EXECUTIVE OFFICE OF THE PRESIDENT

OFFICE OF MANAGEMENT AND BUDGET

SPECIAL ANALYSES

BUDGET OF THE UNITED STATES GOVERNMENT

FISCAL YEAR

1988

THE BUDGET DOCUMENTS

Budget of the United States Government, 1988 contains the Budget Message of the President and presents an overview of the President's budget proposals. It includes summary information on goals of the 1988 Budget, economic assumptions, receipts and outlays, defense and international programs, social security benefits, other programmatic changes, financing changes, reductions and terminations, a listing of the budget by agency and account, and various summary data tables.

Budget of the United States Government, 1988—Supplement repeats the Budget Message of the President and the summary information. In addition it includes sections on the Federal program by function, perspectives on the budget, the budget system and concepts, reform of the Federal credit system, and summary tables (both the tables included in the *Budget* and additional tables).

United States Budget in Brief, 1988 is designed for use by the general public. It provides a more concise, less technical overview of the 1988 budget than the above volumes, including summary and historical tables on the Federal budget and debt, together with graphic displays.

Budget of the United States Government, 1988—Appendix contains detailed information on the various appropriations and funds that constitute the budget. The *Appendix* contains more detailed information than any of the other budget documents. It includes for each agency: the proposed text of appropriation language, budget schedules for each account, new legislative proposals, explanations of the work to be performed and the funds needed, and proposed general provisions applicable to the appropriations of entire agencies or groups of agencies. Supplementals and rescission proposals for the current year are presented separately. Information is also provided on certain activities whose outlays are not part of the budget totals.

Special Analyses, Budget of the United States Government, 1988 contains analyses that are designed to highlight specified program areas or provide other significant presentations of budget data. This document includes information about alternative views of the budget; i.e., current services and national income accounts; economic and financial analyses of the budget covering Government finances and operations as a whole; and Government-wide program and financial information for Federal research and development programs. Data on Federal civilian employment are also included in this volume.

Historical Tables, Budget of the United States Government, 1988 provides data on budget receipts, outlays, surpluses or deficits, and Federal debt covering extended time periods—in many cases from 1940-1992. These are much longer time periods than those covered by similar tables in other budget documents. The data in this volume and all other historical data in the budget documents are consistent with the concepts and presentation used in the 1988 Budget, so the data series are comparable over time.

Management of the United States Government, 1988 includes the President's Management Message and provides the goals and strategies of the President's Management Improvement Program. It reports on the nine point credit management program, the program to improve financial management in executive branch agencies, the President's Productivity Program, the activities of the President's Council on Integrity and Efficiency, and the President's Council on Management Improvement. This document also describes the status of Grace Commission recommendations, the status of debt collection and prompt payment efforts, and a report on the motor vehicle cost reductions required by the Consolidated Omnibus Budget Reconciliation Act (COBRA) of 1985.

Instructions for purchasing copies of any of these documents are on the last two pages of this volume.

GENERAL NOTES

1. All years referred to are fiscal years, unless otherwise noted.
2. Detail in the tables, text and charts of this volume may not add to the totals because of rounding.

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PART 1

ALTERNATIVE VIEWS OF THE BUDGET

INTRODUCTION

Part 1 includes two alternative views of the budget—current services estimates and the national income and product accounts. The data include both on-budget and off-budget amounts (i.e., transactions of the Federal old-age, survivors, and disability insurance trust funds). These special analyses are designated A and B.

Special Analysis A (Current Services Estimates) presents the estimates required by the Congressional Budget Act of 1974 (31 U.S.C. 1109(a)). These estimates reflect the anticipated costs of continuing ongoing Federal programs and activities at present levels without any policy changes. Estimates are provided through 1992.

Special Analysis B (Federal Transactions in the National Income and Product Accounts) presents the Federal Government estimates through 1988 in terms of the national income and product accounts (NIPA). It also explains the relationship of the unified budget to the NIPA, which constitute the most widely used measure of aggregate economic activity in the United States.

SPECIAL ANALYSIS A

CURRENT SERVICES ESTIMATES

The Congressional Budget Act of 1974, as amended, requires that the President submit to the Congress estimates of the outlays and budget authority needed to maintain current Government services and activity levels. The Act defines the current services levels as

> . . . the estimated budget outlays and proposed budget authority that would be included in the budget for the following fiscal year if programs and activities of the United States Government were carried on during that year at the same level as the current year without a change in policy.

Since current services estimates show what outlays, receipts, and budget authority would be if no policy changes were made, they provide a base with which the administration's budget proposals, or other proposals, may be compared. Such comparisons are made in various parts of the budget and serve to highlight the effects of recommended policy changes.

Since long range estimates of Presidential policy are included in the Budget, current services estimates are also provided for the 4 years beyond the budget year. Generally, these long-range current services estimates are based on the same concepts as the budget year current services estimates. Current services estimates include both on- and off-budget receipts and outlays.

THE CURRENT SERVICES CONCEPT

The current services estimates are neither recommended amounts nor forecasts of what the budget results for 1987–1992 will actually be. Rather, they provide a base against which budgetary alternatives may be assessed. This base embodies the cumulative effects of all past congressional and Presidential budgetary choices. Since the estimates indicate the budgetary implications of the current directions of Federal programs, they in effect answer the question: "What would the budget be if enacted budget policy were continued unchanged?"

The guiding principle in establishing a conceptual basis for the current services estimates was to make the results useful to the Congress and the public. The current services concepts used in this analysis, and in previous current services estimates submitted by the Executive Branch, are not the only ones possible. Different concepts may be useful for different purposes. The current services estimates presented in this analysis generally reflect the expected costs of continuing ongoing Federal programs at 1987 levels in real terms, without policy change; that is, they omit all proposed new legislative initiatives, presidential or congressional, that are not now enacted. (The major exceptions to this approach are described below.) In general, the 1987 level on which the current services estimates are based is that which is authorized or implied by enacted 1987 appropriations or substantive legislation as modified by administrative actions anticipated to be in place before the end of 1987. The estimates allow for the future implications of current law and final regulations, and for anticipated changes of a relatively uncontrollable nature (as distinct from policy changes) such as increases in the number of medicare beneficiaries.

The current services estimates are based on the same economic assumptions as the President's budget proposals. Changes in economic conditions significantly affect budget estimates because of their effects on tax receipts, unemployment benefits, interest on the Federal debt, and other programs under which spending varies with the unemployment, interest, or inflation rates. As a result, if different economic assumptions were used, it would be very difficult to separate the effects of policy differences from the effects of differences in the economic assumptions.

The economic assumptions assume that all the President's budget proposals will be adopted. Continuation of all programs and tax laws unchanged at current services levels would result in different economic conditions than would occur under the budget proposals. The economic assumptions common to the budget and the current services estimates are summarized in table A–1. For further details and discussion of the sensitivity of the estimates to the selected economic assumptions, see Part 3 of the *Budget of the United States Government, Fiscal Year 1988—Supplement.*

The current services estimates reflect the effects of inflation on virtually all budget accounts, including discretionary programs. The current services estimates thus provide a "constant real program" base against which to measure the President's budget proposals. To facilitate the comparison between the current services estimates and the President's budget proposals, the current services estimates are presented in the same account structure as the budget, even if legislation is required to effect any structural changes that may be proposed in the budget.

Specific guidelines for this year's detailed programmatic estimates are:

—For the Department of Defense—Military and other programs in the national defense function, the current services budget

Table A-1. **SUMMARY OF ECONOMIC ASSUMPTIONS**

(Fiscal years)

	1986	1987	1988	1989	1990	1991	1992
Gross national product (in billions of current dollars)	4,163	4,419	4,731	5,076	5,434	5,790	6,133
Change in constant dollar GNP (percent change, year over year)	2.7	2.9	3.4	3.7	3.6	3.6	3.4
Inflation measures (percent change, year over year):							
GNP deflator	2.9	3.1	3.5	3.5	3.3	2.9	2.4
Consumer Price Index	2.2	2.3	3.7	3.6	3.4	2.9	2.4
Federal construction deflator	2.5	2.9	3.3	3.3	3.1	2.7	2.3
State and local purchases deflator	4.0	3.3	3.7	3.7	3.5	3.0	2.5
Unemployment rate (percent, annual average)	6.9	6.7	6.4	6.1	5.8	5.6	5.5
Interest rate, 91-day Treasury bills (percent)	6.4	5.4	5.5	5.4	4.9	4.3	3.8
Interest rate, 10-year Treasury notes (percent)	8.3	6.9	6.6	6.3	5.6	5.1	4.6
ADDENDUM							
Federal pay raise (percent): [1]							
Military	[2] 3.0	3.0	4.0	4.3	4.6	4.5	4.2
Civilian	0.0	3.0	2.0	3.0	3.0	3.0	3.0

[1] All pay raises are effective on January 1, unless otherwise noted.
[2] Effective October 1, 1985.

authority and outlay levels are the same as those proposed by the President. The budget authority for 1988 represents a 3-percent increase in real terms over the 1987 enacted level. A lesser amount, such as zero real growth, would not provide adequate funding to carry out the decisions Congress has already made. Defining current services as being zero real growth would cause additional problems if the 1987 program mix was simply extended through the projection period. This approach would ignore the shift toward faster spending accounts that is occurring. For more discussion of the defense current services concept, see Part 3 of the *Budget of the United States, Fiscal Year 1988.*

—For entitlement programs (such as social security), the current services estimates take into account changes in the benefit base (usually determined by past earnings), and changes in the anticipated numbers of beneficiaries. In addition, inflation adjustments are applied where mandatory under current law or required to maintain real program level.

—The impact of regulations that are required to be issued under current law in order to set specific program parameters (such as Commodity Credit Corporation price support levels) is included in current services at the level assumed in the President's Budget. The impact of all other proposed regulations is not reflected in current services.

—Individual grants to State and local governments are assumed to support the same program levels or to be funded at the same real (constant-dollar) amounts as in 1987 unless the grants are: (a) set by law at specified amounts; (b) tied by legislation to cost-of-living increases or the unemployment rate; (c) affected by changes in beneficiary populations or other factors that alter benefit payments under entitlement programs; or (d) affected by spending from prior-year commitments (for example, highway grants).

—Procurement and construction activities are assumed to proceed in an orderly fashion, consistent with current law and past appropriation levels. Outlays for these programs are largely determined by prior-year contracts and obligations. Some appropriations provide for anticipated inflation in the cost of multiyear projects. In other cases, however, current services estimates may reflect constraints on spending levels imposed by available funding.

—As already set by law, the 1987 Federal pay was 3 percent for civilians and military personnel. Absorption of the increased costs associated with the pay raise is assumed to be at the level proposed by the President. For 1988 through 1992, Federal pay is assumed to increase at the same rates as assumed in the President's Budget. The President's final recommendation on pay, issued in August of each year, is implemented unless overturned by Congress. The pay raise assumptions are shown in table A–1. In 1987, absorption of the increased costs associated with the new Federal employee retirement system is also assumed to be at the level proposed by the President. For 1988 through 1992, the full cost of the new system is incorporated.

—Interest on the public debt is estimated on the basis of the current services deficits and the interest rate assumptions shown in Table A–1.

—Offsetting receipts are estimated on the basis of judgment as to their most likely level, assuming no change in current law.

—Budget authority for certain major trust funds consists of trust fund receipts. These are estimated using standard revenue estimating techniques.

—Proposed rescissions of nondefense budget authority and discretionary nondefense program supplementals are not reflected.

—It is assumed that deferral actions continue in effect for the period specified in the special message transmitted to the Congress under the Impoundment Control Act of 1974 (unless they have been overturned by the Congress).

Many Federal programs are authorized for a limited number of years, but are routinely renewed. If authority for such a program is scheduled to expire before or during the projection period, it is generally assumed for purposes of current services estimates that it will be renewed and that budget authority will be held constant in real terms. Programs that are clearly temporary in nature, such as temporary study commissions, are assumed to expire.

The estimates of receipts on a current services basis assume that future tax changes will occur as scheduled under current law. Provisions that are clearly temporary in nature are assumed to expire. Airport and airway trust fund taxes, highway trust fund taxes, and hazardous substance response trust fund taxes scheduled to expire under current law are assumed to be extended at present rates.

Current Services Totals

As shown in Table A–2, current services outlays are estimated to be $1,060.5 billion in 1988, 4.3 percent higher than in 1987, and budget authority is estimated to be $1,172.2 billion, an increase of 6.3 percent over 1987. Outlays are projected to grow at an average annual rate of 4.4 percent from 1988 to 1992. Receipts for 1988 are estimated to increase 8.1 percent on a current services basis, from $842.3 billion in 1987 to $910.4 billion in 1988. Receipts are projected to grow at an average annual rate of 6.8 percent from 1988 to 1992. The resulting 1988 current services deficit is $150.1 billion, $24.4 billion lower than the $174.5 billion deficit for 1987. The deficit is projected to decline further each year, falling to $78.3 billion in 1992.

Table A–2. **CURRENT SERVICES TOTALS**

(In billions of dollars)

	1986 actual	1987	1988	1989	1990	1991	1992
Budget authority	1,072.8	1,102.6	1,172.2	1,251.8	1,323.0	1,410.6	1,460.8
(On-budget)	(883.2)	(888.5)	(930.5)	(988.9)	(1,037.0)	(1,103.6)	(1,136.2)
(Off-budget)	(189.6)	(214.0)	(241.7)	(262.8)	(286.0)	(307.1)	(324.6)
Receipts	769.1	842.3	910.4	968.2	1,039.7	1,114.3	1,182.3
(On-budget)	(568.9)	(628.3)	(668.7)	(705.3)	(753.6)	(807.3)	(857.7)
(Off-budget)	(200.2)	(214.0)	(241.7)	(262.8)	(286.0)	(307.1)	(324.6)
Outlays	989.8	1016.8	1,060.5	1,115.1	1,165.4	1,215.5	1,260.6
(On-budget)	(806.3)	(822.3)	(857.9)	(903.0)	(942.5)	(981.5)	(1,016.0)
(Off-budget)	(183.5)	(194.5)	(202.7)	(212.1)	(223.0)	(234.0)	(244.6)
Surplus or deficit (–)	–220.7	–174.5	–150.1	–146.9	–125.7	–101.2	–78.3
(On-budget)	(–237.5)	(–194.0)	(–189.2)	(–197.7)	(–188.8)	(–174.3)	(–158.3)
(Off-budget)	(16.7)	(19.5)	(39.0)	(50.8)	(63.1)	(73.1)	(80.0)

Receipts.—Table A–3 shows receipts by major source on a current services basis. Current services receipts are projected to increase by $68.1 billion from 1987 to 1988 and by $271.9 billion from 1988 to 1992, largely due to assumed increases in incomes resulting from both real economic growth and inflation.

Individual income taxes are estimated to increase by $27.7 billion from 1987 to 1988 on a current services basis. This growth of 7.6 percent is the net effect of increased collections resulting from rising personal incomes, partially offset by the reductions provided in the Tax Reform Act of 1986. Individual income taxes are projected to grow at an average annual rate of 7.5 percent between 1988 and 1992, to $522.3 billion.

Corporation income taxes on a current services basis are estimated to grow by $11.4 billion or 10.9 percent from 1987 to 1988, in large part due to higher corporate profits. Corporation income taxes are projected to increase at an average annual rate of 8.1 percent from 1988 to 1992.

Table A-3. **CURRENT SERVICES RECEIPTS BY SOURCE**

(In billions of dollars)

	1986 actual	1987	1988	1989	1990	1991	1992
Individual income taxes	349.0	364.0	391.7	415.9	449.5	487.6	522.3
Corporation income taxes	63.1	104.8	116.2	127.1	138.3	147.6	158.8
Social insurance taxes and contributions	283.9	301.5	330.7	353.8	380.5	406.3	427.6
(On-budget)	(83.7)	(87.4)	(89.0)	(91.0)	(94.4)	(99.2)	(103.1)
(Off-budget)	(200.2)	(214.0)	(241.7)	(262.8)	(286.0)	(307.1)	(324.6)
Excise taxes	32.9	32.6	32.2	31.6	32.4	33.1	33.9
Other	40.2	39.5	39.5	39.7	39.1	39.8	39.6
Total	**769.1**	**842.3**	**910.4**	**968.2**	**1,039.7**	**1,114.3**	**1,182.3**
(On-budget)	(568.9)	(628.3)	(668.7)	(705.3)	(753.6)	(807.3)	(857.7)
(Off-budget)	(200.2)	(214.0)	(241.7)	(262.8)	(286.0)	(307.1)	(324.6)

Social insurance taxes and contributions are estimated to increase by $29.3 billion on a current services basis between 1987 and 1988, and by an additional $96.9 billion between 1988 and 1992. The estimates reflect assumed increases in total wages and salaries paid; scheduled increases in the combined employer-employee social security (OASDHI) tax rate from 14.3 percent to 15.02 percent on January 1, 1988 and to 15.3 percent on January 1, 1990; and annual increases in the social security taxable earnings base to $55,800 in 1992.

