577	75,816
Total	\$505,617	\$104,682	\$610,299	\$31,226	\$641,525	\$60,690	\$702,215

Percent of Private Awards

	Primary Dealer	P.Dealer Customer	Competitive		Total Comp.	Private Non-Comp.**	Total Private
			Total	Other Direct			
2-year	67.8 %	12.8 %	80.6 %	7.9 %	88.6 %	11.4 %	100.0 %
3-year	72.1	14.9	87.0	2.3	89.3	10.7	100.0
4-year	71.0	15.2	86.1	3.6	89.7	10.3	100.0
5-year	74.7	15.9	90.6	2.0	92.6	7.4	100.0
7-year	80.7	10.3	91.0	3.1	94.1	5.9	100.0
10-year	69.7	22.9	92.5	2.0	94.5	5.5	100.0
30-year	78.1	15.9	94.0	2.6	96.6	3.4	100.0
Total	72.0 %	14.9 %	86.9 %	4.4 %	91.4 %	8.6 %	100.0 %

* Based on auction date, not issue date.

** Excludes awards to foreign custody accounts and to the Federal Reserve for its own account.

Source: U.S. Treasury Department.

Table B-4

**Awards to Top Ten Primary Dealers and Customers
In Treasury Bill Auctions *
January 1990 Through September 1991
(Millions of Dollars)**

	Primary Dealer	P.Dealer Customer	Competitive Total	Other Direct	Total Comp.	Private Non-Comp.**	Total Private
13-week	\$280,313	\$27,389	\$307,702	\$179,861	\$487,563	\$145,559	\$633,122
26-week	260,695	21,307	282,002	174,866	456,868	114,895	571,763
52-week	103,058	10,090	113,148	60,508	173,656	19,789	193,445
Total	\$644,066	\$58,786	\$702,852	\$415,235	\$1,118,087	\$280,243	\$1,398,330

Percent of Private Awards

	Primary Dealer	P.Dealer Customer	Competitive Total	Other Direct	Total Comp.	Private Non-Comp.**	Total Private
13-week	44.3 %	4.3 %	48.6 %	28.4 %	77.0 %	23.0 %	100.0 %
26-week	45.6	3.7	49.3	30.6	79.9	20.1	100.0
52-week	53.3	5.2	58.5	31.3	89.8	10.2	100.0
Total	46.1 %	4.2 %	50.3 %	29.7 %	80.0 %	20.0 %	100.0 %

* Based on auction date, not issue date. Excludes cash management bills.

** Excludes awards to foreign custody accounts and to the Federal Reserve for its own account.

Source: U.S. Treasury Department.

Table B-5

**Awards to Top Ten Primary Dealers and Customers
In Treasury Note and Bond Auctions *
January 1990 Through September 1991
(Millions of Dollars)**

	Primary Dealer	P.Dealer Customer	Competitive		Total Comp.	Private Non-Comp.**	Total Private
			Total	Other Direct			
2-year	\$113,315	\$29,781	\$143,096	\$84,212	\$227,308	\$29,389	\$256,697
3-year	46,408	10,867	57,275	19,189	76,464	9,176	85,640
4-year	19,700	4,855	24,555	4,976	29,531	3,384	32,915
5-year	66,992	17,466	84,458	23,524	107,982	8,594	116,576
7-year	33,590	5,286	38,876	15,570	54,446	3,387	57,833
10-year	40,747	16,388	57,135	15,420	72,555	4,183	76,738
30-year	44,828	10,566	55,394	17,845	73,239	2,577	75,816
Total	\$365,580	\$95,209	\$460,789	\$180,736	\$641,525	\$60,690	\$702,215

Percent of Private Awards

	Primary Dealer	P.Dealer Customer	Competitive		Total Comp.	Private Non-Comp.**	Total Private
			Total	Other Direct			
2-year	44.1 %	11.6 %	55.7 %	32.8 %	88.6 %	11.4 %	100.0 %
3-year	54.2	12.7	66.9	22.4	89.3	10.7	100.0
4-year	59.9	14.8	74.6	15.1	89.7	10.3	100.0
5-year	57.5	15.0	72.4	20.2	92.6	7.4	100.0
7-year	58.1	9.1	67.2	26.9	94.1	5.9	100.0
10-year	53.1	21.4	74.5	20.1	94.5	5.5	100.0
30-year	59.1	13.9	73.1	23.5	96.6	3.4	100.0
Total	52.1 %	13.6 %	65.6 %	25.7 %	91.4 %	8.6 %	100.0 %

* Based on auction date, not issue date.

** Excludes awards to foreign custody accounts and to the Federal Reserve for its own account.

Source: U.S. Treasury Department.

Table B-6

**Awards to Top Three Bidders in
Treasury Note and Bond Auctions*
January 1990 Through September 1991
(Millions of Dollars)**

	Awards to Top 3 Bidders**	Percent of		Awards to Top 3 Dealers and Customers***	Percent of	
		Comp. Awards	Pvt. Awards		Comp. Awards	Pvt. Awards
2-year	\$92,223	40.6%	35.9%	\$102,689	46.2%	40.0%
3-year	39,103	51.1	45.7	42,454	55.5	49.6
4-year	18,439	62.4	56.0	21,108	71.5	64.1
5-year	55,160	51.1	47.3	64,661	60.0	55.5
7-year	21,312	39.1	36.9	26,020	47.8	45.0
10-year	32,289	44.5	42.1	42,868	59.1	55.9
30-year	28,548	39.0	37.7	36,657	51.4	49.7
Total	\$287,074	44.7%	40.9%	\$337,461	52.6%	48.1%

* Based on auction date, not issue date.

** Bidder may be a primary dealer or a customer of a primary dealer.

*** Primary dealer plus customer of the primary dealer.

Source: U.S. Treasury Department.

Table B-7

**Primary Dealer Net Position Before Auctions*
as a Percent of Account Awards to Primary Dealers
January 1990 Through September 1991
(Millions of Dollars)**

	<u>Primary Dealer Account Competitive Awards</u>	<u>Primary Dealer Net Position Before Auction**</u>	<u>Net Position as Percent of Awards</u>
2-year	\$173,633	-\$80,637	-46.4%
3-year	61,731	-22,194	-36.0
4-year	22,852	-5,338	-23.4
5-year	83,058	-39,890	-48.0
7-year	46,654	-11,221	-24.1
10-year	53,453	-14,262	-26.7
30-year	<u>58,356</u>	<u>-17,387</u>	<u>-29.8</u>
Total	\$499,737	-\$190,929	-38.2%

* Based on auction date, not issue date.

** Aggregate primary dealer net position as of 3:30 p.m. the day before the auction.

Sources: U.S. Treasury Department and Federal Reserve Bank of New York.

4. Hedge Funds

The recent events involving Salomon and the much-publicized "squeezes" of Treasury notes have focused public and regulatory attention on a type of investment entity popularly referred to as a "hedge fund." These investment funds, which are operated so as to be exempt from most types of regulatory oversight and restraints, have recently begun to play a major role in the government securities market. They apparently have the capability to assume large positions in Treasury securities because of their size, capacity for leverage, and willingness to take substantial risks with their capital. This section discusses why regulators have little access to information about these entities and their day-to-day activities and what the possible implications are for the government securities market.

What is a "hedge" fund?

The term "hedge fund" was in use as early as the 1960s to describe a new speculative investment vehicle that used sophisticated hedging and arbitrage techniques in the corporate equities market.³⁴ In the late 1960s, former Securities and Exchange Commissioner Hugh Owens described "hedge funds" as "private investment partnerships which employ the investment techniques of leveraging and hedging."³⁵ In the 1970s and 1980s, the activities of similar types of funds broadened into a range of financial instruments and activities. These funds grew tremendously in terms of assets, particularly in the 1980s, and now operate in the cash, futures, and options markets and engage in foreign currency, government securities, and commodity transactions, as well as merger and acquisition activities.

The term "hedge fund" does not have a precise definition, but it has been used to refer generally to a cadre of private investment partnerships that are engaged in active trading and arbitrage of a range of different securities and commodities. For the purposes of this report, the discussion presented here will focus on characteristics of those funds that are large and active participants in the government securities market and will use the term "hedge fund" to refer to this sort of private investment fund, regardless of its actual activities.

³⁴ The A.W. Jones Group may have been the first entity to be nicknamed a "hedge fund" in the early 1960s because of its strategy of taking offsetting long and short positions in the stock of companies in the same industry, thus hedging macroeconomic factors but benefitting from company specific performance.

³⁵ "A Regulator Looks at Some Unregulated Investment Companies: The Exotic Funds," Remarks of SEC Commissioner Hugh Owens before the North American Securities Administrators Association (October 21, 1969).

Publicly available data on hedge funds and their activities are limited. In fact, hedge funds are organized in such a way as to minimize the amount of information that they need to disclose about their operations. No comprehensive statistics exist as to their overall number in the United States, assets under management, types of transactions, degree of leverage, rates of return, or positions in particular securities, aside from large positions in futures contracts and corporate equities.

Media reports, discussions with market participants, and the limited information disclosed to regulatory agencies suggest some rough estimates. Total assets invested in hedge funds certainly run into the tens of billions of dollars; several funds have assets of more than \$1 billion each. In fact, many hedge funds are reported not to be accepting new money, as some have grown too large and unwieldy for the sort of trading strategies they typically employ. Rates of return on leading hedge funds are reported to be well above average market returns, even over a period of years.³⁶ Many hedge fund managers began their careers as commodity traders and continue to use sophisticated trading and arbitrage techniques.

As hedge funds have grown in size, requiring fund managers to seek markets that can easily absorb huge amounts of money, several of the largest funds have recently become aggressive participants in the government securities market. While hedge funds have regularly placed bids in Treasury auctions in the past, it was not until late 1990 that funds began making large and aggressive bids in Treasury auctions. These funds have been placing bids in amounts that suggest highly leveraged positions. The funds typically bid through major primary dealers, and the combined awards of dealer and hedge fund would often represent a significant portion of the publicly offered amount of securities.

Hedge funds are also reported to have acquired even larger positions in the secondary market for Treasury securities (including the when-issued market) and are likely to have engaged in repurchase transactions in order to finance these positions and those purchased in the primary market. Certain hedge funds that are large participants in the government securities market have also been the focus of some publicity as a result of unauthorized bids submitted in their names by Salomon in several Treasury auctions.³⁷

³⁶ Stephen Taub, "Hedging your way to prosperity," *Financial World*, (April 3, 1990).

³⁷ See Statement of Salomon Inc. submitted in conjunction with the testimony of Warren E. Buffet, Chairman and Chief Executive Officer of Salomon Inc. before the Securities Subcommittee, Committee on Banking Housing and Urban Affairs, United States Senate, September 10, 1991.

Legal and regulatory structure

Hedge funds are generally structured as limited partnerships, organized either in a U.S. state or "offshore" in a tax-haven country.³⁸ This structure affords the investors important legal distinctions from other types of investment vehicles, distinctions without which their activities would be severely curtailed.

An entity structured as a limited partnership is permitted under the tax laws to pass through its profits to the partners, avoiding entity-level taxes that would be levied on other forms of organization. Equally important, hedge funds can be structured so as to be exempt from a variety of securities and investment company regulations. This leaves hedge funds structured in this way with a much greater degree of flexibility in both investment techniques and compensatory structure than would be possible for a conventional regulated investment company.

Each limited partnership must have a general partner, who is responsible for managing the fund, making investment decisions (or selecting who will make investment decisions) and raising new capital when necessary. The general partner of a hedge fund (or its owner) sometimes has a large personal stake invested in the fund. The limited partners purchase an interest in the partnership, in return for which they receive a fixed percentage of the fund's profits. The minimum purchase unit for a partnership interest is usually in the \$100,000 to \$1 million range and is thus geared towards high net worth individuals or institutions. A partnership interest cannot be easily sold or transferred, unlike shares in a mutual fund. There may be a minimum holding period before sale is allowed or a substantial delay in liquidating the partnership interest by selling it to the general partner.

Securities laws. Hedge funds are not generally subject to SEC oversight.³⁹ Most investment interests in hedge fund partnerships are privately offered and not registered pursuant to the Securities Act of 1933; therefore, no offering documents for them are filed with the SEC, although an offering document may be required to be distributed to the limited partners.

Hedge funds also claim an exclusion from registering as securities dealers under Section 15(a) of the Securities Exchange Act of 1934 ("Exchange Act"), based on the so-called "trader" exception to the definition of "dealer." In general, a trader is an

³⁸ Offshore funds may also be organized as corporations, which affords their foreign investors exemption from U.S. taxes but allows the shares to trade on foreign stock exchanges.

³⁹ The anti-fraud provisions of the federal securities laws do apply to hedge funds whether or not they are registered with the SEC. See Tamar Frankel, *The Regulation of Money Managers*, (1978), Vol. 4, pp. 318-323, for a discussion of the treatment of hedge funds under the securities laws.

entity that trades securities solely for its own investment account and does not carry on a public securities business, while a dealer buys and sells securities as part of a regular business, deals directly with public investors, engages in market intermediary activities, and may also provide other services to investors. To date, the SEC has not taken a formal position on the issue of hedge fund registration as dealers, and the funds that this report has focused on have not, on their own initiative, sought advice from the SEC as to whether to register.

If appropriately structured, a hedge fund is not an investment company under the Investment Company Act of 1940. Under Section 3(c)(1) of this statute, funds with less than 100 persons and no intention of making a public offering are exempt from registering as an investment company. A fund excluded from the definition of investment company is not subject to any provisions of the Investment Company Act.

Investment company status imposes substantial regulatory requirements, including conflict of interest regulations, financial statement and audit requirements, and disclosures to customers and to the SEC. Investment companies are also subject to leverage limitations, including an overall 300 percent asset-to-debt coverage rate. This would be a particularly troublesome restriction for hedge funds, which reportedly often rely on a high degree of leverage in order to take larger positions and raise their potential rate of return on capital.

The Investment Advisers Act of 1940 requires registration of professional money managers with the SEC. Fund managers may avail themselves of the small adviser exemption from registration in Section 203(b)(3) of the Investment Advisers Act if they have less than 15 clients. In 1985, the SEC adopted rule 203(b)(3)-1, which permits a general partner to count a limited partnership as a single client, rather than counting each partner as a separate client, under certain circumstances. Under this rule, it appears that managers and general partners of hedge funds would be exempt from registration.

Hedge funds are probably particularly eager to avoid investment adviser registration. In addition to record-keeping and disclosure requirements associated with investment adviser registration, fund managers might also have to comply with Rule 205-3, which prohibits an investment adviser from charging performance-linked fees.⁴⁰ Of course, as general partner, the manager of a hedge fund would be entitled to a fair return on capital invested, but the SEC would probably view any compensation above a return on capital and payment for services which are not linked to performance as a performance fee.

⁴⁰ Rule 205-3(e) permits performance fees when all clients have a minimum of \$500,000 under management or a net worth of \$1 million each.

Commodity Exchange Act. Because most hedge funds make use of futures markets, their operators, advisers and trading activities fall within the regulatory domain of the Commodity Futures Trading Commission ("CFTC"). The CFTC requirements for hedge funds are disclosure oriented and less prescriptive than those for investment companies and investment advisers, but at the same time, CFTC registration is harder to avoid.

Under the Commodity Exchange Act ("CEA"), registration of hedge funds themselves is not required; rather, registration is required of the hedge fund manager and any adviser(s) to the fund under certain circumstances. The manager may have to register as a commodity pool operator ("CPO") and the adviser(s) may have to register as a commodity trading advisor ("CTA"). Every commodity pool must have a pool operator responsible for operational aspects of the fund and for raising funds from investors. A CPO can manage more than one pool, and a pool can have more than one CPO or CTA. Several major hedge fund managers or their affiliates are, in fact, registered with the CFTC as CTAs or CPOs.

The CFTC's regulations define a commodity pool as "an investment trust, syndicate or similar form of enterprise operated for the purpose of trading commodity interests." Accordingly, an investment fund generally must be considered a commodity pool if it makes use of commodity futures and options contracts. The CFTC generally makes a determination as to when pool status is appropriate depending on the importance of commodity futures trading to the entity and its other characteristics. An offshore operator of an offshore investment entity, however, may be granted relief from CPO registration if it is not marketed to U.S. investors, regardless of the scope of its activities in the U.S. futures markets.