On a current services basis, excise taxes are estimated to decrease by $0.4 billion or 1.1 percent from 1987 to 1988 and are estimated to increase by $1.7 billion from 1988 to 1992. The decrease between 1987 and 1988 is in large part due to expiration of the telephone excise tax on December 31, 1987. The estimates for 1988–92 assume extension of the airport and airway trust fund taxes scheduled to expire December 31, 1987, the highway trust fund taxes scheduled to expire September 30, 1988, and the hazardous substance response trust fund taxes scheduled to expire September 30, 1991.

Other receipts (estate and gift taxes, customs duties, and miscellaneous receipts) are projected to increase on a current services basis by $0.2 billion from 1987 to 1992.

Outlays.—The level of outlays necessary to continue ongoing Federal programs and activities at current services levels is estimated at $1,060.5 billion in 1988. The increase in current services outlays from 1987 to 1988 is $43.7 billion, or 4.3 percent. Between 1988 and 1992 current services outlays are projected to increase at an average annual rate of 4.4 percent.

Table A–4 shows current services outlays by function. Estimates by agency are presented in table A–5. The nondefense outlay increases from 1987 to 1988 are largely due to increases in the number of beneficiaries, cost-of-living adjustments, increases in the prices of goods and services purchased or financed and, in the case of interest, increased borrowing requirements.

Table A–6 shows the major components of the changes in current services outlays between 1987 and 1988. Outlays for social security (OASDI) are estimated to increase by $11.6 billion between 1987 and 1988, from $207.9 billion in 1987 to $219.5 billion in 1988. Medicare outlays are estimated to increase by $6.6 billion, from $71.6 billion in 1987 to $78.2 billion in 1988, largely as a result of increases in medical care prices and utilization. Outlays for income security programs are estimated to rise by $4.5 billion, from $125.0 billion in 1987 to $129.5 billion in 1988. This increase includes a $1.4 billion increase in the earned income tax credit, resulting from the Tax Reform Act of 1986, and a $1.4 billion increase for supplemental security income, resulting from an automatic cost-of-living adjustment and increases in the number of beneficiaries. Outlays for the remaining income security programs are estimated to grow by $1.7 billion on net. Table A–7 shows caseload projections for these and other major benefit programs and other selected programmatic assumptions.

Outlays in the national defense function increase $15.3 billion from 1987 to 1988 from spending approved in prior years and assumed real growth in budget authority. The decline of $4.5 billion for the agriculture function between 1987 and 1988 results primarily from a decrease in estimated outlays required for farm price supports and related Commodity Credit Corporation programs. Undistributed offsetting receipts increase by $3.8 billion largely as a result of increased agency contributions for employee retirement required for the new Federal employee retirement system. These receipts offset higher outlays included in the other functions.

Other large changes in current services outlays between 1987 and 1988 are a $3.2 billion decrease in commerce and housing credit primarily from reduced Federal Deposit Insurance Corpora-

Table A–4. **CURRENT SERVICES OUTLAYS BY FUNCTION**

(In billions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals	1988 differences
National defense:					
Department of Defense—Military	265.6	274.2	289.3	289.3	
Other	7.7	8.0	8.3	8.3	
International affairs	14.2	14.7	16.8	15.2	−1.6
General science, space, and technology	9.0	9.5	11.1	11.4	0.4
Energy	4.7	4.0	6.2	3.3	−2.9
Natural resources, and environment	13.6	14.1	15.7	14.2	−1.4
Agriculture	31.4	31.1	26.6	26.3	−0.3
Commerce and housing credit	4.4	10.1	6.9	2.5	−4.4
Transportation	28.1	26.8	26.9	25.5	−1.4
Community and regional development	7.2	6.3	6.7	5.5	−1.2
Education, training, employment, and social services	30.6	30.3	32.7	28.4	−4.2
Health	35.9	40.0	42.0	38.9	−3.2
Medicare	70.2	71.6	78.2	73.0	−5.2
Income security	119.8	125.0	129.5	124.8	−4.7
Social security	198.8	207.9	219.5	219.4	−0.1
On-budget	*(8.1)*	*(5.0)*	*(4.9)*	*(4.9)*	*(−*)*
Off-budget	*(190.7)*	*(202.9)*	*(214.6)*	*(214.5)*	*(−0.1)*
Veterans benefits and services	26.4	26.8	27.5	27.2	−0.3
Administration of justice	6.6	8.2	8.9	9.2	0.3
General government	6.1	6.7	7.2	7.5	0.3
General purpose fiscal assistance	6.4	1.9	1.8	1.5	−0.4
Net interest	136.0	136.6	139.0	139.0	0.1
On-budget	*(140.3)*	*(141.6)*	*(145.5)*	*(145.6)*	*(0.1)*
Off-budget	*(−4.3)*	*(−5.1)*	*(−6.6)*	*(−6.6)*	*(−*)*
Allowances:					
Civilian agency pay raises			0.7	0.7	
Savings from reform of Davis-Bacon and Service Contract Act				−*	−*
Credit reform initiative				−1.3	−1.3
Proposed change in Goverment contribution for employee health benefits				−0.1	−0.1
Undistributed offsetting receipts:					
Employer share, employee retirement (on-budget)	−25.4	−28.0	−31.8	−32.1	−0.3
Employer share, employee retirement (off-budget)	−2.9	−3.3	−5.4	−5.5	−0.1
Rents and royalties on the Outer Continental Shelf	−4.7	−3.9	−3.7	−3.7	
Sale of major assets		−1.9		−4.1	−4.1
Total Undistributed offsetting receipts	−33.0	−37.1	−40.9	−45.4	−4.5
On-budget	*(−30.2)*	*(−33.8)*	*(−35.5)*	*(−39.9)*	*(−4.4)*
Off-budget	*(−2.9)*	*(−3.3)*	*(−5.4)*	*(−5.5)*	*(−0.1)*
Total outlays	**989.8**	**1,016.8**	**1,060.5**	**1,024.3**	**−36.2**
On-budget	*(806.3)*	*(822.3)*	*(857.9)*	*(821.9)*	*(−36.0)*
Off-budget	*(183.5)*	*(194.5)*	*(202.7)*	*(202.4)*	*(−0.2)*

* $50 million or less.

tion and Federal Savings and Loan Corporation outlays, a $1.5 billion increase in medicaid and a $0.7 billion increase in allowances for the 1988 civilian agency pay raise.

The estimated 1988 current services deficit of $150.1 billion would add a like amount to the Federal debt. Primarily because of this increase in debt, net interest outlays would increase by $2.4 billion between 1987 and 1988 under current services assumptions.

Table A-5. **CURRENT SERVICES OUTLAYS BY AGENCY**

(In billions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals	1988 difference
Legislative Branch	1.7	2.1	2.1	2.2	0.1
The Judiciary	1.1	1.2	1.3	1.4	0.1
Executive Office of the President	0.1	0.1	0.1	0.1	*
Funds Appropriated to the President	11.4	12.1	12.3	11.2	−1.1
Department of Agriculture	58.7	56.3	58.0	50.7	−7.3
Department of Commerce	2.1	2.5	2.5	2.3	−0.2
Department of Defense—Military	265.6	274.2	289.3	289.3	....
Department of Defense—Civil	20.3	20.9	22.2	22.1	−0.1
Department of Education	17.7	17.2	18.8	14.7	−4.1
Department of Energy	11.0	10.7	10.8	10.2	−0.6
Department of Health and Human Services, except Social Security	143.3	145.6	155.8	146.8	−9.0
Department of Health and Human Services, Social Security	190.7	202.9	214.6	214.5	−0.1
Department of Housing and Urban Development	14.1	14.7	15.6	13.9	−1.7
Department of the Interior	4.8	5.3	5.1	4.4	−0.7
Department of Justice	3.8	4.7	5.1	5.8	0.6
Department of Labor	24.1	24.5	24.5	25.4	0.9
Department of State	2.9	3.2	3.3	3.6	0.3
Department of Transportation	27.4	26.0	26.0	24.6	−1.4
Department of the Treasury	179.2	179.3	187.4	187.3	−0.2
Environmental Protection Agency	4.9	4.6	4.8	4.6	−0.2
General Services Administration	0.2	−0.1	*	−0.4	−0.5
National Aeronautics and Space Administration	7.4	7.9	9.4	9.5	0.2
Office of Personnel Management	24.0	27.7	28.8	26.8	−2.0
Small Business Administration	0.6	0.1	0.2	−0.3	−0.5
Veterans Administration	26.5	27.0	27.4	27.0	−0.3
Other Independent Agencies	11.4	17.9	13.6	11.5	−2.1
Allowances:					
Civilian agency pay raises	....	....	0.7	0.7	....
Savings from reform of Davis-Bacon and Service Contract Acts	....	....	....	−*	−*
Credit reform initiative	....	....	....	−1.3	−1.3
Proposed changes in Government contributions for employee health benefits	....	....	....	−0.1	−0.1
Undistributed offsetting receipts:					
Interest received by on-budget trust funds	−26.6	−28.7	−31.4	−31.6	−0.2
Interest received by off-budget trust funds	−4.3	−5.1	−6.6	−6.6	−*
Interest received by OCS escrow account	−1.1	−0.9	−0.6	−0.6	....
Employer share, employee retirement (on-budget)	−25.4	−28.0	−31.8	−32.1	−0.3
Employer share, employee retirement (off-budget)	−2.9	−3.3	−5.4	−5.5	−0.1
Rents and royalties on the Outer Continental Shelf	−4.7	−3.9	−3.7	−3.7	....
Sale of major assets	....	−1.9	....	−4.1	−4.1
Total Undistributed offsetting receipts	−65.0	−71.8	−79.4	−84.2	−4.8
On-budget	*(−57.8)*	*(−63.4)*	*(−67.5)*	*(−72.1)*	*(−4.7)*
Off-budget	*(−7.2)*	*(−8.4)*	*(−12.0)*	*(−12.1)*	*(−0.1)*
Total outlays	**989.8**	**1,016.8**	**1,060.5**	**1,024.3**	**−36.2**
On-budget	*(806.3)*	*(822.3)*	*(857.9)*	*(821.9)*	*(−36.0)*
Off-budget	*(183.5)*	*(194.5)*	*(202.7)*	*(202.4)*	*(−0.2)*

* $50 million or less.

Budget Authority.—Current services budget authority is estimated to total $1,172.2 billion in 1988, $69.6 billion more than in 1987. Increases in budget authority between 1987 and 1988 generally reflect the higher funding levels that would be necessary to main-

Table A–6. **CHANGE IN CURRENT SERVICES BUDGET AUTHORITY AND OUTLAYS, 1987 TO 1988**

(In billions of dollars)

	Budget authority	Outlays
1987 current services estimate	**1,102.6**	**1,016.8**
(On-budget)	(888.5)	(822.3)
(Off-budget)	(214.0)	(194.5)
Changes:		
National defense	19.0	15.3
Social security	31.2	11.6
Medicare	4.9	6.6
Income security:		
General retirement and disability (excluding social security)	0.3	0.2
Federal employee retirement and disability	4.9	0.9
Unemployment compensation	−3.5	−0.3
Housing assistance	−*	0.7
Food and nutrition assistance	0.5	0.4
Other income security programs	2.8	2.5
Subtotal, income security	5.0	4.5
International affairs	0.4	2.1
General science, space, and technology	−1.2	1.5
Energy programs	3.0	2.2
Natural resources and environment	3.4	1.6
Agriculture	−4.4	−4.5
Commerce and housing credit	0.6	−3.2
Transportation programs	2.3	0.1
Community and regional development	−0.3	0.4
Education	1.2	1.8
Training and Employment	*	−*
Social and other labor services	1.2	0.6
Medicaid	1.5	1.5
Other health programs	0.5	0.6
Veterans programs	0.6	0.7
Net interest	2.4	2.4
Allowances for civilian agency pay raises	0.7	0.7
Undistributed offsetting receipts	−3.8	−3.8
All other programs, net	1.3	1.1
Subtotal, changes	**69.6**	**43.7**
(On-budget)	(41.9)	(35.5)
(Off-budget)	(27.7)	(8.2)
1988 current services estimate	**1,172.2**	**1,060.5**
(On-budget)	(930.5)	(857.9)
(Off-budget)	(241.7)	(202.7)

* $50 million or less.

tain 1987 program levels in real terms in 1988. In the case of most trust funds, however, the funds' receipts automatically become budget authority; thus increases in budget authority for these funds simply reflect year-to-year growth in expected receipts. Budget authority for some programs displays erratic year-to-year changes due to sporadic funding patterns or advance funding.

Tables A–8 and A–9 show the estimates of current services budget authority by function and by agency, respectively. The major components of the changes in current services budget authority between 1986 and 1987 are also shown in table A–6.

Table A–7. **PROGRAMMATIC ASSUMPTIONS**

	Fiscal years					
	1987	1988	1989	1990	1991	1992
Beneficiaries (annual average, in thousands):						
Social security (OASDI) [1]	37,877	38,496	39,052	39,660	40,334	40,935
Railroad retirement	935	922	909	894	879	862
Federal civil service retirement	2,054	2,101	2,148	2,195	2,242	2,289
Military retirement	1,526	1,557	1,587	1,614	1,643	1,673
Veterans compensation	2,546	2,525	2,503	2,480	2,457	2,433
Veterans pensions	1,304	1,235	1,176	1,124	1,081	1,055
Disabled coal miners programs	357	337	318	298	280	264
Supplemental security income [2]	4,280	4,388	4,487	4,582	4,669	4,752
Maintenance assistance (AFDC)	11,010	11,012	11,042	11,095	11,167	11,241
Food stamps	19,447	19,301	19,002	18,635	18,359	18,154
HUD Housing subsidy recipients (households)	4,196	4,376	4,488	4,583	4,467	4,764
Medicaid	23,346	23,787	23,959	24,161	24,332	24,538
Medicare:						
Hospital insurance	31,400	31,998	32,602	33,209	33,782	34,309
Supplementary medical insurance	31,041	31,617	32,230	32,822	33,364	33,901
Automatic benefit increases (percent):						
Social security and veterans pensions (January)	1.3	3.5	3.6	3.6	3.1	2.7
Federal employee retirement (January)	1.3	3.5	3.6	3.6	3.1	2.7
Food stamps (October)	2.3	3.6	3.6	3.1	2.7	2.1
Unemployment rate (percent, annual average):						
Total	6.8	6.4	6.1	5.8	5.6	5.5
Insured [3]	2.7	2.5	2.3	2.2	2.1	2.0
Strategic petroleum reserves annual fill rate (millions of barrels)	27.4	27.4	27.4	27.4	27.4	27.4

[1] In current pay status as of June.
[2] Includes those receiving federally administered State supplements.
[3] This measures unemployment under State regular unemployment insurance as a percentage of covered employment under that program. It does not include recipients of extended benefits under that program.

An increase in budget authority of $31.2 billion for social security is primarily due to higher social security trust fund receipts. Budget authority for the national defense function increases by $19.0 billion to reach 3 percent real growth level above the 1987 enacted level. Other major changes in current services budget authority include a $4.9 billion increase for Federal employee retirement and disability, a $4.9 billion increase for medicare, and a $4.4 billion decrease in agriculture programs.