The CEA also prescribes that any person who provides advice regarding commodity futures and options trading must register as a CTA. Exemption is provided for those who advise 15 or fewer clients and do not hold themselves out generally to the public as a CTA. However, unlike the SEC, the CFTC will usually count each investor in the partnership separately for the purposes of determining CTA status.

CPOs are required by the CFTC to provide disclosure documents and certified annual reports to investors and to the CFTC. CTAs must provide disclosure documents to clients and to the CFTC. CPOs and CTAs must keep and maintain books and records which must be accessible to the CFTC and the Department of Justice for inspections. Information that must be maintained includes records of commodity and cash market trading activity and information concerning the pools.

Regulatory Issues

The regulatory issues relevant to these funds involve not so much the protection of the investors who invest in them, typically high net worth individuals or institutions,

but the potential of these funds, due to their size, active market presence, and use of leverage, to cause market disruptions.

For example, Salomon has disclosed that it purchased large amounts of securities for two large hedge funds in the May two-year note auction and was aware of a large position in the notes by a third fund. This concentration of ownership of the securities may have contributed to a squeeze in the market.

In addition, hedge funds are large enough to prompt concern about market stability. However, regulators, except for the CFTC in some circumstances, have little, if any, authority to gain access to information about hedge fund activities. While the SEC can obtain through its subpoena powers records relevant to its investigations, which must be approved by a vote of the Commission, there appears to be little access for regulators outside of an investigatory proceeding.

Reporting and information access. The CFTC is the only regulatory agency with any regular reporting contact with certain hedge funds. In the futures market, the CFTC requires large position reporting identifying the positions of large traders in specific futures contracts, and several of the major hedge funds are regularly included in these reports. As mentioned above, the CFTC also receives annual reports from CPOs regarding their pools' operations and has the authority to inspect records of cash market transactions of the pools, their CPOs, and their clients, although this authority is not routinely exercised.

The CFTC's large trader reporting authority derives from Section 4i of the CEA which requires large traders and position-holders in particular futures contracts to maintain books and records of their transactions and positions in both the futures and cash market for the particular commodity and allows the CFTC, along with the Department of Justice, to inspect these records. It is not clear, however, whether the CFTC could use this authority to acquire information for purposes other than to investigate concerns in the futures market.

In some instances, hedge funds must also report to the SEC. Hedge funds are subject to Section 13(d) of the Exchange Act, which requires investors to report large positions in equity securities. In addition, investment managers of hedge funds may be subject to the reporting requirements of Section 13(f) of the Exchange Act, which requires investment managers that exercise investment discretion with respect to equity securities having an aggregate fair market value of at least \$100 million to file quarterly reports with the SEC regarding their equity securities positions. These reports are made public. Information on hedge funds also is reportable by brokers and dealers under the SEC's new large trader reporting provision (Section 13(h)), although these regulations will cover only publicly traded corporate equities and options.

The SEC has little additional authority to obtain regular information on the activities of hedge funds. In order to claim the exemptions from the Investment Advisers Act and the Investment Company Act, the funds are not required to submit any documentation or to petition for exemption. In fact, the existence of a particular hedge fund may not even come to the SEC's attention unless the SEC receives a complaint about that fund's activities.

Treasury also has little regulatory contact with hedge funds or access to information on their activities. While Treasury does, of course, have information on auction bidding and Treasury securities awarded to hedge funds in auctions, it currently has no access to information on hedge funds' when-issued and other secondary-market activity in government securities, aside from the limited position reporting required on auction tender forms.

Systemic market risk. Events in the government securities market have shown that their capacity for leverage allows hedge funds to take large trading positions disproportionate to their capital base. Thus far, fund managers have proved very adept at controlling their market risk, and their lending counterparties appear to consider them creditworthy. However, the sheer size of the positions taken by the hedge funds raises concerns about systemic risk that these funds may introduce into the financial markets.

It is unclear to what extent the failure of a major hedge fund would affect the functioning of the financial markets. Market participants have indicated that hedge funds' use of leverage is usually implemented through margined or collateralized transactions, which would tend to mitigate the effect of a failure on counterparties. For example, transactions on commodity futures exchanges, in which hedge funds are very active, are subject to margin and mark-to-market rules. Repurchase agreements are collateralized by government securities, which would allow the counterparty that held the collateral securities to retain or sell them in the event of a failure. However, regulators currently have little information that might help them assess the market impact of a failure of a hedge fund or that would warn of an impending failure.

5. Government Securities Clearing Corporation

The Government Securities Clearing Corporation ("GSCC") is a clearing agency registered with the SEC pursuant to the Exchange Act.⁴¹ GSCC currently is the only registered clearing agency that offers a centralized, automated system for the clearance and settlement of trades in Treasury securities. GSCC offers comparison and netting services to members. GSCC's clearance and settlement system also functions as a risk assessment, credit risk reduction, and risk containment facility for eligible trades in government securities that are submitted to GSCC for comparison and netting. GSCC collects and stores information about a significant percentage of trades in the government securities market. The data GSCC currently receives and maintains include the number and value of submitted and compared trades; dollar and par values of when-issued and other net settlement positions; debit and credit marks; and fails to deliver and duration of fails. Such information is available by CUSIP, by member, and in the aggregate.

Comparison

GSCC offers a centralized, automated comparison system for government securities trades. Comparison is the matching of the purchase and sale sides of a trade. Successful comparison occurs if the information submitted by both sides to a trade agrees as to quantity, security identification, contra party, trade price or trade value, buy or sell, and trade and settlement dates. Each comparison generated by GSCC evidences a valid, binding and enforceable contract between the members with

⁴¹ GSCC was temporarily registered as a clearing agency in 1988 (Securities Exchange Act Release No. 25749 (May 24, 1988), 53 FR 19639 ("GSCC Registration Order")). Temporary registration of GSCC has been extended through May 31, 1993 (Securities Exchange Act Release No. 29236 (May 24, 1991), 56 FR 24852). GSCC is owned (about 19 percent) by National Securities Clearing Corporation ("NSCC"), a registered clearing agency and the largest equity clearing corporation in the U.S., and (about 81 percent) by approximately 48 government securities brokers and dealers.

As a clearing agency registered pursuant to Section 17A of the Securities Exchange Act, GSCC is a self-regulatory organization ("SRO") and is subject to statutory obligations pursuant to Section 19 of the Exchange Act. Each SRO is required to file with the SEC for publication and approval any proposed changes to its rules. Each SRO also is required to comply with the 1934 Act and rules thereunder, and its own rules, to enforce compliance with its rules by its members, and to impose disciplinary sanctions on members for violations of rules. Section 17A further requires registered clearing agencies, among other things, to have rules designed to promote the prompt and accurate clearance and settlement of securities transactions, to assure the safeguarding of securities and funds and, in general, to protect investors and the public interest.

respect to the trade.⁴² Centralized, automated comparison systems at clearing agencies have eliminated the need for brokers to match trades manually and have given brokers and dealers better control over operational aspects and financial risks involved in settling trades. Automated comparison gives trading parties time to concentrate on resolving differences with counterparties and to prepare for settlement. In volatile markets, automated comparison enables market participants to liquidate their exposure from uncomparing trades quickly, before changes in market prices increase potential losses. Automated comparison in the government securities market also permits brokers and dealers to submit delivery and payment instructions to clearing agent banks earlier in the day, which reduces late Fedwire deliveries.⁴³

Members submit trade data to GSCC until 10:00 p.m., and receive reports of compared and uncomparing trades by 2:30 a.m. the next morning, which is settlement day. GSCC's comparison system thus allows members to reduce fails by reconciling uncomparing trades at the start of the day and resolving differences in time for the afternoon settlement period.

Approximately 61 GSCC members participate in the comparison system. In 1991, on average, 22,376 sides⁴⁴ were submitted daily to GSCC for comparison, of which 94 percent, with a dollar value of \$153 billion, were successfully compared. Currently, GSCC compares submitted trades that occur in the when-issued market, including yield-based trades,⁴⁵ trades that occur in the post-issuance, secondary market, and exercises of over-the-counter options.

In December 1991, the SEC approved for one year a GSCC proposal to enhance the comparison system by allowing submitting members to enter the name of a non-

⁴² GSCC Rule 7. Also see Jeffrey F. Ingber, Overview of the Government Securities Clearing Corporation (August, 1991) ("Overview"). If comparison does not result in a matched trade, the trade will pend in GSCC's system until it is either compared or deleted by GSCC.

⁴³ GSCC Registration Order at 19641-2.

⁴⁴ A side is either the purchase or sale piece of a trade. Both the purchasing side and the selling side submit data for processing.

⁴⁵ Yield-based trades are when-issued trades that occur after the auction announcement but before the security is auctioned and that trade on a yield rather than a price basis because the coupon on the security has not yet been set. GSCC compares these trades using the yield instead of a price. After comparison, these trades are deleted from GSCC's system. After final price information is determined, the trades may be resubmitted to GSCC for comparison and netting. As discussed *infra*, GSCC plans to expand processing of yield-based trades.

member as the executing firm.⁴⁶ An executing firm could be a customer or a non-clearing broker. The executing firm data can be used as a surveillance tool. Once captured, this data would reside at GSCC and would be available to identify, after the fact, the party for whom a dealer entered into a trade.

Centralized comparison could benefit other market segments. Ideally, centralized comparison systems might also be adapted and expanded to include non-dealer, institutional customers.⁴⁷ Comparison systems for institutional customers generally offer automated confirmation⁴⁸ and affirmation⁴⁹ services. Although GSCC does not yet offer centralized, automated confirmation and affirmation systems, such systems exist today at other clearing agencies. With adaptation or change, these systems could be expanded to include government securities trades involving institutions. For example, Depository Trust Company's ("DTC")⁵⁰ Institutional Delivery ("ID") and International Institutional Delivery ("IID") Systems provide automated confirmation and affirmation services to brokers, banks, and institutional customers.⁵¹

⁴⁶ Securities Exchange Act Release No. 30078 (December 13, 1991), 56 FR 66110. Initially, GSCC will compare trades even if the executing firm data do not match. As members become more comfortable with the new format, however, GSCC intends to use the executing firm data as a required comparison element.

⁴⁷ Because dealers are required to send confirmations of transactions that include more data than are usually included in a comparison report, expanding comparison systems to those customers would not necessarily eliminate dealer confirmation distribution.

⁴⁸ In a typical institutional trade, the customer's executing broker must confirm the terms of the trade in writing to the investment manager. See 17 CFR § 240.10b-10.

⁴⁹ If the confirmation conforms to the investment manager's records of the trades ordered by the customer, the investment manager must issue instructions to the custodian bank authorizing the receipt or delivery of securities against payment to or by the broker.

⁵⁰ DTC is a registered clearing agency and the largest private securities depository in the U.S.

⁵¹ Adapting DTC's ID or IID Systems for use in the government securities markets, however, would mean that dealers who participate in GSCC might be required to interact with more than one clearing agency to compare their government securities trades. It might be possible for GSCC to act as a conduit for its members, by accepting trade data from them and transmitting the data to DTC for confirmation processing. Output from DTC could be transmitted to GSCC for distribution to its members.

DTC would need to adapt the ID system in at least one way in order to accommodate the need for earlier confirmations in the government securities market. Currently, the ID system trade input is in batch form and is processed only once a day – too late for the needs of the government securities market. Plans to enhance the ID system are under discussion. The IID system currently uses a multi-batch system that could accommodate earlier confirmations that would be useful for government securities trades.

Another market segment that might benefit from automated comparison is the market for repurchase and reverse repurchase agreements ("repos").⁵² Centralized repo processing not only would give regulators a truer picture of the government securities market, but also would give a better picture of each market participant's total risk profile, enabling GSCC, other clearing agencies, and regulators to refine their risk reduction policies. GSCC could benefit the market by offering a system that clearly defines which stage of the transaction is occurring, e.g., opening, closing, setting up a reverse repo or closing a reverse repo, and that automatically generates a comparison of the transaction. Such a service, if capable of capturing a high percentage of repo transactions, also could enable regulators to obtain data on repos for surveillance purposes at little or no cost to market participants.

Netting and Guaranteed Settlement

GSCC also operates a netting system through which each netting member's compared trades are reduced to one net settlement position in each security, which is in turn reduced to a minimum number of deliver or receive obligations.⁵³ Centralized, multilateral trade netting systems can increase market efficiency and reduce counterparty credit risk and market risk.⁵⁴ Trade netting reduces delivery and payment obligations for dealers, thus reducing both exposure and settlement costs. A netting system that includes novation of the trade, in which the clearing entity interposes itself as the counterparty to every deliver and receive obligation, effectively guarantees settlement of trades and reduces significantly the risk that the counterparty will fail to settle the trade.⁵⁵ In addition, netting has the potential to reduce daylight

⁵² Some clearing agencies currently offer repo processing services. For example, DTC operates a Repo Tracking System that is designed to ensure that distributions on the securities underlying the repo are paid to the proper party.

⁵³ Essentially all Treasury and Agency securities that are Fedwire-eligible, other than mortgage-backed and floating-rate securities, are eligible for netting. For a list of netting eligible securities, See Overview, *supra* note 41, at 8.

⁵⁴ Counterparty credit risk is the risk to one party to a trade that the other party to the trade will default on its payment or delivery obligations. Market risk is the risk that, in the event of a default, the value of the securities bought or sold will change, so that a subsequent trade to complete the purchase or sale will result in a financial loss.

⁵⁵ The Bank for International Settlements has observed that "multilateral netting by novation and substitution has the potential to reduce liquidity risks more than any other institutional form, but this depends critically on the financial condition of any central counterparty to the netting. . ." Bank for International Settlements, Report on Netting Schemes (February, 1989) at 6.

overdrafts on Fedwire and the risk that the failure of one institution to settle may cause losses or the failure of other institutions.⁵⁶

GSCC's netting system aggregates and matches offsetting deliver and receive obligations resulting from netting members' compared trades⁵⁷ in order to establish a net settlement position for a member's activity in each security. After net settlement positions have been determined, resulting deliver and receive obligations are established. All deliver, receive, and related payment obligations between members that were created by trades that comprise the net settlement positions are terminated and replaced by the settlement obligations issued by GSCC.⁵⁸ Net settlement positions and resulting deliver and receive obligations are fixed at the time that they are reported by GSCC to the member.

GSCC accepts trade data from members until 10:00 p.m. and nets the submitted trades. At approximately 2:30 a.m. on the morning of settlement date, GSCC makes available netting reports to members. Each day, GSCC establishes and reports, by CUSIP and by product for the trades of a netting member: net settlement positions; fail net settlement positions,⁵⁹ which are marked to market daily with accrued interest; forward net settlement positions,⁶⁰ which are netted on a rolling basis from the date of comparison to the current day and which automatically convert into net settlement positions on the scheduled settlement date; and deliver and receive obligations necessary to accomplish the settlement of a member's net and fail net settlement positions.⁶¹ At the time reports of the net settlement positions are reported to members, the deliver and receive obligations are novated.

⁵⁶ The problem of daylight overdrafts has led the Federal Reserve Board to adopt guidelines on the use of Fedwire. See "Reducing Risk on Large Dollar Systems – Interim Policy Statement," Fed. Res. Reg. Serv. Par. 9-1006. In addition, the Federal Reserve Board has addressed methods for controlling the risk on private delivery-against-payment systems. See "Private Delivery-Against-Payment Security Systems," Fed. Res. Reg. Serv. Par. 9-1000.

⁵⁷ Each netting member, other than an interdealer broker, is required by GSCC rules to submit all trades with other netting members to GSCC's netting system. GSCC Rule 11.

⁵⁸ There is no provision for unwinding positions that have been netted and novated.

⁵⁹ A fail net short position results from the failure of a netting member to deliver, and a fail net long position results from a netting member's failure to receive.

⁶⁰ A forward net settlement position is the amount of securities that GSCC anticipates a netting member will be obligated to receive or deliver on the scheduled settlement date. The forward net settlement position arises from the netting member's when-issued and forward trades.

⁶¹ Deliver and receive obligations on fail net settlement positions are not netted with other deliver and receive obligations, but are maintained on an independent basis until settled, except in cases of close-out.