Change in Current Services Since Release of the 1987 Budget.— When the 1987 Budget was released in February, 1986, the current services deficit for 1987 was estimated to be $182 billion. These projections were based on the 1986 continuing resolution and enacted law at the time they were issued. The current estimate for 1987 is $175 billion, or $7 billion less. The major reasons for the decline are the following. The net effect of changes in the national defense function have reduced the estimate of the 1987 deficit by $3 billion since last February. Changes in economic assumptions

Table A-8. **CURRENT SERVICES BUDGET AUTHORITY BY FUNCTION**

(In billions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals	1988 differences
National defense:					
Department of Defense—Military	281.4	284.9	303.3	303.3	....
Other	7.8	8.0	8.7	8.7	....
International affairs	16.7	16.8	17.1	19.1	1.9
General science, space, and technology	9.3	12.2	11.0	11.5	0.5
Energy	6.0	3.7	6.7	2.5	−4.2
Natural resources, and environment	11.7	13.1	16.5	14.1	−2.4
Agriculture	29.9	27.3	22.9	22.2	−0.7
Commerce and housing credit	11.0	8.6	9.2	8.8	−0.5
Transportation	28.9	26.9	29.2	24.6	−4.6
Community and regional development	6.9	7.5	7.1	5.3	−1.9
Education, training, employment, and social services	30.3	32.9	35.3	28.8	−6.5
Health	36.6	40.2	42.2	41.4	−0.8
Medicare	87.2	88.9	93.8	94.4	0.6
Income security	158.0	160.6	165.6	160.2	−5.4
Social security	201.7	227.4	258.5	259.1	0.5
On-budget	*(4.9)*	*(5.0)*	*(4.9)*	*(4.9)*	*(−*)*
Off-budget	*(196.8)*	*(222.4)*	*(253.7)*	*(254.2)*	*(0.5)*
Veterans benefits and services	27.2	27.2	27.8	27.7	−0.2
Administration of justice	6.8	8.6	8.9	9.0	0.1
General government	6.8	6.8	7.4	7.5	0.1
General purpose fiscal assistance	5.8	1.6	1.9	1.5	−0.4
Net interest	136.0	136.6	139.0	139.0	0.1
On-budget	*(140.3)*	*(141.6)*	*(145.5)*	*(145.6)*	*(0.1)*
Off-budget	*(−4.3)*	*(−5.1)*	*(−6.6)*	*(−6.6)*	*(−*)*
Allowances:					
Civilian agency pay raises	....	....	0.7	0.7	....
Savings from reform of Davis-Bacon and Service Contract Act	....	....	....	−0.2	−0.2
Credit reform initiative	....	....	....	−1.3	−1.3
Proposed change in Goverment contribution for employee health benefits	....	....	....	−0.1	−0.1
Undistributed offsetting receipts:					
Employer share, employee retirement (on-budget)	−25.4	−28.0	−31.8	−32.1	−0.3
Employer share, employee retirement (off-budget)	−2.9	−3.3	−5.4	−5.5	−0.1
Rents and royalties on the Outer Continental Shelf	−4.7	−3.9	−3.7	−3.7	....
Sale of major assets	....	−1.9	....	−4.1	−4.1
Total Undistributed offsetting receipts	−33.0	−37.1	−40.9	−45.4	−4.5
On-budget	*(−30.2)*	*(−33.8)*	*(−35.5)*	*(−39.9)*	*(−4.4)*
Off-budget	*(−2.9)*	*(−3.3)*	*(−5.4)*	*(−5.5)*	*(−0.1)*
Total budget authority	**1,072.8**	**1,102.6**	**1,172.2**	**1,142.2**	**−30.0**
On-budget	*(883.2)*	*(888.5)*	*(930.5)*	*(900.1)*	*(−30.4)*
Off-budget	*(189.6)*	*(214.0)*	*(241.7)*	*(242.1)*	*(0.4)*

*$50 million or less.

have increased the deficit by approximately $17 billion, from the net effect of reducing receipts due primarily to lower real growth and reducing outlays due primarily to lower inflation and interest rates. Nondefense policy changes have reduced the 1987 deficit by approximately $34 billion, mostly from one time savings including the Tax Reform Act of 1986, mandated asset sales and loan prepayments, and timing adjustments for medicare payments and Outer

Table A–9. **CURRENT SERVICES BUDGET AUTHORITY BY AGENCY**

(In billions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals	1988 difference
Legislative Branch	1.7	1.9	2.1	2.2	0.1
The Judiciary	1.0	1.2	1.4	1.5	0.1
Executive Office of the President	0.1	0.1	0.1	0.1	*
Funds Appropriated to the President	11.1	11.5	11.6	13.1	1.4
Department of Agriculture	59.2	55.5	56.0	49.0	−7.0
Department of Commerce	2.0	2.2	2.5	2.1	−0.4
Department of Defense—Military	281.4	284.9	303.3	303.3	....
Department of Defense—Civil	32.7	34.5	36.5	36.7	0.2
Department of Education	17.9	19.5	20.7	14.0	−6.7
Department of Energy	10.6	9.8	11.5	10.5	−0.9
Department of Health and Human Services, except Social Security	156.5	163.4	172.0	171.0	−1.0
Department of Health and Human Services, Social Security	196.8	222.4	253.7	254.2	0.5
Department of Housing and Urban Development	15.9	15.2	15.7	10.2	−5.5
Department of the Interior	4.6	4.9	5.1	4.4	−0.7
Department of Justice	3.9	5.1	5.2	5.6	0.5
Department of Labor	28.8	29.4	26.6	28.3	1.7
Department of State	4.0	3.7	3.7	4.3	0.6
Department of Transportation	28.1	26.0	28.3	23.6	−4.7
Department of the Treasury	179.7	179.4	187.5	187.1	−0.4
Environmental Protection Agency	3.4	4.1	5.5	4.6	−0.9
General Services Administration	0.3	0.1	0.2	−0.2	−0.4
National Aeronautics and Space Administration	7.8	10.5	9.3	9.5	0.2
Office of Personnel Management	44.2	44.8	47.4	47.0	−0.4
Small Business Administration	0.7	0.5	0.6	0.4	−0.2
Veterans Administration	27.1	27.1	27.7	27.6	−0.2
Other Independent Agencies	18.2	16.6	16.6	17.0	0.4
Allowances:					
Civilian agency pay raises	....	....	0.7	0.7	....
Savings from reform of Davis-Bacon and Service Contract Acts	....	....	....	−0.2	−0.2
Credit reform initiative	....	....	....	−1.3	−1.3
Proposed changes in Government contributions for employee health benefits	....	....	....	−0.1	−0.1
Undistributed offsetting receipts:					
Interest received by on-budget trust funds	−26.6	−28.7	−31.4	−31.6	−0.2
Interest received by off-budget trust funds	−4.3	−5.1	−6.6	−6.6	−*
Interest received by OCS escrow account	−1.1	−0.9	−0.6	−0.6	....
Employer share, employee retirement (on-budget)	−25.4	−28.0	−31.8	−32.1	−0.3
Employer share, employee retirement (off-budget)	−2.9	−3.3	−5.4	−5.5	−0.1
Rents and royalties on the Outer Continental Shelf	−4.7	−3.9	−3.7	−3.7	....
Sale of major assets	....	−1.9	....	−4.1	−4.1
Total Undistributed offsetting receipts	−65.0	−71.8	−79.4	−84.2	−4.8
On-budget	*(−57.8)*	*(−63.4)*	*(−67.5)*	*(−72.1)*	*(−4.7)*
Off-budget	*(−7.2)*	*(−8.4)*	*(−12.0)*	*(−12.1)*	*(−0.1)*
Total budget authority	**1,072.8**	**1,102.6**	**1,172.2**	**1,142.2**	**−30.0**
On-budget	*(883.2)*	*(888.5)*	*(930.5)*	*(900.1)*	*(−30.4)*
Off-budget	*(189.6)*	*(214.0)*	*(241.7)*	*(242.1)*	*(0.4)*

* $50 million or less.

Continental Shelf receipts. Technical reestimates account for the remaining $13 billion increase in the 1987 current service deficit.

Differences Between Current Services and the Budget

The differences between the administration's budget proposals and the current services estimates are summarized in Table A–10. The administration's proposals would reduce the current services budget deficit by $42.4 billion in 1988 and would reduce the 1992 deficit by $90.6 billion. Between 1987 and 1992, the cumulative deficit reductions proposed by the administration total $334.5 billion. Receipts proposals would reduce the deficit by a total of $40.6 billion, whereas proposed outlay reductions would reduce the deficit by $294.0 billion. As shown in Table A–11, cumulative increases for international affairs, space and science, and administration of justice are $9.7 billion. Reductions to human resources programs account for $154.6 billion or 46% of the cumulative reduction in total deficits. Reductions in other domestic programs account for $126.3 billion or 38% of the total deficit reduction. Net interest savings from all of the reductions during 1987–1992 total $22.7 billion.

Table A–10. **SUMMARY OF CURRENT SERVICES AND PROPOSED BUDGET TOTALS**

(In billions of dollars)

	1986 actual	Estimate					
		1987	1988	1989	1990	1991	1992
Receipts:							
Current services	769.1	842.3	910.4	968.2	1,039.7	1,114.3	1,182.3
Effect of proposals	....	0.1	6.1	8.0	8.6	8.8	8.9
Administration budget	769.1	842.4	916.6	976.2	1,048.3	1,123.2	1,191.2
Total outlays:							
Current services	989.8	1,016.8	1,060.5	1,115.1	1,165.4	1,215.5	1,260.6
Effect of proposals	....	−1.3	−36.2	−46.1	−57.6	−71.1	−81.7
Administration budget	989.8	1,015.6	1,024.3	1,069.0	1,107.8	1,144.4	1,178.9
Total surplus or deficit (−):							
Current services	−220.7	−174.5	−150.1	−146.9	−125.7	−101.2	−78.3
Effect of proposals	....	1.3	42.4	54.2	66.2	79.9	90.6
Administration budget	−220.7	−173.2	−107.8	−92.8	−59.5	−21.3	12.3

Table A-11. **COMPOSITION OF ADMINISTRATION BUDGET PROPOSALS: CHANGE FROM CURRENT SERVICES**

(In billions of dollars)

	1987	1988	1989	1990	1991	1992	Total 1987-1992
National defense	....	....	....	....	....	....	....
International affairs, space and science, and justice	....	−0.9	1.9	2.3	3.1	3.2	9.7
Human resources [1]	−1.1	−17.8	−23.9	−31.4	−37.4	−43.0	−154.6
Net interest	0.9	0.1	−1.3	−3.7	−7.1	−11.5	−22.7
Other domestic programs	−1.1	−17.6	−22.8	−24.8	−29.7	−30.4	−126.3
Subtotal, outlays	−1.3	−36.2	−46.1	−57.6	−71.1	−81.7	−294.0
Receipts [2]	−0.1	−6.1	−8.0	−8.6	−8.8	−8.9	−40.6
Total deficit reduction	**−1.3**	**−42.4**	**−54.2**	**−66.2**	**−79.9**	**−90.6**	**−334.5**
(On-budget)	(−1.3)	(−41.7)	(−53.2)	(−65.1)	(−78.6)	(−89.2)	(−329.1)
(Off-budget)	....	(−0.6)	(−1.0)	(−1.2)	(−1.3)	(−1.4)	(−5.5)

*50 million or less.

[1] Education, training, employment and social services; Health; Medicare; Income security; Social security; and Veterans functions.

[2] Receipt increases are shown as a negative because they reduce the deficit.

Receipts.—As shown in table A-12, the administration's estimate of receipts for 1987 is only $0.1 billion greater than the current services level of $842.3 billion.

Current services receipts for 1988 are estimated at $910.4 billion. Legislative and administrative proposals, which are estimated to increase receipts to $916.6 billion, or $6.1 billion above the current services level, include the following: Internal Revenue Service (IRS) initiatives to close the gap between taxes owed and taxes paid, extension of medicare hospital insurance (HI) coverage to State and local government employees, repeal of exemptions from gasoline and other highway excise taxes, an increase in rail pension contributions, the requirement that employers pay the employer portion of the social security (OASDHI) payroll tax on total tips, an increase in the excise tax on coal production, and extension of social security (OASDHI) coverage to certain earnings. A more detailed discussion of the administration's receipts proposals is presented in the *Budget of the United States Government, Fiscal Year 1988—Supplement,* Part 4, "Federal Receipts by Source."

The administration's proposals are estimated to increase receipts above the current services level by $8.0 billion to $8.9 billion in each year, 1989-1992.

Table A–12. **DIFFERENCES BETWEEN CURRENT SERVICES AND ADMINISTRATION POLICY RECEIPTS**

(In billions of dollars)

	1987	1988	1989	1990	1991	1992
Current services receipts estimates	**842.3**	**910.4**	**968.2**	**1,039.7**	**1,114.3**	**1,182.3**
(On-budget)	(628.3)	(668.7)	(705.3)	(753.6)	(807.3)	(857.7)
(Off-budget)	(214.0)	(241.7)	(262.8)	(286.0)	(307.1)	(324.6)
Differences:						
IRS initiatives	....	2.4	3.1	3.3	3.3	3.4
Extend HI coverage to State and local employees	....	1.6	2.2	2.2	2.2	2.2
Increase contribution to rail industry pension plan	....	0.1	0.3	0.3	0.3	0.3
Require employer tax on total tips [1]	....	0.2	0.3	0.3	0.4	0.4
Repeal gasoline and other highway tax exemptions [1]	....	0.6	0.6	0.6	0.6	0.6
Increase tax on coal production [1]	....	0.3	0.3	0.3	0.3	0.3
Extend OASDHI coverage to certain earnings	....	0.3	0.3	0.4	0.4	0.4
Customs user fee [1]	*	0.1	0.1	0.5	0.5	0.5
Other	0.1	0.5	0.9	0.8	0.8	0.8
Total differences	**0.1**	**6.1**	**8.0**	**8.6**	**8.8**	**8.9**
(On-budget)	(0.1)	(5.8)	(7.5)	(8.0)	(8.1)	(8.2)
(Off-budget)	....	(0.4)	(0.6)	(0.6)	(0.7)	(0.7)
Administration policy receipts estimates	**842.4**	**916.6**	**976.2**	**1,048.3**	**1,123.2**	**1,191.2**
(On-budget)	(628.4)	(674.5)	(712.8)	(761.6)	(815.4)	(865.9)
(Off-budget)	(214.0)	(242.1)	(263.4)	(286.6)	(307.7)	(325.3)

*$50 million or less.

[1] Net of income tax offsets.

Outlays.—The total outlay change proposed by the administration is, on net, a $36 billion reduction for 1988. Of this reduction, $16 billion is from user fees, loan asset sales, privatization initiatives, and other revenue changes. The remaining $20 billion is the net effect of program reforms, increases, and reductions, and debt service. Table A–13 shows the major differences between the administration's budget request and current services for outlays by function.

A summary description of the administration's proposals is in the *Budget of the United States Government, Fiscal Year 1988—Supplement,* Part 2, "Budget Summary and Priorities."

A detailed discussion of the administration's budget authority and outlay proposals is presented in the *Budget of the United States Government, Fiscal Year 1988—Supplement,* Part 5, "Meeting National Needs: The Federal Program by Function."