Once a netting member receives the report of its net delivery obligations, it is obligated to instruct its clearing bank as to securities and funds transfers to and from GSCC's clearing bank. All settlements are made over the Fedwire, thereby ensuring delivery versus payment and finality of settlement.⁶² Securities movements take place throughout the day over Fedwire from 8:30 a.m. until the Fedwire closes for securities transfers, usually 2:30 p.m. or later. Securities deliveries made to GSCC's clearing bank are instantaneously redelivered to members.⁶³ All deliveries are made against full payment of GSCC's system price.⁶⁴

GSCC also conducts funds only settlements. The funds only settlement amount is the daily aggregate of funds owing to GSCC for Trade Adjustment Payments, forward mark allocation payments, fail mark adjustment payments, clearance difference amounts, fees, and any miscellaneous adjustments. GSCC's clearing banks collect debit amounts from members by 10:00 a.m. and pay credit amounts to members by 11:00 a.m.

Currently, about 44 GSCC members are netting members. This group includes all the interdealer brokers, 34 of the 38 primary dealers, and several non-primary dealers. In 1991, on average 17,015 sides, valued at \$135 billion, were submitted to the net daily, and were reduced to 3,719 obligations, valued at \$39 billion. GSCC nets members' forward settling trades, including when-issued trades that are traded on a price basis, and post-issuance secondary trades. GSCC's netting system routinely reduces deliver and receive obligations by nearly 80 percent.

The benefits of netting are greater as more trades are included in the net, because a greater number of deliver and receive obligations are reduced to as small a number as possible. In addition, as more trades are included in GSCC's netting system, a larger percentage of market activity is novated, becoming guaranteed trades and freeing members from certain risks described above. To this end, GSCC is planning to include more types of trading activity in the netting process and to expand its membership in order to extend the benefits of netting to a larger universe of its current members' trades and to a larger universe of participants. Specifically, GSCC has proposed to add yield-based trades and auction take-down activity to the netting process. In addition, GSCC has begun discussions with the futures contract markets about including futures transactions in the netting process.

⁶² Fedwire transfers are immediate and irrevocable.

⁶³ If GSCC receives securities late in the day that it cannot redeliver, the financing costs are shared by netting members, other than interdealer brokers, on a *pro rata* basis.

⁶⁴ The system price is the par-weighted average of all compared trades in each issue on that date, excluding trades with suspect prices. Because the system price is an average, GSCC also calculates a trade adjustment payment, or "TAP," that is the difference between the system price and the contract price. Each business day, each member must pay or receive a net debit TAP or net credit TAP.

The SEC recently approved GSCC's proposal to include yield-based trades in the netting system beginning in January 1992.⁶⁵ In order to include yield-based trades in the netting system, GSCC will convert the yield trades into priced trades at the time of comparison. To convert, GSCC will use a standard Treasury Department conversion formula. This change will permit GSCC to extend the credit protection of the trade guarantee to members' yield-based trades sooner than under the current procedure, whereby compared yield-based trades are deleted from the system and resubmitted for netting after the Treasury auction.

Another type of trading activity that could benefit from netting is auction take-down activity. GSCC has proposed that its services be used in connection with the delivery of auction purchases. Under its proposal, GSCC would accept and report in its comparison system data on securities purchases made at auctions by GSCC netting members, net the purchases with when-issued trades of such members in the same securities through the netting system, and assume responsibility for the delivery of the purchased securities through GSCC's clearing mechanism.⁶⁶ If implemented, additional information on the overall distribution process required to settle Treasury auction purchases and on the true net settlement positions of members during a when-issued period would be available at GSCC. Treasury and FRBNY staff have been working with GSCC on implementing this concept for the past eighteen months.

Safeguards Underlying Guaranteed Settlement

By guaranteeing settlement of trades included in the net, GSCC has given market participants greater certainty of settlement. GSCC does this by interposing itself between all receive and deliver obligations, and thus becoming the delivering party to all members with receive obligations and the receiving party to all members with deliver obligations. Nevertheless, the guarantee is only as good as GSCC's ability to meet its obligations. GSCC therefore has adopted many safeguards to ensure that members and GSCC are able to meet their settlement obligations.

GSCC's safeguards encompass risk assessment capability and risk reduction and containment measures. GSCC's system of risk assessment is based on historical data. GSCC's system of risk reduction is designed to protect GSCC from identifiable risks in its clearing agency activities and to ensure settlement of trades. In the event GSCC

⁶⁵ Securities Exchange Act Release No. 29732 (September 24, 1991), 56 FR 49937.

⁶⁶ GSCC has refined its proposal so that any Treasury auction purchase by a netting member – whether competitive or non-competitive in nature and whether or not for a customer, would be automatically delivered to GSCC's clearing bank and encompassed within GSCC's net. GSCC would allocate auction deliveries to allow for the most complete netting process and to ensure timely delivery so that each member would take possession of the entire amount of its auction purchases on the morning of issue date.

incurs a loss resulting from its clearing agency functions, GSCC's system of risk containment is designed to limit each member's loss to a *pro rata* assessment. Safeguards include member operational and financial standards, collection and maintenance of a clearing fund, collection of forward marks, monitoring of open positions, and procedures in the event of default by a GSCC member.

GSCC's credit and market risk reduction features may be particularly appealing in light of the anonymous nature of trading in the government securities market. Four interdealer brokers may have recognized that GSCC's system promotes risk reduction and effectively screens members' creditworthiness. These four have broadened their customer lists beyond primary and aspiring primary dealers to include all netting members of GSCC. As the group of GSCC netting members expands, therefore, access to interdealer broker screens should expand as well.

Membership Standards and Monitoring. GSCC's rules permit the following types of entities to become comparison members: registered government securities brokers and dealers, government securities brokers or dealers that have provided notice under Section 15C of the Exchange Act, clearing agent banks, and entities that demonstrate they could materially benefit from access to the service. Each comparison applicant must have sufficient operational capability and must be in compliance with the capital requirements imposed by its regulator.

For netting members, admission standards are more stringent. Unlike comparison members, all netting members must be registered government securities brokers or dealers, government securities brokers or dealers that have provided notice under Section 15C, or clearing agent banks. In addition, netting members must have used the comparison service for at least six months and have an established, profitable business history of a minimum of six months or personnel with sufficient operational experience. Netting members must be well-capitalized, with net worth of at least \$50 million and excess net capital or excess liquid capital of at least \$10 million (or \$4.2 million in liquid or net capital for an inter-dealer broker and \$250 million in equity capital for a bank).⁶⁷

The SEC has emphasized that a clearing agency's rules must be designed to prevent unfair discrimination in the admission of members.⁶⁸ The SEC has voiced to GSCC its view that GSCC's services should be opened to all applicants enumerated in

⁶⁷ Membership standards are set forth in GSCC Rule 2.

⁶⁸ Securities Exchange Act Release No. 16900 (June 17, 1980), 45 FR 41920.

the Exchange Act based on appropriate credit and operational standards, and not based on primary and aspiring primary dealer status.⁶⁹

The financial condition of each GSCC member is continuously monitored through the shared facilities of NSCC's compliance department. The compliance department receives from members financial reports made to regulators, as well as audited financial statements.⁷⁰ The compliance department also is in regular contact with regulatory, supervisory and examining entities, including self-regulatory organizations. Monitoring determines whether each member remains in compliance with its minimum admission standards and whether it poses any financial or other risks to GSCC.⁷¹ Members that pose risk to GSCC may be placed on surveillance status.⁷²

GSCC uses the data submitted for comparison and netting services to monitor the aggregate positions of members and to assess their risk profiles. By having as complete a picture as possible about its members' aggregate positions, GSCC is better able to assess risks to its members resulting from their activity and risks to itself as guarantor of netted trades. GSCC's current netting system produces a good picture of netting members' trades with each other. GSCC also has a data base of activity among comparison-only members and between these members and netting members. Trades with non-members, however, do not appear anywhere in GSCC's data base.

GSCC represents that it is actively developing changes to its membership standards to admit a second tier of market participants beyond the primary dealers, aspiring primary dealers, and interdealer brokers. GSCC believes this tier of potential members is composed of two categories of market participants: a small group of arbitrage firms and registered or noticed government securities brokers and dealers. Interest from the second group principally is to meet the government securities needs of their retail equity customers. The Treasury, the SEC and the Federal Reserve

⁶⁹ See GSCC Registration Order, *supra* note 40, at n.38, and Securities Exchange Act Release No. 27006 (July 7, 1989), 54 FR 29798 at n.82.

⁷⁰ By sharing monitoring facilities, GSCC benefits by seeing the regulatory reports not only of GSCC members, but also of the members' affiliates who are NSCC members. NSCC's monitoring capability is similarly enhanced.

⁷¹ GSCC may cease to provide services generally or for a particular transaction for a member that no longer complies with membership standards and a member whose financial or operational condition has deteriorated such that GSCC believes the member will be unable to meet its obligations. GSCC Rule 18.

⁷² GSCC's rules provide GSCC with the discretion to require a member that is placed on surveillance status to make and maintain an additional deposit to the clearing fund of up to 200 percent of its highest single business day's required clearing fund deposit during the most recent 20 business days. Securities Exchange Act Release No. 27006, *supra* note 68, at n.52.

believe that GSCC should accelerate its efforts to expand membership to more government securities dealers and brokers.

Clearing Fund, Marks and Loss Allocation Procedures. The basic risks posed to GSCC by netting members are that a member might not pay a settlement amount due to GSCC or might fail to deliver or to take delivery of securities. A member's default or insolvency could expose GSCC to significant financial losses. To protect against this risk, GSCC has established a clearing fund the purposes of which are: (1) to have on deposit from each netting member cash or other collateral sufficient to satisfy a loss to GSCC as a result of that member's default and close out of settlement positions; (2) to maintain a total asset amount sufficient to satisfy potential losses to GSCC resulting from the default of more than one member and the failure of the counterparties of that member to pay their *pro rata* allocation of loss; and (3) to ensure that GSCC has sufficient liquidity at all times to meet its payment and delivery obligations.⁷³

A netting member's clearing fund requirement is a percentage of its money settlement obligations over a recent period plus a margin amount on the member's net settlement positions.⁷⁴ A minimum of the greater of \$100,000 or 10 percent of a dealer's clearing fund required deposit must be in cash. Eligible Treasury securities and letters of credit from approved banks also are acceptable forms of clearing fund deposits. Clearing fund requirements are calculated daily and collected if there is a deficit.⁷⁵ The clearing fund recently has been valued at about \$225 million.⁷⁶

The margin requirements are based on historical daily price volatility data with protection to two standard deviations.⁷⁷ "Disallowance percentages" were established among classes of offsetting securities, to allow GSCC to give credit for offsets only to

⁷³ Overview, *supra* note 41, at 17.

⁷⁴ Currently, the clearing fund requirement is 125 percent of the member's average funds-only settlement amount over the most recent 20 business days plus the greater of the margin amount on the member's net settlement positions averaged over the most recent 20 business days, taking into account offsetting positions, or 50 percent of the margin for that business day on the member's net settlement positions without allowing for offsetting positions. GSCC, Form CA-1 (March 15, 1991) at 8-9.

⁷⁵ Currently, interdealer broker netting members must make a deposit to the clearing fund of \$1.6 million each in collateral to cover losses that may be allocated against them. As users of GSCC's netting system, interdealer brokers are required to share in the loss allocation scheme.

⁷⁶ Telephone conversation with Thomas F. Costa, Senior Vice President, GSCC, October 31, 1991.

⁷⁷ Two standard deviations encompass approximately 95 percent of the measurements from the mean.

the extent appropriate. Irrespective of the nature of the offset, a minimum margin of 50 percent of the margin amount on the member's "gross" positions is collected.⁷⁸

While technically not a part of the clearing fund, a special margining system was designed for forward-settling trades, including when-issued trades, to ensure that the failure of up to all of the five members with the largest debit mark levels on any given day would not disrupt the ability of the system to settle successfully that day's government securities trades. To this end, GSCC collects forward mark allocation payments from certain non-interdealer broker netting members. The basis for these payments is the daily mark-to-market obligation associated with a member's ongoing forward net settlement position in each security from the time of comparison and novation of the trades that underlie such position.⁷⁹

Another risk reduction policy is the collection of daily marks on fail net settlement positions. The daily mark-to-market payment for fails takes into account accrued interest.⁸⁰

Netting members have obligations for loss sharing. Three principles underlie GSCC's loss allocation scheme. First, GSCC will look to the collateral put up by the member whose default caused the loss.⁸¹ Second, if the loss remains unsatisfied, the members that dealt with the defaulting member will be asked to satisfy the loss in full

⁷⁸ GSCC maintains a separate margin factor schedule for zero-coupon securities because of the tendency of zero-coupon securities to display greater volatility than other Treasury securities.

⁷⁹ A member's net securities and funds only settlement obligations arising from forward-settling trades are included in the calculation of such member's clearing fund requirement during the post-auction forward-settling period.

⁸⁰ This mark to market procedure has in some cases replaced certain capital and customer protection requirements imposed by the Treasury Department. Overview, *supra* note 41, at 9.

⁸¹ Under GSCC Rule 4, each member grants to GSCC a first priority perfected security interest in all assets and property placed by a member in the possession of GSCC (or its agents acting on its behalf), including all securities and cash on deposit with GSCC in satisfaction of a netting member's required fund deposit or additional fund deposit as security for any and all of its obligations and liabilities. GSCC is entitled to its rights as a pledgee under common law and as a secured party under Articles 8 and 9 of the New York Uniform Commercial Code with respect to such collateral. GSCC maintains a lien on securities that have been delivered to it by the selling side of each trade until it receives payment via Fedwire from the buying side. Securities Exchange Act Release No. 27006 *supra* note 68, at n.39.

on a *pro rata* basis.⁸² Third, if the members that traded with the defaulting member do not satisfy the loss in full, other members will be asked to share in the loss.⁸³

⁸² The affected members are those with trading activity to be settled on the day of default.

⁸³ GSCC, Form CA-1 (March 15, 1991) at 9. If a non-counterparty member determines to withdraw from GSCC, its maximum exposure is limited to the amount of its clearing fund requirement. Maximum interdealer broker liability is \$1.6 million, the amount of the clearing fund deposit.

6. Sales Practice Rules

Background and discussion

In enacting the GSA in 1986, Congress did not grant Treasury or any other regulatory body new authority to develop sales practice rules pertaining to transactions in government securities except for advertising rules. The legislative history of the GSA shows Congress' previous intent that the GSA not result in excessive regulation that would impair the efficient operation of the market and recognition that the SEC has authority under Section 10(b) of the Exchange Act to promulgate rules to prohibit fraudulent, manipulative, and deceptive acts and practices. The scope of the GSA and the new authority thereunder generally were limited to those areas of documented abuse and weakness in the government securities market.⁸⁴

Congress' initial judgment was that the potential costs of sales practice rules in the government securities market would outweigh the potential benefits. Congress had the opportunity to authorize sales practice rules for the government securities market in its development of the GSA but, with the exception of advertising, chose not to do so. The scope of the GSA was therefore narrower than other securities legislation designed to regulate the equities and municipal securities markets.

The GSA continued the restriction placed on the NASD that prohibits it from applying its sales practice rules to government securities transactions, although it provided an exception to that restriction, authorizing the NASD to prohibit fraudulent,

⁸⁴ "The legislation would grant to the Secretary specific rulemaking authority in the areas of financial responsibility and related practices, financial statements, recordkeeping and exemptions from registration. Rulemaking authority in additional areas does not appear to be necessary to address the weaknesses that have been identified in the government securities markets." ***

"The Committee views these rules as being generally sufficient to achieve the purposes of the rules to be adopted under Section 15C(b)...." ***

"Since government securities would continue to be treated as exempted securities for purposes of the Exchange Act, a registered securities association would have no authority with respect to government securities brokers, government securities dealers, and government securities transactions except as specifically authorized in the bill or as already exists in current law. ... a registered securities association would not be authorized to regulate transactions in exempted securities by member brokers or dealers. For example, a registered securities association would be precluded from adopting ... any rules of fair practice applicable to government securities brokers and government securities dealers...." S. Rep. 99-426, *supra* at 14, 16, 20.

misleading, deceptive, or false advertising in connection with government securities.⁸⁵ Registered securities exchanges have no such restriction on the application of their sales practice rules to their members' transactions in government securities.

The appropriate regulatory agencies for financial institutions do not have explicit authority to impose sales practice rules on the institutions they supervise, although the OCC currently applies the Municipal Securities Rulemaking Board's ("MSRB") sales practice rules as benchmarks for the government securities transactions of national banks.⁸⁶ Most banks that are dealers act as such both for municipal and government securities.

As a result, the vast majority of brokers and dealers that conduct a business in government securities, as well as financial institutions that have filed notice as government securities brokers or dealers, are not subject to sales practice rules prescribing just and equitable principles of trade.⁸⁷ These brokers and dealers are subject to SEC rules adopted under Section 10(b) of the Exchange Act and, with the exception of financial institutions, are subject to SEC rules adopted under Section 15(c)(1) of the Exchange Act.⁸⁸ However, the enforcement of Section 10(b) and the rules promulgated thereunder generally requires a showing that the respondent acted with scienter.⁸⁹

⁸⁵ Section 15A(f)(1) of the Securities Exchange Act, 15 U.S.C. § 78o-3(f)(1), as amended. The restriction against the NASD's application of its sales practice rules to transactions in government securities does not, however, apply to the NASD's enforcement of compliance by its members with the provisions of the Exchange Act and the rules and regulations thereunder. See Section 15A(f)(2) of the Securities Exchange Act, 15 U.S.C. § 78o-3(f)(2), as amended.

⁸⁶ See, e.g., MSRB rule G-17.

⁸⁷ Registered brokers or dealers that have filed notice as government securities brokers or dealers and that are members of the NYSE or other national securities exchanges are subject to exchange sales practice rules. The exchanges' rules, however, are not always easily adaptable to over-the-counter markets. For example, the exchanges do not have specific rules addressing mark-ups, which are not charged on exchange transactions.

⁸⁸ Section 15(c)(1) of the Securities Exchange Act, 15 U.S.C. § 78o(c)(1), proscribes a broker or dealer from using any manipulative, deceptive or fraudulent device or contrivance, as defined by the SEC, in connection with transactions in securities otherwise than on a national securities exchange. See 17 CFR § 240.15c1-1 *et. seq.*

⁸⁹ The term "scienter," as applied to conduct necessary to give rise to an action for civil damages under the Securities Exchange Act and Rule 10b-5, refers to a mental state embracing intent to deceive, manipulate, or defraud. *Ernst and Ernst v. Hochfelder*, 425 U.S. 185 (1976). Most courts have followed the standard in *Sunstrand Corp. v. Sun Chemical Corp.*, 553 F.2d 1033 (7th Cir. 1977), which describes the necessary mental state as one in which "the danger of misleading buyers must actually be known or so

(continued...)

The types of sales practice abuses that may be most likely to occur in the government securities market are those related to mark-up or pricing practices; failure to ensure that recommendations to customers are suitable based on customers' investment objectives and financial backgrounds; excessive trading in customer accounts; failure to obtain proper customer authorization before trading; and false, deceptive, or misleading advertising practices. These types of abuses can occur in customer accounts regardless of product. However, it has been difficult to assess the magnitude and severity of the problem given the lack of specific evidence of widespread sales practice abuses in the government securities market.

While the government securities market is still principally a wholesale market in which brokers, dealers, large commercial banks, and experienced institutional investors participate, a significant number of smaller and less experienced investors also participate in this market. Additionally, this market increasingly encompasses instruments that can pose considerably greater risk of adverse price movements and loss than traditional investments in Treasury or agency securities, which may increase the need for more specific investor protection rules. These instruments, some of which are very complex, include mortgage-backed securities and real estate mortgage investment conduits ("REMICs") issued or guaranteed by government agencies or Government-sponsored enterprises, zero-coupon instruments such as STRIPS, agency mortgage-backed securities stripped into interest-only ("IOs") and principal-only ("POs") pieces, and over-the-counter options on government securities. Some of these instruments are quite similar to instruments already covered by sales practice rules or that trade in combination strategies with instruments that are covered by such rules.

Currently, proceedings under Rule 10b-5 may be brought in response to mark-up practices, excessive trading in customer accounts, and other sales practice abuses, and a body of case law has developed as a result.⁹⁰ Also, abuses in which a broker effects

⁸⁹(...continued)

obvious that any reasonable person would be legally bound as knowing...." *Id.* at 1045. In other circuits, see *Kehr v. Smith Barney Harris Upham & Co.*, 736 F.2d 1283, 1286 (9th Cir. 1984); *Warren v. Reserve Fund, Inc.*, 728 F.2d 741, 745 (5th Cir. 1984); *Kennedy v. Tallant*, 710 F.2d 711, 720 (11th Cir. 1983); *Hackbart v. Holmes*, 675 F.2d 1114, 1117 (10th Cir. 1982); *Sharp v. Coopers & Lybrand*, 649 F.2d 175, 193 (3d Cir. 1981), *cert. denied*, 455 U.S. 938 (1982); *Mansbach v. Prescott Ball & Turben*, 598 F.2d 1017, 1023-25 (6th Cir. 1979).

⁹⁰ See, e.g., *Costello v. Oppenheimer & Co.*, 711 F.2d 1361, 1368 (7th Cir. 1983); *Thompson v. Smith Barney, Harris, Upham & Co.*, 709 F.2d 1413 (11th Cir. 1983); *In re Catanella and E.F. Hutton & Co.*, 583 F. Supp. 1398, 1405, 1410-1411 (E.D. Pa. 1984); and *Ryan v. SEC*, Sec. Reg. & L. Rep. (BNA) No. 26 at 1273 (July 1, 1983) (9th Cir. May 23, 1983), *aff'g.* *In re James E. Ryan*, 47 SEC 759 (1982). In the mark-up area, the SEC, in 1987, issued a release designed to clarify the application of mark-up policy, including the federal anti-fraud provisions, to zero-coupon securities. Securities Exchange Act Release No. 24368 (April 27, 1987), 52 FR 15575 (1987).

unsuitable transactions in discretionary accounts may be prosecuted by the SEC and the SROs as violations of Rule 15c1-7 under the Exchange Act.⁹¹

Nevertheless, adopting sales practice rules for the government securities market would allow most disciplinary actions to be taken without having to prove scienter. In addition, such rules could provide more objective or specific criteria that would serve as standards to be applied in routine examination programs. Application of such rules to the government securities market also would be consistent with the rules applied to the equity and municipal securities markets. Moreover, government securities sales practice rules should strengthen investor confidence and integrity in the market and enhance investor protection.

In its September 1990 report,⁹² the GAO stated that, although actual sales practice abuse is hard to document in the government securities market, the limitations on the NASD's authority to enforce its sales practice rules should be removed and Treasury should be granted authority to write such rules. The GAO's recommendation was largely based on its view that sales practice rules that supplement the basic anti-fraud statutes have become a fixture in securities markets in the United States. The GAO indicated that these rules make sense for government and other securities markets because there are similar opportunities for abuse in both markets. The GAO also indicated that increased risk characteristics of certain government securities now increases the need for sales practice rules, particularly for the benefit of some individuals and smaller institutional investors.

⁹¹ 17 CFR § 240.15c1-7.

⁹² U.S. Government Securities: More Transaction Information and Investor Protection Measures Are Needed, GAO/GGD-90-114 (September 1990), at 4,5,6, and 48.

7. Information Access

Background and discussion

An important aspect of the government securities market is the role played by seven interdealer brokers. Their system of "blind brokering" provides a trading mechanism for primary dealers that maintains the anonymity of the traders and increases the liquidity of the market. The interdealer brokers' systems are a significant price discovery vehicle for the dealers. Initial efforts to increase transparency have focused on the interdealer brokers.

A significant characteristic of fair and efficient markets is transparency, defined as the degree to which real-time trade and quotation information and other market-related information, such as information about the depth of the market, is available to all market participants.

Transparency is important for several reasons. First, it is crucial to market participants' evaluation of the investments they are considering. Participants without knowledge of the current buying and selling interest in the form of firm bid and ask quotations and transaction reports, are at a distinct disadvantage in assessing the value of securities. Thus, transparency is crucial to efficient pricing mechanisms. Second, access to accurate market information enhances the ability of regulatory examiners and independent auditors to carry out their respective responsibilities to ensure that securities transactions and positions are priced appropriately. In addition, transparency permits investors to evaluate whether their brokers are treating them fairly by obtaining the best available price for them and by charging them reasonable markups and markdowns on their transactions. Without access to the prices other market participants are paying for the same security, they cannot effectively determine whether they have paid a fair price. This can be a problem in the government securities market, in which the best market data has traditionally been available only to the primary dealers and generally has not even been available to the majority of intermediaries.

In a completely transparent market, all market participants have equal and immediate access to all firm quotations, including the size of those quotations, and reports of prices and volumes on all trades effected in the market. Of course, complete transparency represents a theoretical model that has not been achieved in any market.

The need for increased access to interdealer broker price and volume information⁹³ has been a topic of discussion for at least the past five years. Congress has shown interest in the activities of these firms and has previously requested the General Accounting Office to report on certain aspects of their business. Congressional concern focused on the barriers to expanding the number of dealers who could trade through the interdealer brokers beyond primary and aspiring primary dealers and to making available interdealer price information to the public. In its 1987 report,⁹⁴ the GAO recommended that market participants be provided increased access to government securities pricing information. At that time, the GAO did not support a federal regulatory structure to achieve expanded access because it believed private sector initiatives should be allowed time to develop.⁹⁵

Also, at that time, Treasury, the Federal Reserve, and the SEC concurred with GAO's conclusion on the need for increased information access but had differing views on the best means to achieve it. The Federal Reserve and Treasury agreed with the GAO that a regulatory structure was not then required to achieve improved information access, because private sector initiatives, which could obviate the need for such action, should be allowed time to develop. The SEC expressed the view that it was not necessarily in the interest of the interdealer brokers and primary dealers to disseminate price information and, accordingly, it did not agree that this information necessarily would be made available on a voluntary basis. As a result, the SEC believed that Congress should establish a date certain by which information access should be expanded. The SEC recommended that if this objective were not achieved, Congress should grant rulemaking authority to a federal agency to ensure that information access would be expanded.

In its follow-up report issued in September 1990,⁹⁶ the GAO recommended that Congress legislatively mandate that government securities transaction information from interdealer brokers and any trading systems that serve a similar function be made

⁹³ The phrase "price and volume information" is used in this section to refer to both actual prices at which trades are effected, i.e., trade reports, including volume, and prospective prices, i.e., quotations, including size.

⁹⁴ U.S. Government Securities: An Examination of Views Expressed About Access to Brokers' Services, GAO/GGD 88-8 (December, 1987).

⁹⁵ GAO also concluded that, while it theoretically supported the notion that access to interdealer broker trading services should be expanded, no viable proposals had been put forth on how to account for the increased counterparty risk that such an expansion could cause. The Federal Reserve, Treasury, and the SEC agreed. The SEC, however, encouraged the interdealer brokers to work voluntarily to develop appropriate credit risk assessment systems that would permit the participation of non-primary dealers in the brokers' systems.

⁹⁶ U.S. Government Securities: More Transaction Information and Investor Protection Measures Are Needed, GAO/GGD 90-114 (September, 1990).

available on a real-time basis to anyone willing to pay the appropriate fees. GAO further recommended that regulatory authority be assigned to Treasury to prescribe regulations as needed to ensure that such transaction information is available. In their Joint Report of October 1990, Treasury, the Board and the SEC did not reach a consensus on the best approach for addressing the need for expanded access to and dissemination of government securities price and volume information but instead identified issues to be considered.⁹⁷ These issues included:

- what is the best means to achieve expanded access;
- what is the reasonable prospect that private-sector initiatives will be successful;
- should standards be developed to ensure the adequacy of private-sector systems;
- if authority is granted to a federal agency, which agency would be best able to exercise this authority;
- should a deadline be established for a federal agency to evaluate the adequacy of private sector initiatives; and
- should the authority be utilized only in the event that findings regarding the inadequacy of private-sector initiatives are made?

Interdealer broker screens represent the best source for deriving market prices for government securities, because they include the current bids and offers, and transaction reports of the primary dealers, the principal market makers in the government securities market. Broader access to this information, as well as transaction information, supports the efficiency and liquidity of the government securities market.

Dissemination of quotation and trade information allows customers to judge execution quality, especially for inactively traded issues. The expanded availability of such information would serve the public interest because it would ensure that a broad spectrum of market participants could obtain current, accurate facts related to market conditions, and thus, the competitiveness, liquidity and efficiency of the government securities market could improve. Improvements in the derivative markets are also likely to accrue due to the availability of more timely and accurate information on the underlying securities used for pricing and hedging strategies.

⁹⁷ Department of the Treasury, Securities and Exchange Commission and the Board of Governors of the Federal Reserve System, Study of the Effectiveness of the Implementation of the Government Securities Act of 1986, (October, 1990), p. 87.

Market solutions

Industry Initiatives. Through a number of attempts, the market has experienced a significant increase in the dissemination of government securities price information.⁹⁸ Currently, the quotes of one broker, Cantor Fitzgerald Securities Corp., which does not conduct an exclusively interdealer business, are publicly available through Telerate Systems Inc. These quotes represent a substantial portion, approximately 25 percent, of the interdealer market. Additionally, in June 1991 Cantor Fitzgerald expanded the range of information that it disseminates to include agency and additional Treasury security price information, including off-the-run issues and zero coupon instruments, and analytical capabilities for the government securities market.

One private sector initiative, a joint venture known as GOVPX, Inc., became operational on June 16, 1991. GOVPX disseminates real-time price and quotation information on all Treasury bills, notes and bonds on a 24-hour, global basis. The system provides information regarding all trading of Treasury securities (other than stripped zero-coupon instruments) that is executed through five interdealer brokers. The information disseminated is a composite picture of the trading activity, showing executed trade prices, volume of executed trades, best bids and best offers, and aggregated volumes traded for each security on a daily basis. This information is provided to on-line vendors for redistribution to the public.

While GOVPX is a promising beginning, it has deficiencies when compared with the interdealer broker screens in that it does not provide information on stripped Treasury securities and non-Treasury government securities. It also provides neither the size associated with published bids and offers nor an indication of the depth of the market. Finally, it does not provide the capability for analytics and does not provide historical price information. In addition, GOVPX disseminates quotation and transaction information only from the interdealer brokers who participate in the venture. It thus does not provide price information from other interdealer brokers or from dealers that trade with each other or with their customers outside of the interdealer broker system. In this regard, Treasury, in a letter to GOVPX's Board of Directors dated October 25, 1991, strongly encouraged GOVPX to address certain of these deficiencies and urged the interdealer brokers to make their screens independently available to the public.

Expanded trading access. With the exception of one interdealer broker, access to trading through interdealer broker screens had traditionally been restricted to primary and aspiring primary dealers as a means to provide control over the credit risk inherent in a system of anonymous trading. Limiting the number of potential counterparties eases specific evaluation of their individual creditworthiness. However,

⁹⁸ A description of some of the various initiatives can be found in U.S. Government Securities, More Transaction Information and Investor Protection Measures are Needed, GAO/GGD 90-114.

only with an appropriate credit review mechanism can a system of anonymous trading operate efficiently. The operation of the Government Securities Clearing Corporation ("GSCC") has provided an additional means of addressing the creditworthiness of trading counterparties.

GSCC has increased the efficiency and decreased the risk of government securities settlement. This is particularly important for the interdealer brokers, since GSCC allows them to be netted out of every compared trade. In a typical interdealer transaction, Dealer A sells securities to Dealer B through the Interdealer Broker. Because the trading is anonymous, two trade tickets are written; one between Dealer A and the Interdealer Broker and one between the Interdealer Broker and Dealer B. The GSCC netting system replaces these two steps with one net transaction between the two dealers, each of whom now has GSCC as a counterparty and each of whom settles with GSCC. This greatly reduces any counterparty or fails risk previously inherent in interdealer broker systems. Additionally, by removing the fails risk, the interdealer broker does not face the possibility of having to incur the financing cost for securities positions. This system also provides significant credit comfort to the dealer because his counterparty is GSCC and GSCC has systems in place (e.g., margining systems and a clearing fund) to ensure the settlement of all netted trades.