Table A–13. **DIFFERENCES BETWEEN CURRENT SERVICES AND ADMINISTRATION POLICY OUTLAYS**

(Outlays; in billions of dollars)

	1987	1988	1989	1990	1991	1992
Current services estimates	**1,016.8**	**1,060.5**	**1,115.1**	**1,165.4**	**1,215.5**	**1,260.6**
(On-budget)	(822.2)	(857.9)	(903.0)	(942.5)	(981.5)	(1,016.0)
(Off-budget)	(194.5)	(202.7)	(212.1)	(223.0)	(234.0)	(244.6)
Differences:						
National defense	....	....	....	....	....	....
International affairs:						
International development and humanitarian assistance	0.1	−0.2	−0.1	−0.2	*	*
International security assistance:						
Military assistance	*	0.1	0.3	0.4	0.4	0.4
Other	−0.4	−1.3	0.7	0.6	0.4	*
Subtotal, International security assistance	−0.3	−1.2	0.9	0.9	0.8	0.4
Conduct of foreign affairs	0.2	0.4	0.4	0.5	0.6	0.5
Foreign information and exchange activities	*	0.1	0.1	0.1	0.1	0.1
International financial programs	....	−0.7	0.1	0.4	0.6	0.7
Subtotal, international affairs	−0.1	−1.6	1.4	1.7	2.0	1.7
General science, space, and technology	−*	0.4	0.4	0.7	1.1	1.5
Energy	−0.3	−2.9	−3.0	−2.7	−3.7	−3.8
Natural resources and environment	−0.2	−1.4	−1.8	−2.0	−2.2	−2.4
Agriculture:						
Farm income stabilization	....	−0.1	−4.9	−7.6	−8.3	−8.3
Agricultural research and services	−*	−0.2	−0.3	−0.3	−0.4	−0.4
Subtotal agriculture	−*	−0.3	−5.2	−7.9	−8.7	−8.7
Commerce and housing credit:						
Mortgage credit and deposit insurance	−0.8	−4.2	−3.2	−3.3	−3.1	−4.3
Postal service	....	0.3	−*	0.2	0.2	0.4
Other advancement of commerce	−*	−0.5	−0.3	0.1	−0.2	−0.4
Subtotal, commerce and housing credit	−0.8	−4.4	−3.5	−3.0	−3.1	−4.2
Transportation:						
Ground transportation	*	−1.3	−2.2	−3.3	−4.2	−4.5
Air transportation	0.1	0.1	0.3	0.4	0.3	0.3
Water transportation	0.1	−0.2	−0.3	−0.3	−0.3	−0.3
Other transportation	....	*	−*	−*	−*	−*
Subtotal, transportation	0.2	−1.4	−2.3	−3.3	−4.2	−4.5
Community and regional development	−0.1	−1.2	−3.4	−2.6	−2.4	−2.6

Table A–13. **DIFFERENCES BETWEEN CURRENT SERVICES AND ADMINISTRATION POLICY OUTLAYS—Continued**

(Outlays; in billions of dollars)

	1987	1988	1989	1990	1991	1992
Education, training, employment, and social services:						
Education	−0.3	−4.1	−6.6	−8.7	−9.9	−10.9
Training and employment	−*	0.2	0.7	0.4	0.3	0.3
Social services and other	−0.1	−0.3	−0.6	−0.8	−1.0	−1.2
Subtotal, education, training, employment, and social services	−0.5	−4.2	−6.5	−9.0	−10.6	−11.8
Health:						
Medicaid	−*	−1.4	−3.0	−4.0	−5.2	−6.6
Other health	−0.3	−1.8	−2.2	−2.6	−3.1	−3.4
Subtotal, health	−0.3	−3.2	−5.1	−6.6	−8.2	−10.0
Medicare	....	−5.2	−5.8	−8.2	−10.0	−12.0
Income security:						
General retirement and disability (excluding social security)	....	−0.4	−0.4	−0.4	−0.4	−0.4
Federal employee retirement and disability	....	−1.5	−1.7	−1.9	−2.1	−2.2
Unemployment compensation	....	−*	−0.1	−0.1	−*	−*
Housing assistance	−0.1	−0.3	−0.8	−1.3	−1.9	−1.9
Food and nutrition assistance	−0.1	−1.2	−1.3	−1.4	−1.4	−1.4
Other income security	−*	−1.3	−1.4	−1.4	−1.7	−2.0
Subtotal, income security	−0.1	−4.7	−5.8	−6.4	−7.5	−8.1
Social Security	....	−0.1	−0.2	−0.3	−0.3	−0.3
(On-budget)	....	(−*)	(−*)	(−*)	(−*)	(−*)
(Off-budget)	....	(−0.1)	(−0.2)	(−0.3)	(−0.3)	(−0.3)
Veterans benefits and services:						
Income security for veterans	....	−*	−*	−*	−*	−*
Hospital and medical care for veterans	−0.1	−0.1	−*	−*	−0.1	*
Other	−0.1	−0.3	−0.5	−0.8	−0.7	−0.7
Subtotal, veterans benefits and services	−0.2	−0.4	−0.6	−0.8	−0.8	−0.8
Administration of justice:						
Federal law enforcement activities	*	0.3	0.1	0.1	*	0.1
Federal correctional activities	*	0.1	0.2	0.2	0.3	0.3
Other	0.1	−0.1	−0.3	−0.4	−0.4	−0.4
Subtotal, administration of justice	0.1	0.3	0.1	−0.2	−0.1	*
General government:						
Central fiscal operations	0.1	0.6	0.8	0.8	0.7	0.7
Other	*	−0.4	−0.1	*	0.1	−0.3
Subtotal, general government	0.1	0.3	0.8	0.8	0.8	0.4

Table A–13. **DIFFERENCES BETWEEN CURRENT SERVICES AND ADMINISTRATION POLICY OUTLAYS—Continued**

(Outlays; in billions of dollars)

	1987	1988	1989	1990	1991	1992
General purpose fiscal assistance		−0.4	−0.4	−0.4	−0.4	−0.4
Net interest	0.9	0.1	−1.3	−3.7	−7.1	−11.5
(On-budget)	(0.9)	(0.1)	(−1.3)	(−3.6)	(−6.9)	(−11.4)
(Off-budget)		(−*)	(−*)	(−0.1)	(−0.1)	(−0.2)
Allowances		−1.4	−1.1	0.1	1.1	2.1
Undistributed offsetting receipts:						
Employer share, employee retirement		−0.4	−0.8	−1.2	−1.5	−1.7
(On-budget)		(−0.3)	(−0.6)	(−1.0)	(−1.3)	(−1.5)
(Off-budget)		(−0.1)	(−0.2)	(−0.2)	(−0.2)	(−0.2)
Rents and royalties on the Outer Continental Shelf						
Sale of major physical assets		−4.1	−2.3	−2.5	−5.4	−4.5
Subtotal, undistributed offsetting receipts		−4.5	−3.1	−3.7	−6.9	−6.2
(On-budget)		(−4.4)	(−3.0)	(−3.5)	(−6.7)	(−6.0)
(Off-budget)		(−0.1)	(−0.2)	(−0.2)	(−0.2)	(−0.2)
Total, differences	**−1.3**	**−36.2**	**−46.1**	**−57.6**	**−71.1**	**−81.7**
(On-budget)	(−1.3)	(−36.0)	(−45.7)	(−57.1)	(−70.4)	(−81.0)
(Off-budget)		(−0.2)	(−0.4)	(−0.6)	(−0.7)	(−0.7)
Administration policy estimates	**1,015.6**	**1,024.3**	**1,069.0**	**1,107.8**	**1,144.4**	**1,178.9**
(On-budget)	(821.1)	(821.9)	(857.3)	(885.4)	(911.1)	(935.1)
(Off-budget)	(194.5)	(202.4)	(211.7)	(222.4)	(233.3)	(243.9)

*$50 million or less.

The effects of the administration's budget proposals on Federal borrowing and debt held by the public are substantial. As shown in Table A–14, the budget proposals would reduce the debt held by the public in 1992 by $334.5 billion, from $2,509.2 billion to $2,174.7 billion.

Table A–14. **DIFFERENCES BETWEEN CURRENT SERVICES AND ADMINISTRATION BUDGET REQUEST BORROWING REQUIREMENTS**

(In billions of dollars)

	1987	1988	1989	1990	1991	1992
Requirements for borrowing from the public:						
Current services	163.6	149.1	146.5	125.3	100.7	77.9
Budget proposals	162.2	106.7	92.3	59.1	20.9	−12.7
Difference	1.3	42.3	54.2	66.2	79.9	90.6
End of year debt held by the public:						
Current services	1,909.7	2,058.8	2,205.3	2,330.6	2,431.4	2,509.2
Budget proposals	1,908.4	2,015.1	2,107.5	2,166.5	2,187.4	2,174.7
Difference	1.3	43.7	97.9	164.1	244.0	334.5

Tables A-15 and A-16 provide a more detailed comparison (by function, subfunction, and program) of the President's policy estimates for 1987 with the current services budget authority and outlay estimates.

Table A-15. **CURRENT SERVICES BUDGET AUTHORITY BY FUNCTION AND PROGRAM**

(In millions of dollars)

	1986 actual	Current services		1988 administration proposals
		1987 estimate	1988 estimate	
050 NATIONAL DEFENSE				
051 Department of Defense-Military:				
Military personnel	67,794	74,203	76,299	76,299
Operation and maintenance	74,888	79,674	86,065	86,065
Procurement	92,506	85,847	83,974	83,974
Research, development, test and evaluation	33,609	36,724	43,719	43,719
Military construction	5,281	5,382	6,592	6,592
Family housing	2,803	3,121	3,484	3,484
Revolving funds and other	5,262	678	1,225	1,225
Offsetting receipts	−753	−699	−750	−750
Allowances: Civilian pay raises			505	505
Allowances: Military pay raises and benefits			2,008	2,008
Allowances: Other legislation (proposed)			174	174
Subtotal, Department of Defense-Military	281,390	284,931	303,295	303,295
053 Atomic energy defense activities	7,287	7,478	8,050	8,050
054 Defense-related activities	470	518	622	622
Total budget authority	289,146	292,927	311,967	311,967
150 INTERNATIONAL AFFAIRS				
151 International development and humanitarian assistance:				
Multilateral development banks:				
Existing law	1,143	949	983	1,774
Proposed legislation				44
International organizations	261	237	239	194
Agency for International Development	2,026	2,044	2,117	2,192
P.L. 480 food aid	1,243	1,083	1,134	965
Refugee assistance	324	361	360	314
Other	220	293	303	269
Offsetting receipts	−457	−583	−572	−568
Subtotal, International development and humanitarian assistance	4,760	4,384	4,563	5,185
152 International security assistance:				
Foreign military sales credit	4,947	4,040	4,182	4,421
Military assistance	798	900	916	1,330
Economic support fund	3,762	3,600	3,674	3,600
Other	95	98	101	112
Offsetting receipts	−58	−76	−111	−111
Subtotal, International security assistance	9,543	8,562	8,762	9,352
153 Conduct of foreign affairs:				
Administration of foreign affairs	2,445	2,022	2,058	2,655
International organizations and conferences	477	420	436	506
Other	81	80	82	89
Subtotal, Conduct of foreign affairs	3,003	2,521	2,576	3,250
154 Foreign information and exchange activities	958	980	1,091	1,147
155 International financial programs:				
Foreign military sales trust fund (net)	−3,034	412	241	241
Other	1,514			

Table A–15. **CURRENT SERVICES BUDGET AUTHORITY BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals
Offsetting receipts	−87	−89	−90	−90
Subtotal, International financial programs	−1,607	323	151	151
Total budget authority	16,659	16,770	17,142	19,085
250 GENERAL SCIENCE, SPACE, AND TECHNOLOGY				
251 General science and basic research:				
National Science Foundation programs	1,472	1,636	1,685	1,898
Department of Energy general science programs	650	708	781	814
Subtotal, General science and basic research	2,121	2,345	2,466	2,712
253 Space flight	4,240	6,532	5,153	5,254
254 Space, science, applications, and technology	2,107	2,264	2,242	2,361
255 Supporting space activities	819	1,039	1,140	1,141
Total budget authority	9,286	12,180	11,002	11,468
270 ENERGY				
271 Energy supply:				
Research and development	2,070	1,697	2,374	2,187
Uranium enrichment	199			−231
Other power marketing	9	−100	−142	−142
Petroleum reserves	−565	−486	−540	−540
Nuclear waste disposal fund	131	58	−12	−12
Tennessee Valley Authority	985	1,450	213	213
Subsidies for nonconventional fuel production	3	*	*	*
Rural electric and telephone:				
Existing law	1,914	29	3,304	27
Proposed legislation				−27
Subtotal, Energy supply	4,745	2,648	5,196	1,474
272 Energy conservation:				
Energy conservation grants and R&D	426	234	288	86
Solar Energy and Energy Conservation Bank		1		
Subtotal, Energy conservation	426	235	288	86
274 Emergency energy preparedness	113	153	597	276
276 Energy information, policy, and regulation	763	662	664	676
Total budget authority	6,047	3,698	6,745	2,513
300 NATURAL RESOURCES, AND ENVIRONMENT				
301 Water resources:				
Corps of Engineers	2,774	3,354	3,507	3,503
Bureau of Reclamation	768	953	1,074	1,053
Other	298	216	225	87
Offsetting receipts	−161	−422	−462	−475
Subtotal, Water resources	3,678	4,101	4,344	4,168
302 Conservation and land management:				
Management of national forests, cooperative forestry, and forestry research (Forest Service)	1,946	1,978	2,149	1,828
Management of public lands (BLM)	470	569	578	487
Mining reclamation and enforcement	278	304	313	292
Conservation of agricultural lands	595	622	2,038	1,801
Other resources management	307	315	326	218
Offsetting receipts:				
Existing law	−2,166	−2,217	−2,336	−2,292
Proposed legislation				

Table A-15. **CURRENT SERVICES BUDGET AUTHORITY BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services: 1987 estimate	Current services: 1988 estimate	1988 administration proposals
Subtotal, Conservation and land management	1,430	1,572	3,069	2,334
303 Recreational resources:				
Federal land acquisition:				
Existing law	195	246	261	89
Proposed legislation				−30
Urban park and historic preservation funds	24	24	25	
Operation of recreational resources:				
Existing law	1,312	1,410	1,498	1,379
Proposed legislation				52
Offsetting receipts:				
Existing law	−74	−49	−84	−136
Proposed legislation				−63
Subtotal, Recreational resources	1,456	1,631	1,700	1,291
304 Pollution control and abatement:				
Regulatory, enforcement, and research programs	1,373	1,444	1,476	1,436
Hazardous substance response fund	261	1,411	1,463	1,200
Oil pollution funds (gross)	6	7	5	5
Sewage treatment plant construction grants:				
Existing law	1,774	1,200	2,500	
Proposed legislation				2,000
Leaking underground storage tank trust fund		50	52	
Offsetting receipts:				
Existing law	−16	−35	−57	−57
Proposed legislation				−40
Subtotal, Pollution control and abatement	3,399	4,077	5,439	4,544
306 Other natural resources:				
Program activities:				
Existing law	1,778	1,764	1,981	1,734
Proposed legislation				29
Offsetting receipts	−17	−15	−19	−24
Subtotal, Other natural resources	1,761	1,749	1,961	1,738
Total budget authority	11,724	13,130	16,514	14,076
350 AGRICULTURE				
351 Farm income stabilization:				
Commodity price support and related programs:				
Existing law	23,085	21,514	16,108	16,069
Proposed legislation				308
Crop insurance:				
Existing law	344	345	746	500
Proposed legislation				−157
Agricultural credit:				
Existing law	4,627	3,506	4,068	3,685
Proposed legislation				50
Other programs and unallocated overhead	9	*	*	
Subtotal, Farm income stabilization	28,065	25,365	20,922	20,456
352 Agricultural research and services:				
Research programs:				
Existing law	775	862	852	783
Proposed legislation				−*
Extension programs	328	332	345	263
Marketing programs:				
Existing law	133	134	142	140
Proposed legislation				−40
Animal and plant health programs:				
Existing law	310	308	331	303

Table A–15. **CURRENT SERVICES BUDGET AUTHORITY BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals
Proposed legislation				−86
Economic intelligence	182	188	198	200
Other programs and unallocated overhead:				
Existing law	206	211	221	247
Proposed legislation				−4
Offsetting receipts	−97	−99	−102	−102
Subtotal, Agricultural research and services	1,836	1,938	1,986	1,703
Total budget authority	29,901	27,303	22,908	22,158
370 COMMERCE AND HOUSING CREDIT				
371 Mortgage credit and deposit insurance:				
Mortgage purchase activities (GNMA)		1		
Mortgage credit (FHA and other)	137	90	473	432
Housing for the elderly or handicapped	493	506	546	
Rural housing programs (FmHA)	3,036	3,086	3,155	3,125
Federal Savings and Loan Insurance Corporation and other	3,000			
Subtotal, Mortgage credit and deposit insurance	6,666	3,683	4,175	3,557
372 Postal service:				
Existing law	2,504	3,183	3,010	2,972
Proposed legislation				376
Subtotal, Postal service	2,504	3,183	3,010	3,348
376 Other advancement of commerce:				
Small and minority business assistance	757	565	631	384
Science and technology	323	334	416	425
Economic and demographic statistics	217	298	422	511
International trade and other	493	562	592	561
Subtotal, Other advancement of commerce	1,790	1,758	2,061	1,882
Total budget authority	10,960	8,624	9,246	8,787
400 TRANSPORTATION				
401 Ground transportation:				
Highways	14,644	13,476	15,733	13,386
Highway safety	254	303	337	285
Mass transit	3,616	3,504	3,601	1,556
Railroads:				
Existing law	789	668	709	17
Proposed legislation				−9
Regulation:				
Existing law	46	47	50	48
Proposed legislation				−17
Subtotal, Ground transportation	19,349	17,997	20,430	15,265
402 Air transportation:				
Airports and airways (FAA)	4,815	4,799	5,150	5,803
Aeronautical research and technology	642	699	723	725
Air carrier subsidies	27	30		
Subtotal, Air transportation	5,484	5,528	5,873	6,529
403 Water transportation:				
Marine safety and transportation:				
Existing law	2,306	2,575	2,656	2,717
Proposed legislation				15
Proposed Coast Guard fees				−355
Ocean shipping:				
Existing law	1,609	646	109	328

Table A–15. **CURRENT SERVICES BUDGET AUTHORITY BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals
Proposed legislation				−29
Subtotal, Water transportation	3,915	3,220	2,765	2,676
407 Other transportation	115	115	131	135
Total budget authority	28,863	26,861	29,199	24,604
450 COMMUNITY AND REGIONAL DEVELOPMENT				
451 Community development:				
Community development block grants	3,023	3,000	3,111	2,510
Urban development action grants	316	225	233	
Rental rehabilitation and rental development	144	320	310	75
Other	244	241	245	227
Subtotal, Community development	3,726	3,785	3,900	2,811
452 Area and regional development:				
Rural development	1,552	2,275	1,742	1,306
Economic development assistance	216	217	214	
Indian programs	968	1,057	1,090	1,169
Regional commissions	120	108	113	1
Tennessee Valley Authority	100	100	104	73
Offsetting receipts	−273	−298	−301	−298
Subtotal, Area and regional development	2,684	3,459	2,962	2,251
453 Disaster relief and insurance:				
Disaster relief	346	120	125	125
National flood insurance fund			48	
Other	129	90	96	77
Subtotal, Disaster relief and insurance	475	210	269	202
Total budget authority	6,884	7,454	7,130	5,264
500 EDUCATION, TRAINING, EMPLOYMENT, AND SOCIAL SERVICES				
501 Elementary, secondary, and vocational education:				
Block grant and special programs:				
Existing law	675	935	969	175
Proposed legislation				609
Compensatory education:				
Existing law	3,537	3,952	4,098	
Proposed legislation				4,144
Education for the handicapped	1,350	1,742	1,806	1,488
Impact aid	683	718	744	548
Vocational and adult education	907	988	1,024	130
Other	528	568	596	487
Subtotal, Elementary, secondary, and vocational education	7,680	8,902	9,238	7,581
502 Higher education:				
Student financial assistance:				
Existing law	4,823	5,196	6,854	6,133
Proposed legislation				−2,797
Receipts	−67	−70	−73	
Guaranteed student loan program:				
Existing law	3,266	3,004	2,223	2,510
Proposed legislation				−1,334
Other	754	876	841	546
Subtotal, Higher education	8,776	9,006	9,846	5,058

Table A–15. **CURRENT SERVICES BUDGET AUTHORITY BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals
503 Research and general education aids	1,184	1,295	1,360	1,217
504 Training and employment:				
Employment and training assistance:				
Existing law	3,337	3,686	3,759	3,286
Proposed legislation				1,130
Older Americans employment	312	326	326	326
Work incentive program	203	103		
Federal-State employment service	958	959	1,000	873
Other	65	67	67	74
Subtotal, Training and employment	4,875	5,141	5,152	5,688
505 Other labor services	679	730	782	812
506 Social services:				
Social services block grant	2,584	2,700	2,700	2,700
Community service programs	352	368	382	310
Rehabilitation services	1,310	1,485	1,535	1,401
Family social services	761	994	1,062	682
Social services activities	1,929	2,098	2,173	2,277
Domestic volunteer programs	145	156	160	153
Other social services	23	26	957	953
Subtotal, Social services	7,104	7,826	8,969	8,476
Total budget authority	30,298	32,900	35,347	28,832
550 HEALTH				
551 Health care services:				
Medicaid grants:				
Existing law	24,644	26,740	28,225	28,120
Proposed legislation				−1,256
Federal employees' health benefits:				
Existing law	1,537	1,459	1,789	1,789
Proposed legislation				−502
Other health care services	3,237	3,631	3,540	3,332
Subtotal, Health care services	29,418	31,830	33,554	31,483
552 Health research:				
National Institutes of Health research	5,013	5,894	6,093	7,970
Other research programs	539	726	677	639
Subtotal, Health research	5,552	6,621	6,770	8,609
553 Education and training of health care work force:				
Research training	262	286	297	291
Clinical training	206	202	208	36
Other	39	32	33	30
Subtotal, Education and training of health care work force	507	521	538	357
554 Consumer and occupational health and safety:				
Consumer safety:				
Existing law	794	857	891	881
Proposed legislation				−397
Occupational safety and health	363	392	421	422
Subtotal, Consumer and occupational health and safety	1,157	1,249	1,311	906
Total budget authority	36,634	40,220	42,174	41,355

Table A–15. **CURRENT SERVICES BUDGET AUTHORITY BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals
570 MEDICARE				
571 Medicare:				
Hospital insurance (HI):				
Existing law	67,037	67,627	67,842	67,841
Proposed legislation				1,811
Supplementary medical insurance (SMI):				
Existing law	25,004	27,805	34,267	34,183
Proposed legislation				−596
Medicare premiums and collections:				
Existing law	−5,739	−6,545	−8,340	−8,311
Proposed legislation				−570
Interfund transactions	926			
Total budget authority	87,228	88,887	93,769	94,358
600 INCOME SECURITY				
601 General retirement and disability insurance (excluding social security):				
Railroad retirement:				
Existing law	5,541	4,589	4,497	4,405
Proposed legislation				230
Special benefits for disabled coal miners:				
Existing law	2,213	1,170	1,574	1,563
Proposed legislation				−8
Other	67	87	94	94
Subtotal, General retirement and disability insurance (excluding social security)	7,820	5,846	6,165	6,284
602 Federal employee retirement and disability:				
Civilian retirement and disability programs:				
Existing law	43,296	44,039	46,243	46,243
Proposed legislation				85
Military retirement	29,896	31,246	33,120	33,409
Thrift investment fund	*	612	1,514	1,514
Federal employees workers' compensation (FECA)	266	226	170	170
Subtotal, Federal employee retirement and disability	73,458	76,122	81,046	81,420
603 Unemployment compensation:				
Existing law	22,066	23,242	19,733	19,859
Proposed legislation				28
Subtotal, Unemployment compensation	22,066	23,242	19,733	19,887
604 Housing assistance:				
Subsidized housing	9,394	7,506	7,769	3,920
Public housing operating subsidies	1,159	1,350	1,329	1,377
Low-rent public housing loans	895	1,829	1,552	1,552
Other housing assistance	196	225	236	527
Subtotal, Housing assistance	11,643	10,910	10,886	7,376
605 Food and nutrition assistance:				
Food stamps and aid to Puerto Rico:				
Existing law	12,582	12,646	12,842	12,788
Proposed legislation				−278
Child nutrition and other programs:				
Existing law	6,221	6,699	7,020	6,954
Proposed legislation				−860
Subtotal, Food and nutrition assistance	18,803	19,345	19,862	18,604
609 Other income security:				
Supplemental security income (SSI)	10,171	10,856	12,231	12,303

Table A–15. **CURRENT SERVICES BUDGET AUTHORITY BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals
Family support payments:				
Existing law	9,899	10,414	10,330	10,244
Proposed legislation				−468
Earned income tax credit (EITC)	1,415	1,491	2,910	2,910
Refugee assistance	403	340	333	253
Other	2,281	2,078	2,151	1,423
Subtotal, Other income security	24,170	25,179	27,954	26,665
Total budget authority	157,960	160,644	165,647	160,236
650 SOCIAL SECURITY				
651 Social security:				
Old-age and survivors insurance (OASI)—Off-budget:				
Existing law	183,055	207,743	236,399	236,399
Proposed legislation				473
Old-age and survivors insurance (OASI)—On-budget:				
Existing law	−854	−542	−560	−560
Proposed legislation				−1
Disability insurance (DI)—Off-budget:				
Existing law	22,718	20,237	22,759	22,759
Proposed legislation				42
Disability insurance (DI)—On-budget	−45	−53	−54	−54
Interfund transactions (Off-budget)	−8,971	−5,603	−5,497	−5,497
Interfund transactions (On-budget)	5,760	5,603	5,497	5,497
Total budget authority	201,662	227,384	258,544	259,058
On-budget	*(4,861)*	*(5,008)*	*(4,883)*	*(4,882)*
Off-budget	*(196,802)*	*(222,377)*	*(253,661)*	*(254,176)*
700 VETERANS BENEFITS AND SERVICES				
701 Income security for veterans:				
Service-connected compensation:				
Existing law	10,430	10,489	10,653	10,352
Proposed legislation				301
Non-service-connected pensions	3,850	3,828	3,841	3,841
Burial and other benefits:				
Existing law	129	128	142	142
Proposed legislation				−36
National service life insurance trust fund	1,367	1,372	1,375	1,375
All other insurance programs:				
Existing law	29	22	30	30
Proposed legislation				4
Insurance program receipts	−443	−405	−404	−404
Subtotal, Income security for veterans	15,363	15,433	15,636	15,605
702 Veterans education, training, and rehabilitation:				
Readjustment benefits (GI Bill and related programs):				
Existing law	896	741	626	626
Proposed legislation				−20
Post-Vietnam era education				
All-volunteer force educational assistance trust fund:				
Existing law	−105	−178	−186	−186
Proposed legislation				223
Veterans jobs program	35			
Subtotal, Veterans education, training, and rehabilitation	826	563	440	642

Table A–15. **CURRENT SERVICES BUDGET AUTHORITY BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services: 1987 estimate	Current services: 1988 estimate	1988 administration proposals
703 Hospital and medical care for veterans:				
Medical care and hospital services	9,130	9,629	10,041	9,968
Construction	601	531	557	568
Medical administration, research, and other	233	256	242	249
Third-party reimbursement	–*	–65	–250	–250
Subtotal, Hospital and medical care for veterans	9,964	10,350	10,590	10,534
704 Veterans housing:				
Existing law	200		320	390
Proposed legislation				–390
Subtotal, Veterans housing	200		320	
705 Other veterans benefits and services:				
Cemeteries, administration of veterans benefits, and other	731	784	780	831
Non-VA support programs	68	73	62	54
Subtotal, Other veterans benefits and services	799	857	842	885
Total budget authority	27,151	27,204	27,828	27,666
750 ADMINISTRATION OF JUSTICE				
751 Federal law enforcement activities:				
Criminal investigations (DEA, FBI, and OCDE)	1,522	1,784	1,878	2,006
Alcohol, tobacco, and firearms investigation (ATF)	167	193	208	197
Border enforcement activities (Customs and INS)	1,375	1,908	2,014	2,056
Protection activities (Secret Service)	293	335	359	376
Other enforcement:				
Existing law	371	384	406	447
Proposed legislation				5
Subtotal, Federal law enforcement activities	3,728	4,604	4,865	5,087
752 Federal litigative and judicial activities:				
Civil and criminal prosecution and representation:				
Existing law	834	1,044	1,096	1,296
Proposed legislation				1
Federal judicial activities	1,063	1,252	1,411	1,471
Representation of indigents in civil cases	292	306	312	
Subtotal, Federal litigative and judicial activities	2,190	2,601	2,820	2,767
753 Federal correctional activities	595	867	708	971
754 Criminal justice assistance	265	488	510	159
Total budget authority	6,777	8,560	8,903	8,984
800 GENERAL GOVERNMENT				
801 Legislative functions	1,412	1,566	1,698	1,786
802 Executive direction and management	110	116	128	130
803 Central fiscal operations:				
Collection of taxes	3,826	4,368	4,678	5,072
Other fiscal operations:				
Existing law	220	286	298	358
Proposed legislation				–24
Subtotal, Central fiscal operations	4,046	4,654	4,976	5,405
804 General property and records management:				
Federal buildings fund	10			
Property receipts	–70	–345	–189	–494
Personal property	14	15	16	16
Records management	97	102	110	111

Table A–15. **CURRENT SERVICES BUDGET AUTHORITY BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals
Other:				
Existing law	330	342	361	418
Proposed legislation				–169
Subtotal, General property and records management	382	113	298	–119
805 Central personnel management:				
Existing law	136	139	143	146
Proposed legislation				
Subtotal, Central personnel management	136	139	143	146
806 Other general government:				
Compact of free association	221	76	144	144
Territories	153	146	98	77
Indian affairs	8	2	2	2
Treasury claims	277	349	339	350
Other	101	65	65	62
Subtotal, Other general government	760	638	649	635
809 Deductions for offsetting receipts:				
Existing law	–78	–450	–450	–450
Sallie Mae fees (proposed)				–6
Other proposed offsetting receipts				14
Subtotal, Deductions for offsetting receipts	–78	–450	–450	–442
Total budget authority	6,768	6,776	7,440	7,542
850 GENERAL PURPOSE FISCAL ASSISTANCE				
851 General revenue sharing	4,192	6		
852 Other general purpose fiscal assistance:				
Payments and loans to the District of Columbia	–34	287	553	497
Payments to States and counties from Forest Service receipts:				
Existing law	685	274	296	296
Proposed legislation				–270
Payments to States from receipts under the Mineral Leasing Act	423	435	445	391
Payments to States and counties from Federal land management activities	95	89	63	63
Payments in lieu of taxes	100	105	105	105
Payments to territories and Puerto Rico	381	378	386	386
Other	5	9	7	7
Subtotal, Other general purpose fiscal assistance	1,655	1,576	1,855	1,475
Total budget authority	5,847	1,582	1,855	1,475
900 NET INTEREST				
901 Interest on the public debt:				
Existing law	190,166	191,749	199,295	198,150
Proposed legislation				244
Subtotal, Interest on the public debt	190,166	191,749	199,295	198,394
902 Interest received by on-budget trust funds:				
Existing law	–26,570	–28,680	–31,368	–31,372
Proposed legislation				–236
Subtotal, Interest received by on-budget trust funds	–26,570	–28,680	–31,368	–31,608

Table A-15. **CURRENT SERVICES BUDGET AUTHORITY BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals
903 Interest received by off-budget trust funds:				
Existing law	−4,329	−5,084	−6,586	−6,586
Proposed legislation				−8
Subtotal, Interest received by off-budget trust funds	−4,329	−5,084	−6,586	−6,594
908 Other interest:				
Interest on refunds of tax collections	1,814	1,668	1,621	1,621
Interest on loans to Federal Financing Bank	−16,377	−14,738	−15,836	−14,475
Interest on loans to CCC	−2,190	−1,741	−1,849	−1,878
Interest on loans to FmHA	−770	−1,105	−1,095	−1,024
OCS interest	−1,072	−901	−604	−604
Other:				
Existing law	−4,689	−4,615	−4,615	−4,598
Proposed legislation				−201
Subtotal, Other interest	−23,285	−21,432	−22,379	−21,159
Total budget authority	135,982	136,553	138,962	139,032
On-budget	*(140,311)*	*(141,636)*	*(145,548)*	*(145,626)*
Off-budget	*(−4,329)*	*(−5,084)*	*(−6,586)*	*(−6,594)*
920 ALLOWANCES				
921 Civilian agency pay raises:				
Civilian agency pay raises			656	656
Coast Guard military pay raises			48	48
Subtotal, Civilian agency pay raises			704	704
923 Savings from reform of Davis-Bacon and Service Contract Acts:				
Proposed legislation				−163
Subtotal, Savings from reform of Davis-Bacon and Service Contract Acts				−163
924 Credit reform initiative:				
Proposed legislation				−1,284
Subtotal, Credit reform initiative				−1,284
925 Proposed change in Government contribution for employee health benefits:				
Proposed legislation				−140
Subtotal, Proposed change in Government contribution for employee health benefits				−140
Total budget authority			704	−883
950 UNDISTRIBUTED OFFSETTING RECEIPTS				
951 Employer share, employee retirement (on-budget):				
Military retired contributions	−17,429	−18,193	−18,495	−18,782
Federal retirement thrift		−422	−1,324	−1,324
Other contributions:				
Existing law	−8,006	−9,398	−11,985	−11,985
Proposed legislation				−38
Subtotal, Employer share, employee retirement (on-budget)	−25,434	−28,013	−31,803	−32,128
952 Employer share, employee retirement (off-budget):				
Existing law	−2,857	−3,275	−5,367	−5,367

Table A–15. **CURRENT SERVICES BUDGET AUTHORITY BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services: 1987 estimate	Current services: 1988 estimate	1988 administration proposals
Proposed legislation				−117
Subtotal, Employer share, employee retirement (off-budget)	−2,857	−3,275	−5,367	−5,484
953 Rents and royalties on the Outer Continental Shelf:				
Existing law	−4,716	−3,903	−3,686	−3,686
Proposed legislation				
Subtotal, Rents and royalties on the Outer Continental Shelf	−4,716	−3,903	−3,686	−3,686
954 Sale of major assets:				
Sale of Conrail		−1,900		
Sale of petroleum reserve (proposed)				−2,500
Sale of Amtrak (proposed)				−1,000
Auction receipts, FCC (proposed)				−600
Subtotal, Sale of major assets		−1,900		−4,100
Total budget authority	−33,007	−37,091	−40,857	−45,399
On-budget	*(−30,150)*	*(−33,816)*	*(−35,490)*	*(−39,915)*
Off-budget	*(−2,857)*	*(−3,275)*	*(−5,367)*	*(−5,484)*
Total budget authority	**1,072,773**	**1,102,565**	**1,172,170**	**1,142,180**
On-budget	*(883,158)*	*(888,547)*	*(930,462)*	*(900,082)*
Off-budget	*(189,615)*	*(214,018)*	*(241,708)*	*(242,098)*

*$500 thousand or less.