Accordingly, four interdealer brokers (Liberty Brokerage, RMJ Securities, Garban and Fundamental Brokers) have recently expanded their customer bases to include all netting members of GSCC. All of the interdealer brokers are members of GSCC. Their recent actions represent the potential for significant broadening of interdealer trading access because the pool of broker/dealers eligible to be netting members of GSCC, as determined by capital levels, is currently about 75 firms. GSCC has proposed creating a new class of netting member to allow the participation of brokers and dealers that do not meet the current standards for netting membership but who still have a substantial level of capital. If approved, this proposal could also lead to even broader interdealer trading access.

8. Reporting and Audit Trails

It has been suggested that regulatory authority to prevent fraud or manipulation in the sale of government securities is limited compared with other securities markets because of the lack of certain surveillance tools.

Large Position Reporting

One tool that the Agencies have considered to augment government surveillance ability in this market is the ability to require large position reports in particular Treasury issues from government securities market participants. In order to minimize the gaps in coverage, such authority would have to include the ability to require reports from entities that are not government securities dealers or brokers.

Large position reporting could give the Agencies advance notice of a potential problem, such as a large concentration of positions in a particular security. If a problem did develop, such reports could also assist regulators in an investigation.

A scheme of large position reporting, if determined to be necessary, would raise a large number of issues. Foremost would be a definition of what constitutes a large position in government securities for reporting purposes. Items that would have to be considered for inclusion would be when-issued positions, repurchase and reverse repurchase transactions, bonds borrowed and lent, options, fails to receive and deliver, and forward settling contracts. Other issues which would need to be decided include:

- which securities would be covered by the regulations;
- to what type of positions (proprietary, custodial) would the rules apply;
- what reporting threshold would be considered a large position;
- what would be the frequency and timing of the reporting requirement;
- what specific information would be reported; and
- which agency(ies) would be the recipient(s) of the information.

Unlike Section 13(d) of the Exchange Act, which requires owners of more than five percent of a class of a corporation's equity securities to make a public disclosure of this information, it is not contemplated that any position reporting concerning Treasury securities would be publicly disclosed. There is no intention to force market participants to disclose their trading strategies, nor is there a presumption that the mere fact of holding a large position is evidence of manipulative or other illegal intent.

The purpose of such reporting would be similar to the purpose of the position reporting that is done in the commodity futures markets – it would enable government agencies to monitor market developments and have an early warning system of potential problems.

In addition, a possibility that could be considered is to grant the Treasury and the SEC authority similar to that of the Commodity Futures Trading Commission with respect to making a special request for information. The CFTC and the Justice Department can ask futures market participants for information concerning their futures market positions and related cash market positions without the necessity of issuing a subpoena. Because of the presence of large and mainly unregulated entities, such as hedge funds, in the government securities market, consideration could be given to granting similar authority in the government securities market to be used in the case of serious market problems.

Large Trader Reporting

If there were concerns about the ability of traders to take large hidden positions, authority such as that granted by Section 13(h) of the Exchange Act could be extended to government securities traders. Section 13(h) presently authorizes and requires the SEC to create a large trader recordkeeping and reporting system for publicly traded equities and options on equities.⁹⁹

While a large trader reporting system may be appropriate for the stock market, the balance of costs and benefits may be very different in the government securities market. It appears unduly cumbersome given that current concerns relate primarily to short squeezes. As is demonstrated by the CFTC, large position rather than large trader reporting is more effective for monitoring members for such problems.

Audit Trails

Audit trails are automated, time-sequenced records of essential information pertaining to trades in securities. Accurate audit trails are important to market surveillance functions performed by SROs in the equity markets for two reasons. First,

⁹⁹ See Securities Exchange Act Release No. 29593 (Aug. 28, 1991), 56 FR 42550. Proposed Rule 13h-1, which was published for public comment on August 22, 1991, would define a "large trader" as any person that (1) effects aggregate transactions in publicly traded securities during a 24-hour period equal to or exceeding 100,000 shares or \$4 million total market value or (2) conducts program trading. Under the proposed rules, these "large traders" would be required to report to the SEC certain information, such as the traders' names, addresses, telephone numbers, and account names and numbers. These traders would then be assigned "large trader identification numbers" to provide to each brokerage firm where the traders have accounts. The firms would then be required to maintain, and to report to the SEC on request, records of transactions by large traders; these reports could be required as soon as the end of the business day after the trades in question.

automated audit trails permit SROs to sift through voluminous trading data to detect potential trading abuses. Second, audit trails provide timing information for transactions that may uncover trading abuses.¹⁰⁰

In addition to such real-time reporting, the SROs have developed computer systems that sort trading records and create exception reports that flag unusual or suspicious trading patterns and price or volume movements. These volume and price parameters are uniquely and automatically calculated for each stock based on that stock's historical trading pattern. This information is then correlated with relevant news announcements that may affect trading in a security. Additionally, various computer reports are available for review that cover quotes, trades, reported times and other trading areas. By using these automated systems, which are continually upgraded and expanded, the SROs can monitor member broker-dealer firms, market professionals, and other traders.

Neither the Treasury nor the SEC has the authority under the Government Securities Act of 1986 to require centralized trade and price reporting. Consequently, there are no centralized audit trail or exception reports systems in place for the government securities market.

¹⁰⁰ SRO audit trails generally have the same basic structure. A transaction journal is compiled by merging two separate data streams, the quotation and last sale tape, and comparison data, which is the information transmitted by firms to a clearing agency to provide for the clearance and settlement of transactions. The systems attempt to match trade prints to the compared trades using price, quantity, execution time and broker identification numbers. The matching of such reported and cleared securities transactions produces an accurate sequencing of trades.

APPENDIX C

**THE EVENTS INVOLVING SALOMON BROTHERS
AND ALLEGED GOVERNMENT SECURITIES MARKET ABUSES**

1. The events involving Salomon Brothers

The current analysis of the government securities market and the effectiveness of the existing regulatory scheme was triggered by unusual events surrounding the May 22, 1991, auction for two-year Treasury notes.¹ Even before the May two-year notes were settled on May 31, 1991, rumors began to surface of a short squeeze in the market for those notes. On May 29, 1991, Treasury staff called the SEC's Divisions of Market Regulation and Enforcement to notify them of possible problems stemming from the auction. Following that notification, the Treasury, the Federal Reserve, and the SEC jointly began an informal investigation, actively monitoring the market for the notes.

On May 30, 1991, the SEC's Division of Enforcement opened an inquiry into the matter. During the next few weeks, the SEC gathered information concerning the market for the notes, including, through the FRBNY, identification of all the purchasers of large amounts of the two-year notes in the auction. In late June, the Division of Enforcement sent detailed requests for documents and information to Salomon Brothers Inc ("Salomon") and other major purchasers in the May two-year note auction concerning their activities in the when-issued market, the auction, and the secondary market for the notes.

Shortly after receiving the SEC's document requests and learning that the Antitrust Division of the Department of Justice had begun an investigation of the May 22 auction, Salomon hired outside counsel to conduct its own investigation, which eventually led to a series of disclosures by Salomon. The first came on August 9, 1991, when Salomon advised the Treasury and the SEC that it had discovered irregularities in connection with certain Treasury auctions and issued a press release describing its initial findings.²

The factual discussion below with respect to Salomon's conduct is based primarily on public disclosures by Salomon.

Unauthorized customer bids submitted by Salomon

In its August 9 press release, Salomon stated that it placed unauthorized bids in certain of its customers' names at several Treasury auctions. On August 14, 1991,

¹ The SEC and the Department of Justice are conducting separate investigations from a law enforcement perspective, which are not yet complete, and the SEC has not yet reached any conclusions with respect to the actions of any particular market participant. As a result, the discussion contained herein should not be understood as reaching any conclusions of fact or law with respect to the SEC's investigation.

² See Salomon Press Release dated August 9, 1991.

Salomon disclosed that it placed unauthorized bids in five auctions to obtain a greater amount of the securities being auctioned, and, in one case, as a result of a "practical joke." Salomon's internal investigation revealed that, from late July, 1990 through August 1991, Salomon had submitted unauthorized customer bids and bids in excess of the amount authorized by the customer in five Treasury auctions.³ The auctions where these admitted violations occurred were the: (1) December 27, 1990, four-year note auction; (2) February 7, 1991, 30-year bond auction; (3) February 21, 1991, five-year note auction; (4) April 25, 1991, five-year note auction and (5) May 22, 1991, two-year note auction.⁴ In addition, Salomon uncovered evidence of three additional unauthorized bid violations.⁵

The December 27, 1990, four-year note auction. In connection with the December 27, 1990, \$8.5 billion four-year note auction, Salomon stated that it submitted a bid for its own account for \$2.975 billion, or 35 percent of the offering amount, and an unauthorized customer bid in the amount of \$1 billion. Aggregation of the unauthorized customer and Salomon bids resulted in a bid for 46 percent of the auction amount. The bids were at the stop-out rate and thus were subject to 51 percent proration. Salomon was awarded approximately \$1.52 billion of the four-year notes and the customer was awarded \$510 million. Immediately after the auction, Salomon transferred to its own account, or "bought" at the auction price, the \$510

³ See Salomon Press Release dated August 14, 1991 ("August 14 Press Release"). Treasury rules limit the amount a single bidder can purchase at any auction to 35 percent of the total public offering amount of the securities available. In addition, Treasury will not recognize amounts tendered by a single bidder at any one yield in excess of 35 percent of the public offering amount, and will reduce tenders at any one yield exceeding the limit to the 35 percent amount. See Treasury News Releases dated September 8, 1981 and July 12, 1990. Under the rules in effect before July 1990, the Treasury would award no more than 35 percent of the securities publicly available for purchase at the auction to any single bidder, but would recognize bids in excess of 35 percent of the public offering at any particular yield. Therefore, a bidder could enter a bid greater than 35 percent at a yield thought to be the highest accepted to increase its chances of being awarded a larger amount of securities in the event of proration at the high yield. The rule was changed, however, after Salomon bid for an amount in excess of 100 percent of an issue during a Resolution Funding Corporation ("REFCORP") 30-year bond auction in July 1990. REFCORP did not recognize the amount of the bid in excess of 35 percent. After the auction, Treasury announced a change in auction rules, restricting the amount recognized as bid by any one bidder at a single yield to 35 percent of the public offering amount of the issue.

⁴ See Statement of Salomon Inc Submitted in Conjunction with the Testimony of Warren E. Buffet, Chairman and Chief Executive Officer of Salomon Inc., Before the Securities Subcommittee, Committee on Banking, Housing and Urban Affairs, United States Senate, September 10, 1991 at 8 ("Salomon September 10 Testimony"). See also Statement of Salomon Inc. Submitted in Conjunction with the Testimony of Deryck C. Maughan, Chief Operating Officer of Salomon Brothers Inc, and Robert E. Denham, General Counsel of Salomon Inc. Before the Subcommittee on Oversight, Committee on Ways and Means, United States House of Representatives, September 24, 1991, ("Salomon September 24 Testimony").

⁵ See Salomon September 24 Testimony at 9. See also Salomon Press Release dated October 3, 1991.

million of four-year notes awarded to the customer. Salomon suppressed the customer confirmation for the amount purchased at the auction.⁶ As a result of the submission of both bids, Salomon effectively bid for 46 percent of the auction, but acquired only 24 percent. Salomon thus bid for more than 35 percent at a single yield, but did not exceed the 35 percent award amount to a single bidder. However, Salomon did acquire more securities than it would have been able to if it had bid at a single yield for only 35 percent of the public offering amount.

The February 7, 1991, 30-year bond auction. Salomon disclosed that it submitted an unauthorized customer bid in the amount of \$1 billion in the February 7, 1991, \$11 billion 30-year bond auction as the result of a "practical joke."⁷ Salomon claims that an employee arranged to have a customer submit a bid to a salesperson at Salomon for \$1 billion of the 30-year bonds as part of a practical joke on the salesperson. The Salomon employee was to have stopped the customer bid from actually being submitted and, following the auction, the customer was to complain that its bid was not filled. The Salomon employee was then to blame the salesperson for the failed bid.

Salomon has stated that the employee attempted to prevent the customer bid from actually being submitted prior to the auction by crossing out the bid on the work sheet of the clerk responsible for calling in the bids. According to Salomon the clerk did not understand the meaning of the cross-out and submitted the bid, which resulted in the customer being awarded \$870 million of the bonds, as the \$1 billion bid was subject to 87 percent proration. After the auction, the \$870 million in bonds was placed into the account of another Salomon customer and then sold from that account to Salomon, allegedly without the customer's authorization. Salomon has stated that its customer confirmations were suppressed. As a result, Salomon bid \$2.331 billion for its own account and \$1 billion as a result of the "practical joke." The combined total of the two bids represented 30.2 percent of the issue and thus did not exceed 35 percent of the public offering.

The February 21, 1991, five-year note auction. During the February 21, 1991, five-year note auction, Salomon has admitted to placing a bid for itself and two unauthorized customer bids, all at the 35 percent bidding limit at a single yield of \$3.15 billion. As a result of the bids, Salomon effectively bid for 105 percent of the offering amount and was awarded approximately 57 percent of the issue (the bids were at the

⁶ Salomon's internal investigation uncovered the fact that the daily customer confirmations for the \$510 million customer purchase and the subsequent sale were not mailed to the customer. It appears, however, that the monthly statements Salomon mailed to its customer did include the allegedly unauthorized transactions. See Salomon September 10 Testimony at 10.

⁷ *Id.* at 12-13. See also August 14 Press Release.

stop-out yield, and thus were subject to 54 percent proration), thus evading the 35 percent bid and award limits.⁸ Again, customer confirmations were suppressed.

It was in this auction that the much publicized "Warburg/Mercury" bid took place. Minutes after the closing time for receipt of competitive tenders, a FRBNY staff person notified the Treasury auction staff of two bids that appeared to be from related entities. One tender, for an amount equal to 35 percent of the total public offering, had been placed by Salomon in the name of Warburg Asset Management. S.G. Warburg & Co., Inc., a primary dealer, separately submitted a tender at the same yield for its own account. Upon questioning, a Salomon clerk had stated that its bid was actually from Mercury Asset Management, which was previously called Warburg Asset Management. Treasury decided to accept both bids for the meantime, because the relationship between the two entities was not clear, and because after proration, the combined awards to both would not exceed 35 percent of the public offering of securities.

After researching the relationship between Warburg and Mercury, the Treasury sent a letter on April 17 to Charles Jackson, Senior Director, Mercury Asset Management, which informed him of the decision to treat S.G. Warburg & Co., Inc., and Mercury Asset Management as a single bidder for purposes of the 35 percent rule. This letter provided details of the two bids submitted in the February five-year note auction. Copies of the letter were sent to officers of S.G. Warburg, S.G. Warburg, PLC (the British parent company), and the FRBNY. In addition, a copy of the letter was sent to Paul Mozer, a Managing Director of Salomon. It was this letter that, according to Salomon, Paul Mozer showed to his superiors that alerted them to the unauthorized customer bid.

The April 25, 1991, five-year note auction. With respect to the April 25, 1991, \$9 billion five-year note auction, Salomon has stated that it submitted a bid on its own behalf for \$3 billion and a customer bid for \$2.5 billion. According to Salomon, the customer claims that it did not agree to purchase more than \$1.5 billion. Salomon obtained \$600 million of the amount awarded to the customer immediately after the auction. Aggregation of the Salomon bid in its own name and the alleged unauthorized portion of the customer bid resulted in an aggregate Salomon purchase of greater than the 35 percent award limit.