Table A–16. **CURRENT SERVICES OUTLAYS BY FUNCTION AND PROGRAM**

(In millions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals
050 NATIONAL DEFENSE				
051 Department of Defense-Military:				
Military personnel	71,511	70,808	75,677	75,677
Operation and maintenance	75,259	76,714	81,368	81,368
Procurement	76,517	82,695	82,798	82,798
Research, development, test and evaluation	32,283	34,178	38,266	38,266
Military construction	5,067	4,952	5,186	5,186
Family housing	2,819	2,767	3,012	3,012
Revolving funds and other	2,933	2,785	1,212	1,212
Offsetting receipts	–753	–699	–750	–750
Allowances: Civilian pay raises			496	496
Allowances: Military pay raises and benefits			1,979	1,979
Allowances: Other legislation (proposed)			57	57
Subtotal, Department of Defense-Military	265,636	274,200	289,300	289,300
053 Atomic energy defense activities	7,445	7,440	7,817	7,817
054 Defense-related activities:				
Existing law	294	606	433	613
Proposed legislation				–180
Subtotal, Defense-related activities	294	606	433	433
Total outlays	273,375	282,246	297,550	297,550
150 INTERNATIONAL AFFAIRS				
151 International development and humanitarian assistance:				
Multilateral development banks:				
Existing law	1,607	1,029	1,585	1,617
Proposed legislation				22
International organizations	231	259	262	229
Agency for International Development	1,990	2,014	2,114	2,103
P.L. 480 food aid	1,095	1,083	1,134	1,007
Refugee assistance	348	330	358	318
Other	154	150	189	172
Offsetting receipts	–457	–583	–572	–568
Subtotal, International development and humanitarian assistance	4,968	4,282	5,071	4,899
152 International security assistance:				
Foreign military sales credit	4,763	4,470	4,311	3,002
Military assistance	753	198	455	594
Economic support fund	4,684	4,191	4,092	4,097
Guarantee reserve fund	255	8		
Other	102	101	100	113
Offsetting receipts	–58	–76	–111	–111
Subtotal, International security assistance	10,499	8,892	8,847	7,695
153 Conduct of foreign affairs:				
Administration of foreign affairs	1,717	2,170	2,085	2,395
International organizations and conferences	499	306	435	501
Other	64	94	84	91
Subtotal, Conduct of foreign affairs	2,280	2,570	2,604	2,987
154 Foreign information and exchange activities	907	999	1,048	1,114
155 International financial programs:				
Foreign military sales trust fund (net)	–1,016	500	200	200
Export-Import Bank	–1,167	–2,389	–858	–1,564
Exchange stabilization fund	–772	–32	–31	–31
Other	–1,460	–73	–1	–1

Table A–16. **CURRENT SERVICES OUTLAYS BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals
Offsetting receipts	−87	−89	−90	−90
Subtotal, International financial programs	−4,501	−2,083	−781	−1,486
Total outlays	14,152	14,660	16,790	15,209
250 GENERAL SCIENCE, SPACE, AND TECHNOLOGY				
251 General science and basic research:				
National Science Foundation programs	1,550	1,571	1,603	1,806
Department of Energy general science programs	671	697	761	782
Subtotal, General science and basic research	2,221	2,268	2,364	2,588
253 Space flight	3,794	4,308	5,472	5,569
254 Space, science, applications, and technology	2,127	2,184	2,188	2,250
255 Supporting space activities	835	774	1,032	1,031
Total outlays	8,976	9,535	11,057	11,439
270 ENERGY				
271 Energy supply:				
Research and development	2,404	2,431	2,593	2,335
Uranium enrichment	−91	−200	−185	−231
Other power marketing	−408	−500	−556	−556
Petroleum reserves	−415	−442	−539	−539
Nuclear waste disposal fund	17	2	−12	−12
Tennessee Valley Authority	783	806	318	318
Subsidies for nonconventional fuel production	120	89	38	38
Rural electric and telephone:				
Existing law	429	−6	2,926	1,692
Proposed legislation	....	....	....	−979
Subtotal, Energy supply	2,839	2,180	4,582	2,065
272 Energy conservation:				
Energy conservation grants and R&D	483	449	292	152
Solar Energy and Energy Conservation Bank	32	13	*	*
Subtotal, Energy conservation	515	462	292	153
274 Emergency energy preparedness	597	733	683	448
276 Energy information, policy, and regulation	785	675	652	678
Total outlays	4,735	4,049	6,209	3,344
300 NATURAL RESOURCES, AND ENVIRONMENT				
301 Water resources:				
Corps of Engineers	2,855	3,373	3,526	3,522
Bureau of Reclamation	1,050	1,007	1,074	907
Other	298	293	242	144
Offsetting receipts	−161	−422	−462	−475
Subtotal, Water resources	4,041	4,251	4,380	4,099
302 Conservation and land management:				
Management of national forests, cooperative forestry, and forestry research (Forest Service)	1,846	1,983	1,901	1,841
Management of public lands (BLM)	529	566	577	494
Mining reclamation and enforcement	327	345	327	327
Conservation of agricultural lands	553	668	2,052	1,889
Other resources management	299	322	324	216
Offsetting receipts:				
Existing law	−2,166	−2,217	−2,336	−2,292
Proposed legislation	....	....	....	....

Table A-16. **CURRENT SERVICES OUTLAYS BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services: 1987 estimate	Current services: 1988 estimate	1988 administration proposals
Subtotal, Conservation and land management	1,388	1,668	2,846	2,474
303 Recreational resources:				
Federal land acquisition	262	315	276	132
Urban park and historic preservation funds	32	33	28	14
Operation of recreational resources:				
Existing law	1,293	1,396	1,478	1,371
Proposed legislation				45
Offsetting receipts:				
Existing law	−74	−49	−84	−136
Proposed legislation				−63
Subtotal, Recreational resources	1,513	1,695	1,697	1,362
304 Pollution control and abatement:				
Regulatory, enforcement, and research programs	1,291	1,434	1,469	1,458
Hazardous substance response fund	435	550	932	900
Oil pollution funds (gross)	9	10	5	5
Sewage treatment plant construction grants:				
Existing law	3,113	2,592	2,410	1,814
Proposed legislation				506
Leaking underground storage tank trust fund		8	26	18
Offsetting receipts:				
Existing law	−16	−35	−57	−57
Proposed legislation				−40
Subtotal, Pollution control and abatement	4,831	4,558	4,785	4,603
306 Other natural resources:				
Program activities:				
Existing law	1,883	1,948	1,965	1,706
Proposed legislation				21
Offsetting receipts	−17	−15	−19	−24
Subtotal, Other natural resources	1,866	1,932	1,945	1,703
Total outlays	13,639	14,103	15,653	14,241
350 AGRICULTURE				
351 Farm income stabilization:				
Commodity price support and related programs:				
Existing law	25,891	25,288	21,002	20,978
Proposed legislation				308
Crop insurance:				
Existing law	516	637	660	672
Proposed legislation				−190
Agricultural credit:				
Existing law	3,234	3,187	2,928	2,888
Proposed legislation				−133
Other programs and unallocated overhead	−33	51	*	
Subtotal, Farm income stabilization	29,608	29,163	24,590	24,524
352 Agricultural research and services:				
Research programs:				
Existing law	761	843	883	880
Proposed legislation				−*
Extension programs	340	332	343	274
Marketing programs:				
Existing law	154	152	142	140
Proposed legislation				−40
Animal and plant health programs:				
Existing law	283	298	331	303
Proposed legislation				−86
Economic intelligence	197	188	197	198

Table A–16. **CURRENT SERVICES OUTLAYS BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals
Other programs and unallocated overhead:				
Existing law	203	218	223	246
Proposed legislation	....	....	....	−4
Offsetting receipts	−97	−99	−102	−102
Subtotal, Agricultural research and services	1,841	1,932	2,016	1,809
Total outlays	31,449	31,095	26,605	26,333
370 COMMERCE AND HOUSING CREDIT				
371 Mortgage credit and deposit insurance:				
Mortgage-backed securities (GNMA)	−293	−315	−407	−399
Mortgage purchase activities (GNMA)	−790	−373	58	58
Mortgage credit (FHA and other):				
Existing law	−1,750	−2,398	−2,432	−2,574
Proposed legislation	....	....	....	−487
Housing for the elderly or handicapped	531	515	501	47
Rural housing programs (FmHA)	3,235	1,285	2,419	834
Federal Deposit Insurance Corporation	262	4,046	1,535	1,535
Federal Savings and Loan Insurance Corporation and other:				
Existing law	1,072	3,745	850	850
Proposed legislation	....	....	....	−1,550
National Credit Union Administration	−368	−203	−326	−326
Subtotal, Mortgage credit and deposit insurance	1,899	6,302	2,197	−2,013
372 Postal service:				
Existing law	758	1,781	2,707	2,669
Proposed legislation	....	....	....	376
Subtotal, Postal service	758	1,781	2,707	3,045
376 Other advancement of commerce:				
Small and minority business assistance	774	632	553	5
Science and technology	334	479	404	411
Economic and demographic statistics	208	270	415	491
International trade and other	475	636	613	594
Subtotal, Other advancement of commerce	1,790	2,016	1,985	1,501
Total outlays	4,448	10,099	6,889	2,533
400 TRANSPORTATION				
401 Ground transportation:				
Highways	14,138	12,633	13,035	12,861
Highway safety	257	272	328	315
Mass transit	3,399	4,010	3,681	3,426
Railroads:				
Existing law	885	884	786	−42
Proposed legislation	....	....	....	−9
Regulation:				
Existing law	45	46	49	48
Proposed legislation	....	....	....	−17
Subtotal, Ground transportation	18,725	17,844	17,880	16,581
402 Air transportation:				
Airports and airways (FAA)	4,615	4,565	5,130	5,251
Aeronautical research and technology	648	621	682	683
Air carrier subsidies	24	33	2	2
Subtotal, Air transportation	5,287	5,219	5,814	5,935

Table A-16. **CURRENT SERVICES OUTLAYS BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals
403 Water transportation:				
Marine safety and transportation:				
Existing law	2,491	2,642	2,698	2,753
Proposed legislation				15
Proposed Coast Guard fees				−355
Ocean shipping:				
Existing law	1,473	993	360	483
Proposed legislation				−25
Subtotal, Water transportation	3,964	3,636	3,058	2,871
407 Other transportation	140	130	130	136
Total outlays	28,117	26,829	26,881	25,523
450 COMMUNITY AND REGIONAL DEVELOPMENT				
451 Community development:				
Community development block grants	3,337	3,292	3,200	2,996
Urban development action grants	461	440	378	355
Rental rehabilitation and rental development	142	334	214	282
Other	155	228	138	28
Subtotal, Community development	4,095	4,295	3,930	3,661
452 Area and regional development:				
Rural development	1,505	624	1,451	565
Economic development assistance	253	351	236	170
Indian programs	957	1,043	1,050	1,145
Regional commissions	163	147	138	123
Tennessee Valley Authority	122	118	122	98
Other	−5	−2	−12	−12
Offsetting receipts	−273	−298	−301	−298
Subtotal, Area and regional development	2,723	1,983	2,684	1,791
453 Disaster relief and insurance:				
Small business disaster loans	−172	−457	−305	−304
Disaster relief	336	313	225	225
National flood insurance fund	144	−23	35	−9
Other	108	151	105	99
Subtotal, Disaster relief and insurance	416	−16	60	11
Total outlays	7,233	6,261	6,674	5,463
500 EDUCATION, TRAINING, EMPLOYMENT, AND SOCIAL SERVICES				
501 Elementary, secondary, and vocational education:				
Block grant and special programs:				
Existing law	619	675	939	833
Proposed legislation				54
Compensatory education:				
Existing law	3,405	3,109	3,956	3,746
Proposed legislation				207
Education for the handicapped	1,628	1,440	1,543	1,318
Impact aid	684	805	730	581
Vocational and adult education	1,035	1,054	836	524
Other	461	563	567	491
Subtotal, Elementary, secondary, and vocational education	7,832	7,645	8,571	7,755
502 Higher education:				
Student financial assistance:				
Existing law	4,585	5,244	5,510	4,317

Table A–16. **CURRENT SERVICES OUTLAYS BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals
Proposed legislation				−630
Receipts	−67	−70	−73	
Guaranteed student loan program:				
Existing law	3,323	2,367	2,741	2,741
Proposed legislation				−959
Other	574	287	539	67
Subtotal, Higher education	8,415	7,828	8,717	5,535
503 Research and general education aids	1,164	1,408	1,361	1,251
504 Training and employment:				
Employment and training assistance:				
Existing law	3,661	3,560	3,609	3,405
Proposed legislation				513
Older Americans employment	321	319	326	326
Work incentive program	227	110	11	11
Federal-State employment service	986	961	977	872
Other	62	73	69	74
Subtotal, Training and employment	5,257	5,023	4,992	5,201
505 Other labor services	672	730	778	802
506 Social services:				
Social services block grant	2,671	2,686	2,697	2,697
Community service programs	348	366	381	327
Rehabilitation services	1,311	1,492	1,513	1,389
Family social services	808	931	1,050	777
Social services activities	1,933	2,015	2,130	2,216
Domestic volunteer programs	154	152	158	154
Other social services	20	26	327	323
Subtotal, Social services	7,246	7,668	8,256	7,885
Total outlays	30,585	30,301	32,676	28,429
550 HEALTH				
551 Health care services:				
Medicaid grants:				
Existing law	24,995	26,740	28,225	28,120
Proposed legislation				−1,256
Federal employees' health benefits:				
Existing law	638	1,871	1,768	1,768
Proposed legislation				−492
Other health care services	3,217	3,500	3,550	3,313
Subtotal, Health care services	28,850	32,111	33,543	31,453
552 Health research:				
National Institutes of Health research	4,859	5,401	5,976	5,483
Other research programs	534	687	670	674
Subtotal, Health research	5,393	6,088	6,646	6,158
553 Education and training of health care work force:				
Research training	256	273	294	279
Clinical training:				
Existing law	232	224	212	42
Proposed legislation				−2
Other	41	30	33	31
Subtotal, Education and training of health care work force	529	526	538	350

Table A-16. **CURRENT SERVICES OUTLAYS BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals
554 Consumer and occupational health and safety:				
Consumer safety:				
Existing law	799	854	889	883
Proposed legislation				−398
Occupational safety and health	366	391	417	419
Subtotal, Consumer and occupational health and safety	1,165	1,245	1,306	903
Total outlays	35,936	39,970	42,034	38,865
570 MEDICARE				
571 Medicare:				
Hospital insurance (HI):				
Existing law	49,685	48,273	52,537	52,553
Proposed legislation				−3,486
Supplementary medical insurance (SMI):				
Existing law	26,217	29,886	34,051	34,046
Proposed legislation				−1,201
Medicare premiums and collections:				
Existing law	−5,739	−6,545	−8,340	−8,311
Proposed legislation				−570
Interfund transactions				
Total outlays	70,164	71,614	78,248	73,032
600 INCOME SECURITY				
601 General retirement and disability insurance (excluding social security):				
Railroad retirement:				
Existing law	3,755	3,855	3,943	3,851
Proposed legislation				65
Special benefits for disabled coal miners:				
Existing law	1,616	1,611	1,584	1,573
Proposed legislation				−8
Pension Benefit Guaranty Corporation:				
Existing law	−106	−4	171	172
Proposed legislation				−347
Other	64	82	90	90
Subtotal, General retirement and disability insurance (excluding social security)	5,330	5,543	5,789	5,396
602 Federal employee retirement and disability:				
Civilian retirement and disability programs:				
Existing law	24,237	26,696	27,874	27,874
Proposed legislation				−1,505
Military retirement	17,621	17,953	18,887	18,887
Thrift investment fund		−644	−1,828	−1,828
Federal employees workers' compensation (FECA)	266	226	170	170
Federal employees life insurance fund	−760	−679	−694	−694
Subtotal, Federal employee retirement and disability	41,363	43,551	44,410	42,905
603 Unemployment compensation:				
Existing law	17,753	17,983	17,724	17,769
Proposed legislation				−92
Subtotal, Unemployment compensation	17,753	17,983	17,724	17,677
604 Housing assistance:				
Subsidized housing:				
Existing law	10,041	9,472	10,438	10,170
Proposed legislation				−60

Table A–16. **CURRENT SERVICES OUTLAYS BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals
Public housing operating subsidies	1,181	1,381	1,425	1,489
Low-rent public housing loans	1,018	1,872	1,605	1,605
Other housing assistance	144	278	274	188
Subtotal, Housing assistance	12,383	13,003	13,742	13,392
605 Food and nutrition assistance:				
Food stamps and aid to Puerto Rico:				
Existing law	12,443	12,731	12,835	12,782
Proposed legislation				−277
Child nutrition and other programs:				
Existing law	6,159	6,698	6,982	6,921
Proposed legislation				−788
Subtotal, Food and nutrition assistance	18,602	19,430	19,817	18,638
609 Other income security:				
Supplemental security income (SSI)	10,345	10,947	12,303	12,303
Family support payments:				
Existing law	9,877	10,607	10,330	10,244
Proposed legislation				−468
Earned income tax credit (EITC)	1,415	1,491	2,910	2,910
Refugee assistance	435	379	339	288
Other	2,293	2,100	2,150	1,499
Subtotal, Other income security	24,364	25,523	28,033	26,776
Total outlays	119,796	125,034	129,515	124,784
650 SOCIAL SECURITY				
651 Social security:				
Old-age and survivors insurance (OASI)—Off-budget:				
Existing law	179,412	187,699	198,537	198,461
Proposed legislation				1
Old-age and survivors insurance (OASI)—On-budget:				
Existing law	−854	−542	−560	−560
Proposed legislation				−1
Disability insurance (DI)—Off-budget:				
Existing law	20,243	20,761	21,577	21,546
Proposed legislation				−5
Disability insurance (DI)—On-budget	−45	−53	−54	−54
Interfund transactions (Off-budget)	−8,971	−5,603	−5,497	−5,497
Interfund transactions (On-budget)	8,971	5,603	5,497	5,497
Total outlays	198,757	207,865	219,500	219,388
On-budget	*(8,072)*	*(5,008)*	*(4,883)*	*(4,882)*
Off-budget	*(190,684)*	*(202,857)*	*(214,617)*	*(214,506)*
700 VETERANS BENEFITS AND SERVICES				
701 Income security for veterans:				
Service-connected compensation:				
Existing law	10,426	10,499	10,640	10,369
Proposed legislation				271
Non-service-connected pensions	3,874	3,830	3,840	3,840
Burial and other benefits:				
Existing law	122	136	142	142
Proposed legislation				−36
National service life insurance trust fund	1,037	1,047	1,086	1,086
All other insurance programs:				
Existing law	14	−29	−23	−23
Proposed legislation				4
Insurance program receipts	−443	−405	−404	−404

Table A–16. **CURRENT SERVICES OUTLAYS BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals
Subtotal, Income security for veterans	15,031	15,079	15,279	15,248
702 Veterans education, training, and rehabilitation:				
Readjustment benefits (GI Bill and related programs):				
Existing law	918	756	646	646
Proposed legislation				−20
Post-Vietnam era education	−99	−8	18	18
All-volunteer force educational assistance trust fund:				
Existing law	−321	−413	−300	−300
Proposed legislation				194
Veterans jobs program	34	42	5	5
Other:				
Existing law	−6	−6	−6	−6
Proposed legislation				−*
Subtotal, Veterans education, training, and rehabilitation	526	372	363	537
703 Hospital and medical care for veterans:				
Medical care and hospital services	9,095	9,500	9,915	9,848
Construction	539	638	646	650
Medical administration, research, and other	238	257	250	252
Third-party reimbursement	−*	−65	−250	−250
Subtotal, Hospital and medical care for veterans	9,872	10,331	10,561	10,499
704 Veterans housing:				
Loan guaranty revolving fund:				
Existing law	163	278	330	254
Proposed legislation				−390
Direct loan revolving fund	−29	−37	−30	−30
Other (HUD participation sales trust fund)	−20	−19	153	153
Subtotal, Veterans housing	114	222	454	−13
705 Other veterans benefits and services:				
Cemeteries, administration of veterans benefits, and other	764	772	782	821
Non-VA support programs	49	68	70	67
Subtotal, Other veterans benefits and services	813	840	852	888
Total outlays	26,356	26,843	27,509	27,160
750 ADMINISTRATION OF JUSTICE				
751 Federal law enforcement activities:				
Criminal investigations (DEA, FBI, and OCDE)	1,538	1,754	1,854	1,984
Alcohol, tobacco, and firearms investigation (ATF)	166	190	204	193
Border enforcement activities (Customs and INS)	1,291	1,939	1,989	2,154
Protection activities (Secret Service)	290	329	353	369
Other enforcement:				
Existing law	348	385	406	449
Proposed legislation				1
Subtotal, Federal law enforcement activities	3,632	4,597	4,806	5,150
752 Federal litigative and judicial activities:				
Civil and criminal prosecution and representation:				
Existing law	781	948	1,000	1,203
Proposed legislation				1
Federal judicial activities	1,090	1,232	1,383	1,458
Representation of indigents in civil cases	305	303	312	37
Subtotal, Federal litigative and judicial activities	2,176	2,483	2,696	2,698

Table A–16. **CURRENT SERVICES OUTLAYS BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals
753 Federal correctional activities	614	754	836	936
754 Criminal justice assistance	181	344	527	387
Total outlays	6,603	8,178	8,864	9,170
800 GENERAL GOVERNMENT				
801 Legislative functions	1,383	1,650	1,737	1,824
802 Executive direction and management	109	116	126	128
803 Central fiscal operations:				
Collection of taxes	3,754	4,280	4,559	4,974
Other fiscal operations:				
Existing law	−149	103	81	146
Proposed legislation				170
Subtotal, Central fiscal operations	3,605	4,383	4,640	5,290
804 General property and records management:				
Federal buildings fund	19	−81	−1	−18
Property receipts	−70	−345	−189	−494
Personal property	12	14	15	16
Records management	96	102	110	111
Other:				
Existing law	418	339	358	391
Proposed legislation				−166
Subtotal, General property and records management	475	29	294	−161
805 Central personnel management:				
Existing law	126	147	142	144
Proposed legislation				
Subtotal, Central personnel management	126	147	142	144
806 Other general government:				
Compact of free association	10	278	144	144
Territories	173	167	100	77
Indian affairs	8	2	2	2
Treasury claims	277	349	339	350
Other	13	62	176	173
Subtotal, Other general government	482	858	761	746
809 Deductions for offsetting receipts:				
Existing law	−78	−450	−450	−450
Sallie Mae fees (proposed)				−6
Other proposed offsetting receipts				14
Subtotal, Deductions for offsetting receipts	−78	−450	−450	−442
Total outlays	6,102	6,733	7,250	7,528
850 GENERAL PURPOSE FISCAL ASSISTANCE				
851 General revenue sharing	5,121	82	*	*
852 Other general purpose fiscal assistance:				
Payments and loans to the District of Columbia	−34	287	553	497
Payments to States and counties from Forest Service receipts:				
Existing law	399	560	290	296
Proposed legislation				−270
Payments to States from receipts under the Mineral Leasing Act	423	435	445	391

Table A–16. **CURRENT SERVICES OUTLAYS BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals
Payments to States and counties from Federal land management activities	31	88	63	63
Payments in lieu of taxes	100	105	105	105
Payments to territories and Puerto Rico	384	380	386	386
Other	8	8	7	7
Subtotal, Other general purpose fiscal assistance	1,310	1,862	1,849	1,475
Total outlays	6,431	1,944	1,849	1,475
900 NET INTEREST				
901 Interest on the public debt:				
Existing law	190,166	191,749	199,295	198,150
Proposed legislation				244
Subtotal, Interest on the public debt	190,166	191,749	199,295	198,394
902 Interest received by on-budget trust funds:				
Existing law	−26,570	−28,680	−31,368	−31,372
Proposed legislation				−236
Subtotal, Interest received by on-budget trust funds	−26,570	−28,680	−31,368	−31,608
903 Interest received by off-budget trust funds:				
Existing law	−4,329	−5,084	−6,586	−6,586
Proposed legislation				−8
Subtotal, Interest received by off-budget trust funds	−4,329	−5,084	−6,586	−6,594
908 Other interest:				
Interest on refunds of tax collections	1,814	1,668	1,621	1,621
Interest on loans to Federal Financing Bank	−16,377	−14,738	−15,836	−14,475
Interest on loans to CCC	−2,190	−1,741	−1,849	−1,878
Interest on loans to FmHA	−770	−1,105	−1,095	−1,024
OCS interest	−1,072	−901	−604	−604
Other:				
Existing law	−4,702	−4,609	−4,615	−4,598
Proposed legislation				−201
Subtotal, Other interest	−23,298	−21,426	−22,379	−21,159
Total outlays	135,969	136,559	138,962	139,032
On-budget	*(140,298)*	*(141,643)*	*(145,548)*	*(145,626)*
Off-budget	*(−4,329)*	*(−5,084)*	*(−6,586)*	*(−6,594)*
920 ALLOWANCES				
921 Civilian agency pay raises:				
Civilian agency pay raises			630	630
Coast Guard military pay raises			48	48
Subtotal, Civilian agency pay raises			678	678
923 Savings from reform of Davis-Bacon and Service Contract Acts:				
Proposed legislation				−24
Subtotal, Savings from reform of Davis-Bacon and Service Contract Acts				−24
924 Credit reform initiative:				
Proposed legislation				−1,284
Subtotal, Credit reform initiative				−1,284

Table A–16. **CURRENT SERVICES OUTLAYS BY FUNCTION AND PROGRAM—Continued**

(In millions of dollars)

	1986 actual	Current services 1987 estimate	Current services 1988 estimate	1988 administration proposals
925 Proposed change in Government contribution for employee health benefits:				
Proposed legislation				–140
Subtotal, Proposed change in Government contribution for employee health benefits				–140
Total outlays			678	–770
950 UNDISTRIBUTED OFFSETTING RECEIPTS				
951 Employer share, employee retirement (on-budget):				
Military retired contributions	–17,429	–18,193	–18,495	–18,782
Federal retirement thrift		–422	–1,324	–1,324
Other contributions:				
Existing law	–8,006	–9,398	–11,985	–11,985
Proposed legislation				–38
Subtotal, Employer share, employee retirement (on-budget)	–25,434	–28,013	–31,803	–32,128
952 Employer share, employee retirement (off-budget):				
Existing law	–2,857	–3,275	–5,367	–5,367
Proposed legislation				–117
Subtotal, Employer share, employee retirement (off-budget)	–2,857	–3,275	–5,367	–5,484
953 Rents and royalties on the Outer Continental Shelf:				
Existing law	–4,716	–3,903	–3,686	–3,686
Proposed legislation				
Subtotal, Rents and royalties on the Outer Continental Shelf	–4,716	–3,903	–3,686	–3,686
954 Sale of major assets:				
Sale of Conrail		–1,900		
Sale of petroleum reserve (proposed)				–2,500
Sale of Amtrak (proposed)				–1,000
Auction receipts, FCC (proposed)				–600
Subtotal, Sale of major assets		–1,900		–4,100
Total outlays	–33,007	–37,091	–40,857	–45,399
On-budget	*(–30,150)*	*(–33,816)*	*(–35,490)*	*(–39,915)*
Off-budget	*(–2,857)*	*(–3,275)*	*(–5,367)*	*(–5,484)*
Total outlays	**989,815**	**1,016,827**	**1,060,535**	**1,024,328**
On-budget	*(806,318)*	*(822,329)*	*(857,872)*	*(821,900)*
Off-budget	*(183,498)*	*(194,498)*	*(202,663)*	*(202,427)*

*$500 thousand or less.

SPECIAL ANALYSIS B

FEDERAL TRANSACTIONS IN THE NATIONAL INCOME AND PRODUCT ACCOUNTS

The budget is designed to serve several purposes:

- It sets forth the *President's request to the Congress* for appropriations action on existing or new programs and for changes in tax legislation.
- It proposes an *allocation of resources* between the private and public sectors and within the public sector. Through its impact on consumption, investment, and the distribution of income it also affects the allocation of resources within the private sector.
- It is an *economic document* that reflects the taxing and spending policies of the Government for promoting economic growth, high employment, and a stable price level.
- It is a *report to the Congress and the people* on how the Government has spent the funds entrusted to it in past years.

No single budget concept can satisfy all these purposes fully. The budget documents and related Treasury reports provide complete, detailed information on the finances of the Federal Government and on the tax and spending programs proposed by the President. For study of aggregate economic activity, however, the national income and product accounts (NIPA) of the United States provide the most useful measures. This special analysis shows Federal finances as measured in the NIPA. The analysis is divided into three major sections. The first shows the size, composition, and trends in Federal sector receipts and expenditures. Additional details will be published in the February 1987 issue of the Department of Commerce publication, *Survey of Current Business*. The second section of this analysis shows quarterly estimates of Federal sector receipts and expenditures. The final section explains the major differences between the budget and the NIPA concepts. A discussion of fiscal policy can be found in Part 3a of the *Budget—Supplement* and in the *Economic Report of the President*.

Federal Sector Receipts and Expenditures

Table B–1 shows Federal sector NIPA receipts, expenditures, and deficits for 1986–88.

Table B-1. **FEDERAL SECTOR RECEIPTS AND EXPENDITURES IN THE NIPA**

(In billions of dollars)

Description	1986 actual	1987 estimate	1988 estimate
RECEIPTS			
Personal tax and nontax receipts	355.8	368.7	396.5
Corporate profits tax accruals	83.0	108.9	130.2
Indirect business tax and nontax accruals	52.2	53.8	56.6
Contributions for social insurance	323.7	343.2	384.8
Total receipts	**814.7**	**874.6**	**968.1**
EXPENDITURES			
Purchases of goods and services	367.1	384.8	394.8
Defense	(274.8)	(291.0)	(301.0)
Nondefense	(92.3)	(93.8)	(93.8)
Transfer payments	394.2	409.5	427.2
Domestic ("to persons")	(380.4)	(395.3)	(412.9)
Foreign	(13.8)	(14.2)	(14.3)
Grants-in-aid to State and local governments	107.4	104.6	100.0
Net interest paid	136.8	138.5	140.5
Subsidies less current surplus of Government enterprises	19.9	25.1	26.1
Wage disbursements less accruals		−2.0	
Total expenditures	**1,025.4**	**1,060.5**	**1,088.6**
Deficit (—)	**−210.7**	**−185.9**	**−120.5**

Note: The estimates for 1987 and 1988 are preliminary; revisions will be published in the February 1987 issue of the *Survey of Current Business.*

Trends in Federal sector receipts.—Table B-1 divides receipts into four major categories, which are also illustrated in the chart on the distribution of Federal sector receipts by category. Table B-2 shows 3-year averages of Federal sector receipts by category as a percent of the gross national product (GNP). The receipts are shown at 10-year intervals to provide a perspective relative to the 1988 levels. For the earlier periods, 3-year averages eliminate the impact of annual fluctuations, thereby permitting greater focus on trends.