The May 22, 1991, two-year note auction. In its public disclosures, Salomon stated that it failed to report an existing \$590 million net long when-issued position in

⁸ See Salomon September 10 Testimony at 13-14.

connection with the May 22, 1991, auction of the May 1993 two-year notes.⁹ Salomon also submitted several bids at an aggressive yield of 6.81 percent (the May 1993 two-year notes were trading on a when-issued basis at a yield of approximately 6.83 percent directly prior to the auction) at the auction: one on its own behalf for \$4.2 billion (the 35 percent limit was \$4.287 billion); one on behalf of a customer for \$4.287 billion; one on behalf of another customer for \$2 billion; and several on behalf of other customers for a total of \$130 million. Salomon and its customers submitted the best-priced bids at the auction and were awarded the full bid amounts without proration.¹⁰

On the \$2 billion bid, Salomon reported that the customer claimed to have authorized only a \$1.5 billion bid. Salomon obtained the extra \$500 million of the notes for which the customer's bid was submitted at the auction price. Customer confirmations generated in connection with the customer purchase at the auction reflected only a \$1.5 billion purchase and not the \$500 million sale to Salomon. As a result, Salomon bid for and received the maximum 35 percent, obtained \$500 million that had been awarded with respect to a customer's bid, and was long \$590 million going into the auction, thereby circumventing the 35 percent bidding and award limit.¹¹

2. Short squeezes

Short squeezes can occur when an event unanticipated by short sellers reduces the supply of securities available in the marketplace, such as unexpected demand for the securities resulting from an unanticipated change in Federal Reserve policy with respect to interest rates. A short squeeze can also occur as a result of deliberate behavior by one or more market participants to restrict the supply of securities and thereby to drive up prices.¹²

When one market participant, or a group of market participants acting in concert, manages to purchase a significant proportion of the available supply of a particular security, that single participant or group is said to have "cornered the market." When that happens, the single participant or group can withhold the securities from the market and at the same time demand the return of any securities that they have loaned to short sellers. In such a situation, the short sellers must purchase or borrow the securities in order to redeliver them to those controlling the

⁹ Treasury rules require that bidders report net "long" positions greater than \$200 million at the time of the auction. Any net long when-issued position, when it exceeds \$200 million, counts toward the 35 percent award limit.

¹⁰ See Salomon September 10 Testimony at 23-24.

¹¹ August 14 Press Release at 2. See also Salomon September 10 Testimony at 20-23.

¹² See Appendix B, Section 1 for a discussion of short squeezes.

securities,¹³ driving up the price of the securities and, presumably, increasing the profits of the single participant or group that controls the securities.

After the May 22, 1991, two-year note auction, a "short squeeze" occurred in the security.¹⁴ Salomon has admitted that the firm and its customers purchased 94 percent of the auctioned securities. While the bulk of this amount represented authorized bids from customers that were within the 35 percent limitation, Salomon has also admitted its failure to report its net long when-issued position and that it submitted a customer bid that was larger than authorized in that auction.

Prior to the auction, Salomon determined to finance its own position through repos with short sellers and institutional lenders. In addition, Salomon agreed to finance positions of its customers.¹⁵ As a result of having purchased a large part of the supply of the May two-year notes, Salomon and its customers were able to lend through repos a portion of the notes held at "special" repo rates. A security is said to be "on special" when, due to its scarcity, a holder can enter into a repo at a lower rate of interest, and thus a lower financing cost, than the prevailing or general repo rate. The rates Salomon actually received were generally 100-200 basis points below then-prevailing general repo rates.¹⁶

Whatever its cause, the May squeeze prompted regulators to investigate Salomon's purchases of the notes. On May 29, Treasury staff notified the SEC's Divisions of Market Regulation and Enforcement of the "squeeze" on the May two-year note that had become evident in market price movements and complaints of market participants. The squeeze also attracted Congressional interest.

On June 10, John Gutfreund, Chairman of Salomon, initiated a meeting with Treasury officials to explain the firm's point of view with respect to the May two-year notes. As the Treasury officials were aware that the SEC was already investigating the May two-year note squeeze, they did not press an opposing viewpoint. The issue of unauthorized auction bidding was not discussed at the meeting because Treasury had no cause to suspect fraudulent activity at that time. During the months of June and July, Treasury, Federal Reserve, SEC and Justice Department officials had numerous discussions about the persistent squeeze, and about progress on investigating its causes.

¹³ Cf. 3 L. Loss, *Securities Regulation* 1538 n.25 (2d ed. 1961).

¹⁴ The SEC is also investigating other reports of possible short squeezes in connection with recent Treasury auctions. Because these investigations are ongoing, more detailed information cannot be disclosed publicly at this time.

¹⁵ Salomon September 10 Testimony at 23-33.

¹⁶ Salomon September 10 Testimony at 30.

It was these investigations that eventually prompted Salomon's public disclosures acknowledging the auction abuses.

On August 18, the Treasury Department announced that it would not, for an indeterminate time, allow Salomon to participate in Treasury auctions. This penalty was modified later in the day, following actions taken by Salomon's board of directors, to allow Salomon to bid in auctions for its own account but not on behalf of its customers.

3. Improper practices relating to GSE securities

In August 1991, Salomon disclosed that it had engaged in the practice of overstating the amounts of government-sponsored enterprise ("GSE") securities sold when it reported sales to GSEs. The SEC's Division of Enforcement commenced an investigation of the extent to which such practices were widespread and obtained trading data and other documentary evidence from all participants in the market for such securities for the period January 1, 1990, through August 31, 1991.¹⁷ During that period, the amount of customer orders reported to the GSEs by their selling group members far exceeded the amount of securities available. The SEC's investigation revealed that nearly all selling group members engaged in one or more improper practices in connection with the primary distribution of GSE securities.¹⁸

As described below, a number of selling group members reported to GSEs inaccurate information concerning customer orders during the pre-allocation period and nearly all selling group members reported inaccurate information concerning their sales of the securities after settlement. In providing such inaccurate information, selling group members prepared and maintained books and records reflecting the inaccurate information.

Pre-allocation period

In the initial phase of the distributions, many selling group members routinely inflated the number and dollar amount of their customer orders in reports to the GSEs. For example, one trader testified that, because the GSEs placed such reliance on historic allocation in allocating securities, he was able to estimate with reasonable

¹⁷ The SEC is conducting an ongoing investigation of alleged misconduct by dealer members of various GSE selling groups in connection with initial offerings of GSE securities. Although settlements have been reached with certain firms, the investigation has not yet been completed, and the SEC has not reached any conclusions with respect to the actions of other firms. As a result, the discussion contained herein should not be understood as reaching any conclusions of fact or law with respect to the SEC's investigation.

¹⁸ The Office of the Comptroller of the Currency ("OCC") and the Federal Reserve, as well as the New York Stock Exchange and the National Association of Securities Dealers, coordinated with, or assisted, the SEC's Division of Enforcement in the investigation.

accuracy the amount of securities his employer was likely to receive in any one offering. He then "tripled" that estimated amount, and reported the inflated number to the GSEs as customer orders.

Some traders added random amounts to their actual customer orders. Others increased the number and amount of customer orders reported to the GSEs to include "anticipated" or "historic" sales, i.e., an amount that the trader believed, based on past experience, the selling group member would be able to sell after the GSE announced the price. Even in those instances where a selling group member had identifiable customers for the number and amount of the customer orders reported to the GSEs, the trader would not indicate to the GSEs that many of the orders were subject to significant conditions.

Most of the traders prepared work sheets reflecting customer orders for, or interest in, the securities, and updated the work sheets as they learned of additional customer orders or interest. Several selling group members divided their work sheets into sections or columns to reflect two sets of numbers: actual customer orders and the inflated customer orders reported to the GSEs.

Most traders denied inflating customer orders to obtain a larger allocation, and hence a larger concession. Indeed, because most GSEs allocated securities based largely on a historic basis, a selling group member would not necessarily receive a larger allocation simply by inflating its reported customer orders. Rather, entities which had been members of the selling group for a longer period of time testified that they inflated customer orders to avoid losing any of their historic allocation percentage. Newer selling group members testified that they inflated customer orders because other selling group members were inflating orders and the newer entities felt that they needed to report a larger number of orders to appear competitive.

Distribution reports

Nearly all selling group members inflated the number and/or amount of customer sales in the distribution reports or analyses submitted to the GSEs. Usually the number and amount of customer sales reflected in the distribution reports matched the number and amount of customer orders that the selling group member had reported to the GSE prior to allocation. In most instances, distribution reports stated that selling group members had assumed large short positions in a GSE's securities when, in fact, they had not. Often the distribution reports stated that selling group members had purchased securities in the secondary market in order to cover a short position when, in fact, no such purchases had occurred. The distribution reports also contained inaccurate representations regarding the type, and/or geographic location, of customers.

A number of traders testified that they inflated sales, and/or provided other inaccurate information, in the distribution reports either to conceal their initial inflation of customer orders, or to conceal the loss of a customer. Several testified that they simply followed what they perceived to be an industry practice of reporting customer orders rather than actual sales in the distribution reports. Although some traders testified that the GSEs expected the distribution reports to reflect customer orders rather than actual sales, the distribution reports were prepared after the primary distribution had ended, and called for information concerning the sales that had taken place during the primary distribution.

Most of the GSEs appear to have suspected that information selling group members provided regarding the amount of customer orders and sales was not reliable. However, the GSEs stated that they were not able to determine which of the selling group members were inflating orders and/or sales, nor were they able to determine the amount by which any report was inflated.

Although selling group members prepared and maintained an accurate set of books and records reflecting transactions in the GSEs' securities, they also prepared and maintained a second set of records – the work sheets and distribution reports – that were inaccurate. This second set of records cast doubt upon the integrity and reliability of the accurate records, and posed the exact danger that Rule 17a-3 was designed to eliminate – that the SEC and the securities industry self-regulatory organizations would be unable to assure that broker-dealers conduct their business in accordance with the federal securities laws. Strict compliance with the books and records requirements is a keystone of the surveillance of registered broker-dealers.¹⁹

Administrative Proceedings Against Selling Group Members

On January 16, 1992, administrative proceedings were instituted jointly by the SEC, the OCC and the Federal Reserve against 98 registered broker-dealers, registered government securities brokers and/or dealers and banks (the "respondents"). In those proceedings, the three agencies found that, in connection with their participation in the primary distributions, each of the respondents made and kept certain records that did not accurately reflect the respondent's customers' orders for the GSEs' securities and/or offers, purchases or sales by the respondent of the GSEs' securities.

Ninety-eight selling group members submitted Offers of Settlement to the agencies. Pursuant to the settlements, each of the respondents, without admitting or

¹⁹ The preparation and maintenance of such false books and records by an issuer whose securities are registered pursuant to Section 12 of the Securities Exchange Act would likely also violate Section 13(b)(2) of the Securities Exchange Act, which, among other things, requires such issuers to "make and keep books, records, and accounts, which, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the issuer."

denying the allegations in the order instituting the proceedings, consented to the issuance of an order by the appropriate regulatory agency:

- finding, in the case of registered broker-dealers, that the respondent willfully violated Section 17(a) of the Exchange Act and Rules 17a-3 and 17a-4, or, in the case of registered government securities brokers and/or dealers, that the respondent willfully violated 17 C.F.R. Part 404 promulgated under Section 15C of the Exchange Act;²⁰
- directing the respondent to cease and desist from future violations of the relevant provisions of the Exchange Act;
- directing the respondent to pay a civil money penalty to the United States Treasury;²¹ and
- directing the respondent to devise, implement and maintain policies and procedures reasonably designed to ensure future compliance with the relevant provisions of the Exchange Act.

In addition, on January 16, 1992, the SEC issued a Report Pursuant to Section 21(a) of the Securities Exchange Act of 1934 Regarding the Distribution of Certain Debt Securities Issued by Government-Sponsored Enterprises. The 21(a) Report summarized the results of the SEC's investigation, and described the GSEs' distributions of debt securities, the respondents' participation in the distributions, and the practices giving rise to the violations of the recordkeeping provisions of the Exchange Act described in the Report. In the 21(a) Report, the SEC emphasized that, regardless of how widespread a practice is, or is perceived to be, and regardless of whether a firm believes that a particular practice does not harm its customers or other persons, the SEC will not tolerate a disregard for the recordkeeping provisions of the Exchange Act. The Report concluded that the creation of inaccurate books and records by the respondents was a necessary part of a scheme to inflate customer orders in an effort to maintain or increase allocation.

²⁰ Section 17(a) and Rules 17a-3 and 17a-4 and 17 C.F.R. Part 404 promulgated under Section 15C require registered broker-dealers and registered government securities brokers and/or dealers, respectively, to make and keep accurate books and records relating to securities transactions.

²¹ The amount of the civil money penalty to be paid by each respondent was determined on the basis of a formula developed by the SEC, the OCC, and the Federal Reserve based upon the "concessions" received during a defined period. Thus, the differences in amounts are based upon concessions, rather than the number of violations or degree of wrongdoing.

APPENDIX D

THE GOVERNMENT-SPONSORED ENTERPRISE SECURITIES MARKET

Government-sponsored enterprises ("GSEs") are financial intermediaries established pursuant to federal law to facilitate lending for purposes the federal government has deemed socially important, such as education, agriculture, and housing.¹ Congress believed such intermediaries were necessary because credit for these purposes was either insufficient or too expensive. In essence, these institutions borrow funds from the public and make the funds available to particular sectors of the economy. The total amount of GSE obligations outstanding as of December, 1990 was about \$1 trillion dollars.²

Although the GSEs each were established by an Act of Congress and have special relationships with the federal government,³ they are each wholly privately owned. They do not receive direct funding from the federal government, nor are their operating policies directly determined by Congress. However, each of the GSEs may have special Congressionally granted powers, such as limited authority to borrow from the Treasury, and each may enjoy special advantages, including exemptions for securities they issue from most provisions of federal and state securities laws and exemption for the GSEs from certain state and local taxes.

Primary market

In general, the GSEs are required to obtain the approval of the Treasury on the timing, maturity, and pricing of their debt offerings. After receiving recommendations from each of the GSEs, the Treasury establishes a general calendar for GSE securities offerings that includes sales announcement, pricing, trading release, and settlement dates. The Treasury coordinates the offering dates for each of the GSEs to avoid competition among the offerings which potentially could drive up yields or cause market dislocation or confusion.

¹ For purposes of this report, a GSE is a federally chartered entity or group of entities that is authorized to issue debt securities in its own name. Using this definition, the GSEs discussed in this report are: the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation, the Farm Credit System, the Federal Agricultural Mortgage Corporation (Farmer Mac), the Federal Home Loan Bank System and the Student Loan Marketing Association.

² Of this figure, \$365 billion constituted debentures and discount notes and \$616 billion constituted mortgage-backed securities.

³ Some of the GSEs have Presidentially appointed Board members (e.g., Sallie Mae, seven of 21, 20 U.S.C. § 1087-2(c)(3); Fannie Mae, five of 18, 12 U.S.C. § 1723(b); and Freddie Mac, five of 18, 12 U.S.C. § 1452(a)(2)(A). In addition, the five members of the Federal Housing Finance Board are appointed by the President. 12 U.S.C. § 1422a(b)(1)(B)). The Treasury also has approval rights over the issuance of debt and mortgage-backed securities for four of the GSEs. 12 U.S.C. § 1717a (Fannie Mae); 12 U.S.C. § 1455(j)(1) (Freddie Mac); 20 U.S.C. § 1087-2(h)(1) (Sallie Mae); and 31 U.S.C. § 9108(a) (Federal Home Loan Banks). The Farm Credit Administration approves the borrowing of the Federal Farm Credit Banks. 12 U.S.C. §§ 2153(d), 2160(b)(2).

The GSEs distribute a variety of securities, including short-term discount notes, medium-term notes, longer-term debt in the form of bonds or debentures, and mortgage-backed securities. Only a small percentage of GSE bonds (other than mortgage-backed issuances) and debentures have maturities of greater than 10 years.

In general, securities issuances by GSEs, except for Farmer Mac, historically have been exempt from registration under the federal securities laws. This longstanding exemption was not disturbed by the Government Securities Act of 1986. In addition, securities issued by GSEs generally are deemed to be "government securities" within the meaning of the Securities Exchange Act of 1934 ("Exchange Act").⁴ Like other securities deemed to be government securities, however, GSE securities continue to be subject to the anti-fraud provisions of Section 17(a) of the Securities Act of 1933 and Section 10(b) of the Exchange Act. As a result, purchases and sales of GSE securities, whether during initial issuance or in the secondary market, are subject to the SEC's regulatory authority only in cases of actual or suspected fraud.⁵

The process by which the GSEs distribute most of their securities differs substantially from the auction procedure used by the Treasury. The GSEs use a variety of distribution mechanisms, including competitive bidding, placements with individual customers or through particular dealers, allocation among selling group members, underwritten transactions, and exchanges of mortgage-backed securities with institutions. In practice, however, most of the GSEs rely for sales of unsecured debt securities principally on allocation among selling groups composed of both primary and non-primary government securities dealers and dealer banks.

Each GSE maintains several selling groups, ranging in size from five to approximately 100 members, composed of government securities dealers and dealer banks who have signed an agreement with the GSE to participate in its allocation process. The GSE's fiscal agent fills the role ordinarily filled by a managing or lead underwriter in a corporate offering, overseeing the issuance according to the terms of the applicable selling group agreement and allocating the securities to be distributed to the members of the selling group. Selling group members are compensated by a concession, which is expressed as a fixed percentage of the face amount of securities sold and deducted from the proceeds of the sale due to the agency.

⁴ 15 U.S.C. § 78c(a)(12)(A)(i).

⁵ Securities issuances by GSEs may require regulatory approval, however, under each GSE's enabling statute. For example, neither Freddie Mac nor Fannie Mae may issue stock or convertible debt without the approval of the Secretary of Housing and Urban Development. 12 U.S.C. §§ 1452(b)(6), 1723c. Similarly, the Farm Credit System must obtain FCA approval for each issuance of System-wide debt securities. 12 U.S.C. §§ 2153(d), 2160(b)(2).

concession, which is expressed as a fixed percentage of the face amount of securities sold and deducted from the proceeds of the sale due to the agency.

Each selling group member's responsibilities are spelled out by the terms of a selling group agreement that each GSE requires each selling group member to sign as a condition of participating in the selling group. Selling group agreements are between the GSE and each dealer and do not establish a relationship between or among selling group members.

The terms of the selling group agreements vary but they usually expect the member to support secondary trading in the GSE's securities and to provide market and trading information before and during the allocation. In addition, the selling group agreements generally prohibit members of the selling group from purchasing securities in the allocation for their proprietary trading accounts or for reallocation to other dealers and ordinarily require members to produce reports on the distribution of the securities they have been allocated and to keep certain records. When customer demand is light, however, the fiscal agent may ask selling group members to take positions for their own accounts.

Each GSE establishes standards that prospective selling group members must satisfy to join the selling group. In general, the GSEs require prospective selling group members to demonstrate certain capitalization levels, participation in other sectors of the government securities market, a commitment to the secondary market for the GSE's securities, and an established customer base. Most of the GSEs also reserve the right at a minimum to expel members of the selling group for failing to participate fully in the allocation process or in the secondary market. Nonetheless, the GSEs, for the most part, have admitted or expelled relatively few members, and the selling groups have tended to remain relatively stable over time. In recent years, however, several GSE selling groups have decreased in size as members have merged or left the government securities business.

When-issued trading in GSE securities usually does not begin until the day after the pricing of the initial offering. Therefore, when-issued trading does not serve the same price discovery function in the GSE market that it does in the Treasury market. Instead, each GSE sets the price for each security that it issues based on its own judgment about demand for its securities in the market. To reach that judgment, the GSEs take into consideration information provided by selling group members about market demand for their securities, as well as other government, GSE, and corporate securities. Representatives of the GSEs speak with the larger members of their selling groups on a regular basis and are in contact with all members of the selling group daily during the sale period. When determining the structure, maturity, and size for an issue, each GSE consults selling group members for indications of market demand for

information about offerings by other GSEs, the Treasury, and comparable corporate issuers. Most significantly, the GSEs maintain that selling group members provide the GSEs with market information that enables the GSEs to price their securities at yields designed to clear the market, thereby assuring the continued marketability of those securities at the lowest possible cost to the borrower.

The GSEs' reliance on members of their selling groups for market information is magnified by the difficulty that market participants other than primary dealers have in obtaining important market information independently. As noted elsewhere in this report, they generally do not have access to market information on GSE securities displayed on inter-dealer broker screens.⁷ Therefore, although GSEs do have access to news wires and vendor services, the information provided by selling group members about demand for that GSE's securities in the market is a critical component of each GSE's pricing process. Selling group members compete to provide that information accurately and on a timely basis, and agents and dealers indicate that there is a perception in the market that supplying accurate and timely market information will be rewarded in the allocation of securities.

The GSEs consider indications of demand they receive from the selling groups in determining the initial offering price of a particular security. Other significant factors affecting each GSE's pricing decision are the price and availability of Treasury and other agency securities of comparable maturities. Because GSE securities generally are not explicitly backed by the full faith and credit of the federal government and thus are perceived by the market to present a somewhat, if minimally, greater credit risk to investors, they trade at a spread over Treasury securities (i.e., GSE yields are higher than Treasury yields on instruments of the same maturity).

The perceived liquidity and credit quality of each GSE also affect the size of the spread. If the market perceives instability in a particular GSE's economic sector, the spread will widen. For instance, during the mid-1980s, Farm Credit securities traded at a relatively large spread over Treasuries, reflecting the downturn in the agricultural sector and the resulting difficulties of many Farm Credit institutions. The Agricultural Credit Act of 1987 granted assistance to troubled institutions, which the market perceived as implicit federal government backing of the Farm Credit System and its securities. Thereafter, the spread for Farm Credit securities narrowed.

The spread for each GSE's securities tends to vary over time. In addition, as maturity lengthens, the spread usually widens, reflecting the investors' exposure to GSE credit risk over a longer period and the lesser liquidity of GSE securities. Thus, when selling group members make pricing recommendations to a GSE, they may do so as a

⁷ The GSEs currently do have access to Cantor Fitzgerald information through Telerate. Cantor Fitzgerald, however, represents only 20 percent to 25 percent of the interdealer market.

The spread for each GSE's securities tends to vary over time. In addition, as maturity lengthens, the spread usually widens, reflecting the investors' exposure to GSE credit risk over a longer period and the lesser liquidity of GSE securities. Thus, when selling group members make pricing recommendations to a GSE, they may do so as a price or a yield, but more typically they do so as a spread over the benchmark Treasury security.

The allocation process used by each GSE varies slightly, but in general, is conducted as follows. For several days prior to announcing an issue, the GSE consults with members of its selling group to gauge market conditions. Selling group members provide feedback and information on other activity in the market. At a preset time, the GSE announces the actual terms, including the maturity and amount of the issue or issues offered.

Following the announcement of terms (other than rate and price), selling group members contact customers to obtain or verify orders. The members report the information to the GSE. GSE personnel probe selling group members for specific information regarding firmness of the member's book. Orders for securities that are not conditioned on any particular price generally are known as "market orders." Orders that will only be executed at or within specific price frames generally are known as "price conditional."⁸

During the time period following announcement, the GSE makes allocations of the debentures to selling group members based on a number of factors that vary among the GSEs, but often include: (1) customer demand; (2) the strength and consistency of the selling group member's past participation in the primary market and its demonstrated commitment to the secondary market; (3) cultivation of new investor segments; and (4) breadth of distribution, including geographical interest.

The GSEs typically receive price recommendations from selling group members in the course of communications throughout the allocation process. In addition, the GSE may consult with selected selling group members shortly before pricing the issue to get final, specific pricing recommendations. The GSE then prices the issue and makes a public announcement over news wires.

⁸ The Public Securities Association Agency Task Force has proposed standardized order definitions for selling group members and fiscal agents that would eliminate the distinction between "market" and "conditional" orders. Under its proposal, all orders would be categorized as "customer orders," "member orders," or "reallocation orders." Customer orders would include any orders: (1) without condition, or (2) subject to the satisfaction of one or more specific conditions, such as spread, coupon or as otherwise expressed. Customer orders would be based on actual communications between a selling group member and a customer.

Selling group members typically call the GSE after the announcement to confirm their allocations. The GSEs also require selling group members to submit a written report or analysis of each distribution. Selling group members may be asked to provide a breakdown of sales by category of investor or information on when-issued activity in the distribution report.

The GSEs maintain that the allocation process is the best mechanism for issuing debt because, in their opinion, it meets their paramount financing objective: to assure a steady and predictable stream of funds at the lowest possible cost. This assertion has not been proven or disproven empirically, although some GSEs have monitored the stability over time for various issues of the spread over the benchmark Treasury security in the secondary market as a method of monitoring the efficiency of their initial pricing. In addition, the GSEs believe that use of the allocation process assures the liquidity of GSE securities in the secondary market because it achieves a broad-based distribution of securities.

APPENDIX E

THE PRIMARY DEALER SYSTEM

FEDERAL RESERVE BANK OF NEW YORK

Administration of Relationships with Primary Dealers

The Federal Reserve Bank of New York (FRBNY) is adopting certain changes in the administration of its relationship with primary dealers in U.S. Government securities. The primary dealer system has been developed for the purpose of selecting trading counterparties for the Federal Reserve in its execution of market operations to carry out U.S. monetary policy. The designation of primary dealers has also involved the selection of firms for statistical reporting purposes in compiling data on activity in the U.S. Government securities market. These changes in the administration of these relationships have been developed after consultation with the Federal Reserve Board, the Federal Open Market Committee, the Treasury and the Securities and Exchange Commission.

The changes announced today have been prompted by two related factors:

First, decisions have been made to accelerate the automation of Treasury auctions and Federal Reserve open market operations with a view toward increasing the efficiency of the auction process and open market operations, and providing the potential for further broadening the base of direct participation in these operations. These automation initiatives are major

undertakings, as they must be planned and executed with extreme care to ensure operating and communications systems of the highest level of reliability and integrity. They will require back-up systems comparable to those now in place for the Fed's funds and securities transfer systems. Planning for automation of the existing Treasury auction format is well underway and automation is scheduled for completion by the end of this year. Automation planning for Federal Reserve open market operations is just getting started, and completion of this automation will probably take about two years.

Second, and more important, while the system of designating primary dealers on the whole has served the Federal Reserve, the Treasury, and the nation well for many years, there also have been some drawbacks to the existing arrangements. Prominent among these is the public impression that, because of the Federal Reserve Bank's standards for selecting and maintaining these relationships, the Fed is in effect the regulator of the primary dealer firms. Moreover the primary dealer designation has been viewed as conferring a special status on these firms that carries with it elements of "franchise value" for the dealer operation and possibly for other aspects of the firm's standing in the marketplace.

The net result of these interrelated factors is that the Federal Reserve is amending its dealer selection criteria to begin providing for a more open system of trading relationships, while still exercising the discretion that any responsible market

participant would demand to assure itself of creditworthy counterparties who are prepared to serve its needs.

For the most part, the changes in the administration of the primary dealer relationships will have no immediate effect on existing primary dealers--recognizing, of course, that they will, over time, be subject to the requirements noted below for maintaining a counterparty relationship with the Fed. However, existing as well as any new primary dealers will no longer be required to maintain a one percent share of the total customer activity reported by all primary dealers in the aggregate; this requirement is no longer deemed necessary given the active and liquid state of development now achieved in the U.S. Government securities market, and its retention could be an obstacle to achieving more open trading desk relationships. In addition, while continuing to seek creditworthy counterparties, and while continuing to exercise market surveillance, the FRBNY will discontinue its own dealer surveillance activities relating to primary dealer firms' financial characteristics.

New firms will be added on the basis of criteria listed below. As in the past, all primary dealers will be expected to (1) make reasonably good markets in their trading relationships with the Fed's trading desk; (2) participate meaningfully in Treasury auctions and; (3) provide the trading desk with market information and analysis that may be useful to the Federal Reserve in the formulation and implementation of monetary policy. Primary dealers that fail to meet these standards in a meaningful

way over time will have their designation as a primary dealer discontinued by the FRBNY. It is contemplated that each dealer firm's performance relative to these requirements will be reviewed on an ongoing basis and evaluated annually beginning in June 1993. If a firm's relationship with the FRBNY is discontinued because of shortfalls in meeting these standards, the action by the FRBNY will be made strictly on a business relationship basis. As such, any decision by the FRBNY will carry no implication as to the creditworthiness, financial strength or managerial competence of the firm.

In evaluating a firm's market-making performance with the trading desk, the FRBNY will look to the amount of business of various types actually transacted and the quality of the firm's market-making and market commentary. Dealers that do little business with the Fed over a period of time, that repeatedly provide propositions that are not reasonably competitive, and that fail to provide useful market information and commentary, add little to the Fed's ability to operate effectively and will be dropped as counterparties for at least six months.

In evaluating participation in Treasury auctions, the Fed will expect a dealer to bid in reasonable relationship to that dealer's scale of operations relative to the market, and in reasonable price relationship to the range of bidding by other auction participants. Any decision to suspend a primary dealer

designation because of inadequate auction bidding will be taken in close consultation with the Treasury.

Finally, consistent with the Omnibus Trade & Competitiveness Act of 1988, a foreign-owned primary dealer may not be newly designated, or continue to be designated, in cases where the Federal Reserve concludes that the country in which a foreign parent is domiciled does not provide the same competitive opportunities to U.S. companies as it does to domestic firms in the underwriting and distribution of Government debt.

I. Criteria for Accepting New Dealers

New primary dealers must be commercial banking organizations that are subject to official supervision by U.S. Federal bank supervisors or broker/dealers registered with the Securities and Exchange Commission. The dealer firms or the entities controlling the dealer firms must meet certain capital standards as follows:

- commercial banking institutions must--taking account of relevant transition rules--meet the minimum Tier I and Tier II capital standards under the Basle Capital Accord. In addition, commercial banks must have at least \$100 million of Tier I capital as defined in the Basle Capital Accord.
- Registered broker/dealers must have capital in excess of the SEC's or Treasury's regulatory "warning levels" and have at least \$50 million in regulatory capital. Where such capital standards

do not apply to a consolidated entity controlling a primary dealer--consistent with the treatment of banks under the Basle Accord--the FRBNY will also look to the capital adequacy of the parent organization.

The minimum absolute levels of capital specified above (i.e., \$100 million for commercial banks and \$50 million for broker/dealers) are designed to help insure that primary dealers are able to enter into transactions with the Fed in sufficient size to maintain the efficiency of trading desk operations.

A bank or a broker/dealer wishing to become a primary dealer, must inform the FRBNY in writing. As a part of that notification a prospective dealer must also provide appropriate financial data demonstrating that it meets the capital standards outlined above. The FRBNY will consult with the applicable supervisory body to ensure that the firm in question is in compliance with the appropriate capital standards. When new firms are accepted as primary dealers, the nature and extent of the Bank's trading relationship with the firm will, as under current practices, evolve over time. As a result of this change and the elimination of the one percent market share criterion, there will no longer be any need for individual firms to be considered by the market as "aspiring dealers."

Of necessity, at least for the time being, the number of additional primary dealers will be relatively limited, because of resource constraints on trading desk operations. The

selection of this limited number will be dependent on how many can be added without adverse impact on the efficiency of Federal Reserve trading desk operations. Applications received by March 31, 1992, will be evaluated in relation to the foregoing capital standards. If it is not feasible to add all of the qualifying firms as primary dealers, a selection will be made among those firms in a manner that gives primary consideration to their relative capital positions. Following the implementation of automated communications for trading purposes, further expansion in the number of primary dealers will be feasible, and further changes in the criteria for selection also could be considered, although there is no preconception at this time as to what, if any, further changes would be made.

II. Maintenance of Capital Standards

As a result of the adoption of the capital standards for accepting primary dealers, all primary dealers will be expected to maintain capital positions that meet the standards described above on an ongoing basis. Should a firm's capital position fall below these minimum standards, the FRBNY may suspend its trading relationship until the firm's capital position is restored to levels corresponding to these minimum standards. In making such determinations, the FRBNY will look to the firm's primary Federal regulator for guidance as to whether the firm has in place an acceptable plan to restore its capital position in a reasonable period of time. However, in no circumstances will the Bank maintain a trading relationship with

a primary dealer that is unable to restore its capital position to the stipulated minimum level within a year. Over time, the maximum grace period of one year may be shortened and would not apply in any event if a firm's capital position were seriously impaired.

III. Elimination of Dealer Surveillance

While the Federal Reserve Bank of New York will continue to seek creditworthy counterparties--and will continue, or enhance, its market surveillance--it is planning to discontinue the "dealer surveillance" now exercised over primary dealers through the monitoring of specific Federal Reserve standards and through regular on-site inspection visits by Federal Reserve dealer surveillance staff. Rather, the FRBNY will seek to act as any reasonably well-informed and responsible firm might behave in evaluating the creditworthiness of its counterparties. Accordingly, the Federal Reserve will expect to receive periodic reports on the capital adequacy of primary dealers, just as any other responsible market participant should expect to receive such reports.

The elimination of the Bank's dealer surveillance activities should be viewed merely as confirmation of the long-standing reality that the Bank does not have--nor has it ever had--formal regulatory authority over the Government securities market or authority over the primary dealers in their capacity as such. The Bank is satisfied that the existing regulatory apparatus over the market and the regulatory apparatus as it

applies to dealer firms is adequate--especially in light of changes outlined in the joint Treasury-SEC-Federal Reserve study--and it is satisfied that it can protect itself against financial loss without reliance on formal dealer surveillance.

IV. Sanctions of Primary Dealers for Wrongdoing

The Federal Reserve Bank of New York does not have civil or criminal enforcement authority over primary dealers in their capacity as primary dealers. This consideration and the dictates of fairness and due process require that the disposition of allegations of wrongdoing lies with the Government bodies having such authority--including the U.S. Treasury, the Federal bank supervisor, the Securities and Exchange Commission and the U.S. Department of Justice.

In the future, if a primary dealer firm itself is convicted of a felony under U.S. law or pleads guilty or nolo contendere to felony charges under U.S. law for activities that relate directly or indirectly to its business relationship with the Federal Reserve, the firm will be subject to punitive action, possibly including suspension as a primary dealer for six months. Depending on the nature of the wrongdoing the penalty could be more severe, including permanent revocation of a trading relationship.

V. Statistical Reports on Government Securities Activities

The current statistical reporting program is expected to continue unchanged for the time being, but a review is being undertaken to determine how best to adapt this program to an

environment in which market surveillance is receiving greater emphasis and a statistical reporting relationship is not necessarily tied to a trading relationship with the Federal Reserve. This review will take into account the needs of the Federal Reserve, the Treasury and the SEC as well as the burden of statistical reporting on dealer firms.

Summary

Taken as a whole, these changes are designed to facilitate an orderly and gradual move to a more open system of primary dealer relationships with the FRBNY while at the same time preserving certain key characteristics of the current system that have been beneficial to the Federal Reserve and the Treasury over the years. Over time, the successful implementation of highly automated systems for Treasury auctions and Federal Reserve open market operations will provide the room and the opportunity for still further changes. However, the desirability of further changes will have to be evaluated against the experience with these modest changes and the need to preserve both the efficiency and flexibility of Federal Reserve monetary policy operations, and the liquidity and efficiency of the market for U.S. Government securities.

PRIMARY DEALERS: CRITERIA AND PROCEDURES
APPLIED TO FIRMS INTERESTED IN
BECOMING AND REMAINING PRIMARY DEALERS

This statement outlines the criteria used in administering the list of reporting U.S. Government securities dealers ("primary dealers") and describes the process used by the Federal Reserve Bank of New York to handle requests from firms interested in becoming primary dealers.

General Criteria

All primary dealers are expected to make markets in the full range of U.S. Government securities for a reasonably diverse group of customers and to participate meaningfully in Treasury auctions. They are expected to facilitate the Federal Reserve's Open Market Operations and to provide the central bank with information to assist it in performing its duties. Dealers should evidence a strong commitment to continued participation as a market-maker over the long-term. Management depth and experience, a reasonable profitability record, and good internal controls are essential. Primary dealers must have sufficient capital to support comfortably their activities and must manage their risk exposures prudently, with due regard for the limitations of their capital and their ability to identify and control risks.

The minimum criteria discussed in this statement should be considered benchmarks rather than absolute levels at which a dealer is designated a primary dealer reporting to the Federal Reserve. The benchmarks are meant to provide dealers with guidance regarding the general level of development they must attain to qualify for and retain the designation. A dealer's qualifications are evaluated in total. It is expected that each dealer will achieve and maintain overall levels of performance above the minimum standards; a dealer that barely achieves the minimum standards may not be designated or retained as a primary dealer.

Firms are designated primary dealers because they can be of service to the Federal Reserve. Other firms may be sound and capable, but it would be impractical for the Federal Reserve Bank of New York to maintain a reporting or dealing relationship with all such firms. The designation is not an endorsement, is not conferred under regulatory authority, and does not entail official supervision by the Federal Reserve. The Federal Reserve does monitor dealer activities to determine that the primary dealer performance standards are being met, and to obtain information about market developments. The process is not designed to assist the public in determining dealer creditworthiness.

Primary dealers are expected to be active and competitive participants in the Federal Reserve's Open Market Operations. They are also expected to freely and candidly supply the Federal Reserve with information about developments in the U.S. Government securities markets and in all other markets in which they participate. Trading performance and the quality of other support of Open Market Desk needs will be taken into account in decisions regarding primary dealer designation. While all dealers trading with the Open Market Desk must be primary dealers, newly designated primary dealers do not immediately begin a trading relationship with the Reserve Bank. To establish such a trading relationship, a dealer is expected to demonstrate the ability to improve upon and sustain the levels of performance initially required for designation as a primary dealer. Those firms not demonstrating this capacity within a reasonable period of time may have the designation discontinued.

Primary dealers are expected to cooperate with the Federal Reserve in endeavors to increase the efficiency, effectiveness, and safety of the marketplace. They are also required to submit reports reflecting their activities to the Federal Reserve on a regular basis.

Primary dealers must be effective market-makers. The diversity and quality of a dealer's customer base, the breadth of its activity and the consistency of its performance carry significant weight in an evaluation of market-making. In addition, trading volume with customers provides a convenient numerical estimate of a dealer's performance as a market-maker. At a minimum, the dollar volume of a dealer's customer transactions in Treasury and Federal agency issues (excluding mortgage pass through instruments) should average one percent of the aggregate of primary dealer volume with customers if the dealer expects to present a convincing case that it is an effective market-maker. Transactions with other primary dealers or inter-dealer brokers are excluded from this measure. Also excluded from customer volume are (1) intra-firm transactions or trading with affiliates of the dealer unless the dealer can demonstrate that such transactions represent competitive market-making; and, (2) activity in repurchase agreements or similar transactions.

In addition to the standards for secondary market-making, a primary dealer is expected to be a consistent and meaningful participant in Treasury auctions of new securities. A dealer is expected to submit auction bids of a size roughly commensurate with the dealer's capacity. A dealer is expected to submit bids in every auction. At a minimum, the bids should be a percentage of the total being sold that is comparable to the dealer's share of total customer transaction volume reported to the Federal Reserve. A dealer is not required to be awarded a particular amount of

securities, but the minimum amount of bids a dealer is expected to submit should be in a realistic price range relative to current market conditions. Under ordinary conditions, a dealer would be expected to submit a significant amount of bids close to the prices accepted by the Treasury.

The experience of a firm and its key personnel are also considered. A primary dealer is expected to have strong management, experienced trading personnel, a seasoned sales staff, and well-trained back-office personnel. The dealer must possess operational capabilities to process and account for its transactions efficiently and accurately. Clearing of securities must be performed expeditiously and with due regard for the integrity and safety of the clearing process [see separate statement on dealer clearance behavior, dated April 1988]. Proper controls over all operations by management and auditing staffs are also essential.

The capitalization of a primary dealer must reflect a solid financial commitment and a strong capacity to participate in the market. Firms should have sufficient capital to provide an adequate cushion relative to risk exposures and overall leverage, and to more than meet the minimum capital levels required by the supervisory authorities. The main focus on capital is relative to risk, rather than level of capital. Most primary dealers have substantially more than \$50 million of capital; major market-makers would have difficulty functioning prudently with less than \$50 million in capital. Indeed, most primary dealers with moderate amounts of capital are affiliated with very substantial firms that can provide additional capital support if needed. In looking at a dealer's capital strength, the Federal Reserve considers the composition of capital, the variety and nature of the firm's activity, typical risk exposure, the quality of risk controls, and a dealer's affiliate and subsidiary relationships. A dealer's earnings history is also considered. The earnings of a risk-taker understandably fluctuate; however, over a reasonable time period earnings should evidence a healthy business strategy. Poor earnings weaken a dealer's commitment to market-making and its ability to continue functioning as an effective primary dealer.

The ownership of a firm can have a bearing on its suitability as a primary dealer, particularly the reputation and conduct of the owners. The continuation of a primary dealer designation after a change in ownership is not automatic. New ownership arrangements will be evaluated based on the capacity to maintain or strengthen a dealer's performance in terms of financial, operational, managerial, and market-making criteria. In weighing whether to continue a primary dealer designation or request that a firm requalify, particular attention is placed on maintenance of continuity in the risk-management and market-making operations of the firm. When only the firm's primary dealer business, or a

portion thereof, is being acquired by a new owner, the strong presumption is that the designation will not be continued without a period of requalification. The requalification process will be administered flexibly, with due regard for the qualifications of the new owner and the performance of the dealer operation during the transition.

Primary dealers may be foreign-owned though they should be incorporated in the United States with dedicated dollar capital. In keeping with a basic policy of national treatment, there are no limits on representation among primary dealers for firms with parent companies or shareholders based in foreign countries. The maintenance of an appropriate degree of balance and diversity within the primary dealer group will continue to be a factor in considering firms newly interested in becoming or acquiring primary dealers. In seeking to maintain such diversification weight may be given to firms looking to develop business relationships on a de novo rather than acquisition basis. Consistent with the Omnibus Trade & Competitiveness Act of 1988, a foreign-owned firm may not be newly designated, or continue to be designated, a primary dealer after August 1989, in cases where the Federal Reserve concludes that the country in which the foreign parent is domiciled does not provide the same competitive opportunities to U.S. companies as it does to domestic firms in the underwriting and distribution of Government debt.

As noted earlier, primary dealers are designated because they can be of service to the Federal Reserve Bank of New York; however, it is not practical for the Bank to maintain a relationship with all firms who could potentially meet the minimum standards. Recognizing that a large expansion in the dealer list has been accommodated in recent years, it is believed that fifty or so primary dealers will more than meet the business needs of the Federal Reserve in conducting Open Market Operations. As the number of qualified dealers approaches this level, the Bank will be somewhat more selective in determining whether and when to add new dealers to the list and will also move more quickly to discontinue relationships with existing primary dealers. Recognizing that new dealers can add vitality to the market and that it is desirable to maintain an open system, the Bank will consider substituting newly qualified dealers which demonstrate particularly solid performance for existing primary dealers whose performance is not as strong as others in meeting the needs of the Bank. Such an event should not be interpreted as disapproval of the latter dealer's overall qualifications. Rather, such changes will only reflect the fact that it is impractical for the Bank to deal with every firm that might meet the minimum requirements.

Process for Aspiring Dealers

There is no formal application to be filed. Once a firm has a basic appreciation of the requirements of being a primary dealer and makes the decision to pursue designation it may make an informal indication of intent to the Federal Reserve Bank of New York. This step simply presents an opportunity to clarify criteria and procedures. It does not establish a reporting relationship.

At quarterly intervals, the Federal Reserve Bank of New York will decide whether to accept reports from additional dealers who have demonstrated significant potential to become primary dealers. Reports will be accepted only from dealers believed likely to qualify as a primary dealer within a reasonable time interval and for a trading relationship a short time thereafter. To be considered an aspiring dealer from whom reporting would be warranted, a dealer should have daily customer transaction volume for some time of at least half of that required for designation as a primary dealer. That amount of volume should evidence a broad, high-quality customer base, and a steady growth trend. The firm should also exhibit appropriate financial and managerial strength, internal controls, diversity of trading and customers, and a commitment to the market that is likely to continue. Each of these elements will be subjected to further and more intense scrutiny during the period before designation as a primary dealer. This Bank may discontinue receiving reports in cases where an aspiring dealer ceases to meet these criteria, such as if trading volume drops too low, a significant amount of capital is withdrawn, or key personnel are lost.

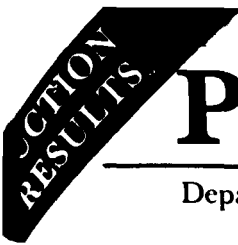
Before accepting reports, the Bank's Dealer Surveillance Staff will visit the dealer to review the firm's operational and financial capabilities. In addition, the Bank will generally limit the period in which reports will be accepted from aspiring dealers. Within about one year an aspiring dealer should be able to achieve, and sustain for some months, a level of activity qualifying it as a primary dealer. If an aspiring dealer has not built sufficient volume within about a year or fails to meet other standards, reporting may be discontinued. The Bank would normally not consider accepting such reports again from that dealer for at least one year.

Reporting List

While the list of primary reporting dealers is available to the public--because this information is needed so that reporting dealers can distinguish trading activity with other primary reporting dealers from activity with "customers"--this Bank does not plan to comment on whether reports are being accepted from

particular firms aspiring to be primary dealers. This is consistent with our view that acceptance of reports by the Federal Reserve for statistical purposes carries with it no official endorsement of the firm in question. More generally, it is also worth restating that appearance of a firm's name on the publicly available list of reporting primary dealers should not be taken as an official endorsement either; market participants are advised to make their own credit evaluations in selecting counterparties.

Federal Reserve Bank of New York
Dealer Surveillance Function
November 17, 1988



PUBLIC DEBT NEWS



Department of the Treasury • Bureau of the Public Debt • Washington, DC 20239

FOR IMMEDIATE RELEASE
January 22, 1992

CONTACT: Office of Financing
202-219-3350

RESULTS OF TREASURY'S AUCTION OF 2-YEAR NOTES

Tenders for \$13,766 million of 2-year notes, Series V-1994, to be issued January 31, 1992 and to mature January 31, 1994 were accepted today (CUSIP: 912827D82).

The interest rate on the notes will be 4 7/8%. The range of accepted bids and corresponding prices are as follows:

	<u>Yield</u>	<u>Price</u>
Low	4.98%	99.802
High	5.00%	99.765
Average	4.99%	99.784

Tenders at the high yield were allotted 25%.

TENDERS RECEIVED AND ACCEPTED (in thousands)

<u>Location</u>	<u>Received</u>	<u>Accepted</u>
Boston	26,115	26,115
New York	39,982,215	12,772,790
Philadelphia	22,220	22,220
Cleveland	149,455	74,455
Richmond	110,335	71,585
Atlanta	51,790	38,040
Chicago	1,122,945	251,695
St. Louis	52,140	47,915
Minneapolis	34,850	27,350
Kansas City	100,380	100,380
Dallas	15,415	15,415
San Francisco	786,675	102,925
Treasury	215,115	215,115
TOTALS	\$42,669,650	\$13,766,000

The \$13,766 million of accepted tenders includes \$1,140 million of noncompetitive tenders and \$12,626 million of competitive tenders from the public.

In addition, \$898 million of tenders was awarded at the average price to Federal Reserve Banks as agents for foreign and international monetary authorities. An additional \$439 million of tenders was also accepted at the average price from Federal Reserve Banks for their own account in exchange for maturing securities.

TREASURY NEWS



Department of the Treasury

Washington, D.C.

Telephone 566-2041

FOR IMMEDIATE RELEASE

January 22, 1992

Monthly Release of U.S. Reserve Assets

The Treasury Department today released U.S. reserve assets data for the month of December 1991.

As indicated in this table, U.S. reserve assets amounted to \$77,719 million at the end of December 1991, up from \$74,651 million in November 1991.

U.S. Reserve Assets (in millions of dollars)

End of Month	Total Reserve Assets	Gold Stock <u>1/</u>	Special Drawing Rights <u>2/3/</u>	Foreign Currencies <u>4/</u>	Reserve Position in IMF <u>2/</u>
<u>1991</u>					
November	74,651	11,058	10,942	43,708	8,943
December	77,719	11,057	11,240	45,934	9,488

1/ Valued at \$42.2222 per fine troy ounce.

2/ Beginning July 1974, the IMF adopted a technique for valuing the SDR based on a weighted average of exchange rates for the currencies of selected member countries. The U.S. SDR holdings and reserve position in the IMF also are valued on this basis beginning July 1974.

3/ Includes allocations of SDRs by the IMF plus transactions in SDRs.

4/ Valued at current market exchange rates.