Table B-2. **FEDERAL SECTOR RECEIPTS AS A PERCENT OF GNP**

Description	1955-57 average actual	1965-67 average actual	1975-77 average actual	1985-87 average estimate	1988 estimate
Personal tax and nontax receipts	8.0	7.8	8.3	8.5	8.4
Corporate profits tax accruals	4.9	4.0	3.0	2.1	2.8
Indirect business tax and nontax accruals	2.6	2.2	1.4	1.3	1.2
Contributions for social insurance	2.6	4.2	6.5	7.8	8.1
Total receipts	**18.1**	**18.3**	**19.2**	**19.7**	**20.5**

Personal tax and nontax receipts.—The largest receipt category—personal tax and nontax receipts—is composed primarily of individual income taxes but also includes estate and gift taxes and some miscellaneous receipts. Increases in income, because of both real growth and inflation, cause these receipts to increase automatically. Since personal income tax rates are progressive, in the past these receipts normally grew at a faster rate than personal income. Periodically, tax reductions were enacted that partially offset the increase in effective tax rates resulting from the progressive tax structure. However, the Economic Recovery Tax Act of 1981 (ERTA) dramatically altered those circumstances. That act provided for across-the-board tax reductions and—starting in 1985—indexing of income tax brackets, the zero bracket amount, and the personal exemption to inflation. Although subsequent legislation limited the reduction in personal tax and nontax receipts anticipated in ERTA, its central components—rate reductions and indexation—remained largely intact. Largely due to the rate reductions enacted in 1981, personal tax and nontax receipts fell from a peak of 9.9 percent of GNP in 1982 to 8.5 percent in 1986.

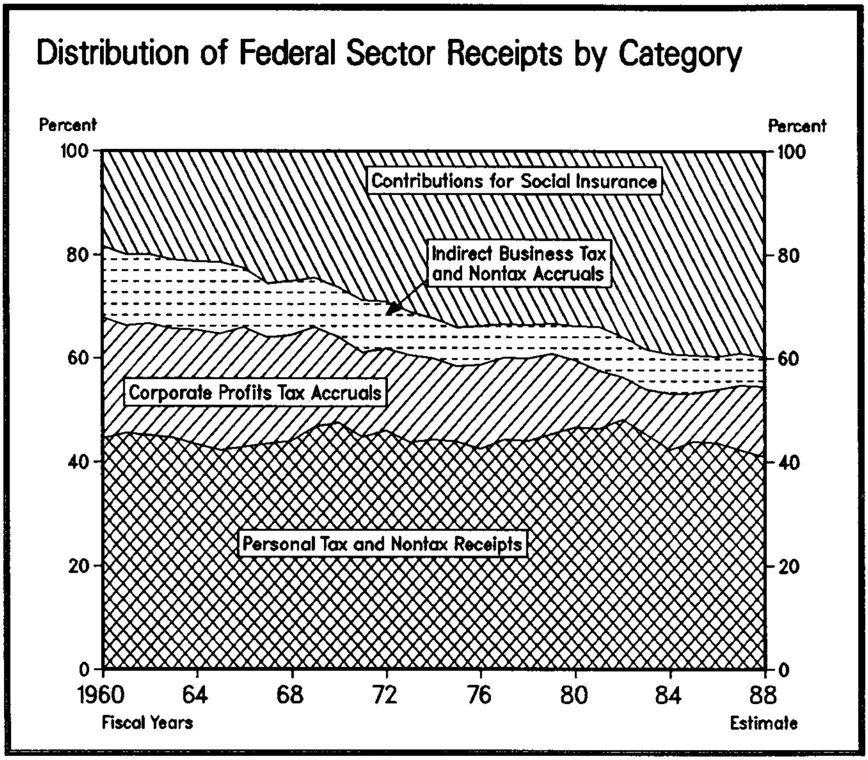
The Tax Reform Act of 1986, which was enacted after a comprehensive review of the income tax law by the Treasury Department and the Congress, is expected to reduce further the personal tax and nontax receipts share of GNP—to 8.4 percent in 1988.

Corporate profits tax accruals.—Corporate profits tax accruals change significantly from year to year because corporate profits are highly volatile. The NIPA corporate profits taxes differ from the corresponding budget category primarily because: (1) the NIPA include the deposit of earnings by the Federal Reserve System as corporate profits taxes, whereas the budget treats these collections as miscellaneous receipts; and (2) the NIPA record corporate profits taxes when the profits are earned (that is, accrued), while the unified budget records the cash receipts.

The gradual decline in corporate profits tax accruals relative to GNP and to total receipts, as shown in the chart on the next page, resulted mainly from three factors: (1) a long-term decline in corporate profits relative to GNP; (2) a narrowing of the corporate profits tax base resulting from changes in the definition of corporate profits for tax purposes (largely increases in permissible depreciation allowances); and (3) reductions in effective tax rates on corporate profits resulting from statutory rate reductions and tax credits. Provisions of ERTA designed to stimulate investment further accelerated this trend, but subsequent legislation offset their effect on corporate profits tax accruals, which are now expected to increase.

Indirect business tax and nontax accruals.—These receipts are composed of excise taxes, customs duties, and various miscellaneous receipts. Over time, indirect business tax and nontax accruals have become a much less important part of total Federal sector receipts for two reasons. First, they normally do not rise in propor-

[Insert chart: DISTRIBUTION OF FEDERAL SECTOR RECEIPTS BY CATEGORY]



tion to the nominal growth in the economy; most are taxes on physical quantities rather than on the value of a good. Second, some excise taxes have been reduced or repealed.

Despite their long-term decline as a general-purpose source of tax receipts, the use of excise taxes as user charges to finance Federal programs, such as highways and airports and airways, makes them an important source of financing for certain specialized programs in the budget.

Contributions for social insurance.—This is the second largest category of Federal sector receipts. The increase in contributions for social insurance since World War II has been caused by the growth in the labor force and in wage rates, the expanded coverage of existing social insurance programs, the enactment of new ones, and increases in the taxable wage base and tax rates needed to finance liberalization of benefits. As a result of the rapid rise in social insurance taxes (mainly social security) and the passage of legislation reducing or eliminating individual income taxes for many low- and moderate-income individuals and families, millions of Americans now pay significantly higher social insurance taxes than income taxes. The reductions in individual income tax rates provided by the Economic Recovery Tax Act of 1981 and the Tax Reform Act of 1986, combined with the increases in social security and other social insurance taxes mandated by the Social Security Amendments of 1983 and the Railroad Retirement Act of 1983, reinforce the trend toward increases in social insurance contributions relative to total NIPA receipts.

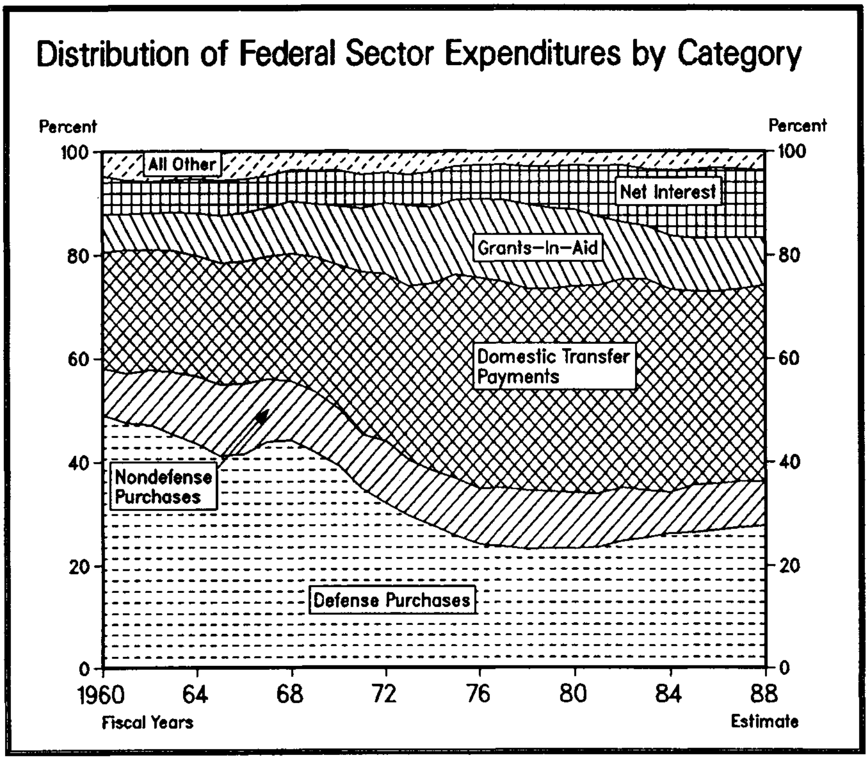
Major tax changes.—In the past 6 years, major tax legislation has been passed to reduce tax rates and increase investment incentives; to curb tax shelter abuse, limit unwarranted tax benefits, and increase taxpayer compliance; to increase payroll taxes as part of overall legislation to restore the solvency of the social security system; and to increase gasoline taxes to fund infrastructure improvements.

One of the most sweeping overhauls of the Federal income tax code in the Nation's history became law in October 1986, when the President signed the Tax Reform Act of 1986. The major provisions of this Act, which broadened the individual and corporation income tax bases and substantially lowered individual and corporation income tax rates, were designed to restore simplicity and fairness to the tax code.

In this budget, the administration proposes several minor modifications of the existing tax system, the effects of which are included in both the budget and the NIPA estimates. Details about enacted and proposed tax changes on a unified budget basis can be found in Part 4 of the *Budget—Supplement*; additional details on an NIPA basis will be published in the February 1987 *Survey of Current Business*.

Trends in Federal sector expenditures.—Federal sector expenditures are divided into several major NIPA categories. The principal distinction is between purchases of goods and services (which are divided between defense and nondefense purchases) and all other transactions. Purchases are that portion of the Nation's output that is bought directly by the Federal Government and, therefore, are included in the GNP. The other expenditure categories consist primarily of transfer payments to individuals, net interest payments, and grants to State and local governments. These individuals and governments, in turn, can use the income to finance their own purchases of goods and services, to save, and—in the case of States and localities—to hold down taxes or to make transfer payments.

Major changes in composition.—As can be seen in the chart on the distribution of Federal sector expenditures since 1960, major shifts in the composition of Federal sector expenditures occur over time.



Over most of this period, defense purchases of goods and services constituted a declining share of Federal spending. This trend was temporarily reversed for 3 years during the Vietnam period, but by 1970 the defense share was well below the pre-Vietnam percentages and continued declining through 1978. The defense share rose slightly in 1979 and 1980, and has increased significantly under this administration, reflecting the President's commitment to strengthen the Nation's defense capability while reducing total Federal spending relative to the GNP. Defense purchases are expected to account for 27.4 percent of Federal sector expenditures in 1987 and 27.7 percent in 1988; they were 26.4 percent in 1985 and 26.8 percent in 1986.

Spending for domestic transfer payments contrasts sharply with the general decline in the defense purchases share during previous administrations. After remaining relatively stable at just below 24 percent of total expenditures for most of the 1960s, domestic transfer payments began growing rapidly in the latter part of the decade, and reached a share of nearly 41 percent in 1976. This growth is largely explained by higher expenditures for retirement and other social insurance programs, due to increases in the number of beneficiaries and the automatic increases in benefit levels enacted over a period of years beginning in 1962, and by the creation and expansion of the medicare program. Domestic transfer payments are now several percentage points below the 1976 share.

For the remaining categories, two patterns stand out. Grants-in-aid to State and local governments grew rapidly in earlier years, but their share of Federal sector expenditures has declined from 16 percent in 1978 to less than 10 percent in 1987. Conversely, the net interest share doubled in the past decade—from about 6½ percent throughout the 1960s and early 1970s to over 13 percent in 1985 and 1986. This increase was due to a combination of growth in Federal debt and higher interest rates. By 1988, however, the increase in the net interest share is expected to have stopped, because of lower interest rates and lower deficits that are slowing the growth of Federal debt.

Expenditures as a share of GNP.—The preceding section discussed the various categories of Federal sector expenditures relative to total expenditures. An alternative way to compare spending trends is to look at changes in the share of the Nation's current output represented by the major expenditure categories. Table B–3, which shows 3-year averages of Federal sector expenditures by category as a percent of GNP at 10-year intervals, presents this alternative comparison.

Table B–3. **FEDERAL SECTOR EXPENDITURES AS A PERCENT OF GNP**

Description	1955–57 average actual	1965–67 average actual	1975–77 average actual	1985–87 average estimate	1988 estimate
Defense purchases	9.8	7.8	5.4	6.5	6.4
Nondefense purchases	1.4	2.4	2.4	2.2	2.0
Domestic transfer payments ("to persons")	3.2	4.4	8.8	9.1	8.7
Foreign transfer payments	0.5	0.3	0.2	0.3	0.3
Grants-in-aid to State and local governments	0.8	1.7	3.3	2.5	2.1
Net interest paid	1.2	1.2	1.5	3.2	3.0
Subsidies less current surplus of Government enterprises	0.4	0.6	0.4	0.5	0.6
Total expenditures	**17.3**	**18.6**	**22.0**	**24.4**	**23.0**

Note.—Total expenditures also include wage disbursements less accruals, which are less than 0.1 percent in most years.

In 1955–57, after the Korean war, defense purchases were nearly 10 percent of GNP. The years 1965–67 include the large military build-up for the Vietnam war, yet the defense expenditures share of GNP (7.8 percent) was significantly lower than the post-Korean war level. By the 1975–77 period after the Vietnam war, defense purchases had declined to 5.4 percent of GNP. For 1985–87 defense purchases are estimated to average 6.5 percent of GNP, which is below the 1965–67 average, but above the 1975–77 average. In 1988 they are expected to be 6.4 percent of GNP.

Over the last 2 decades, spending on domestic transfer payments and net interest rose dramatically relative to GNP, while grants-in-aid spending relative to GNP increased rapidly before declining significantly in recent years. Spending for everything except defense purchases averaged 7.5 percent of GNP in 1955–57. In 1985–87 such spending is estimated to average 17.8 percent of GNP; in 1988 its share is estimated to decline to 16.6 percent of GNP.

Defense purchases of goods and services.—Defense purchases consist of all purchases of goods and services under programs included in the national defense function in the budget document. Also included are purchases of goods and services by the military assistance programs that are classified in the international affairs function. Normally about 95 percent of defense purchases are made by the Department of Defense-Military. Most of the remainder is for international security assistance, defense stockpiles, civil defense, and nuclear weapons programs carried out by other agencies. The budget calls for an increase of $10.0 billion in defense purchases in 1988 over 1987.

Table B–4. **PURCHASES OF GOODS AND SERVICES BY CHARACTER OF EXPENDITURE**

(In billions of dollars)

	1983 actual	1984 actual	1985 actual	1986 actual	1987 estimate	1988 estimate
Defense purchases:						
Compensation of employees	88.6	93.4	99.2	103.5	107.0	113.2
Other	121.8	135.7	154.3	171.3	184.0	187.8
Total defense purchases	210.4	229.1	253.6	274.8	291.0	301.0
Nondefense purchases:						
Compensation of employees	34.7	36.6	39.1	40.0	41.8	44.9
Other	42.2	32.0	48.4	52.4	52.0	48.9
Total nondefense purchases	77.0	68.7	87.5	92.3	93.8	93.8

Table B–4 displays defense and nondefense purchases of goods and services, with a split by character of expenditures between compensation of employees and all other purchases. Defense purchases have been growing much more rapidly than nondefense purchases, with noncompensation defense purchases growing at a significantly faster rate than all other categories. Spending for noncompensation defense purchases is estimated to increase by

54.2 percent from 1983 to 1988, while other nondefense purchases increase by only 15.8 percent.

Nondefense purchases of goods and services.—This category covers the goods and services purchased by Federal nondefense agencies. Included are such programs as the operation of national forest, park, and recreation areas; space exploration; promotion of commerce; acquisition and disposal of agricultural commodities; construction of flood control and navigation projects; operation of the Federal airway system; a wide variety of medical, energy, space, and other scientific research; the capital outlays of Government enterprises; Federal law enforcement; and operation of veterans hospitals. Table B–5 shows these purchases by agency for the years 1979 to 1988, reflecting the agency structure in the 1988 budget.

Nondefense purchases consist mainly of the cost of operating the various nondefense agencies. In the case of Government enterprises, including the Commodity Credit Corporation (CCC) and the Postal Service, the data also reflect capital formation net of sales of assets and changes in inventories. The most volatile major segment of nondefense purchases is CCC purchases, because the CCC buys, sells, or otherwise disposes of agricultural commodities. On occasion—as in 1979 and in 1984—CCC sales and other disposals may exceed new purchases. The negative in 1984 is largely due to disposition of commodities through the payments-in-kind (PIK) program. The NIPA treat the reduction in CCC inventories due to PIK as a reduction in net Federal purchases. However, PIK transactions have no effect on total Federal expenditures since the reduction in Federal purchases is offset by an equal increase in Federal subsidy payments. The value of these subsidies is reflected in the estimates in Table B–8.

The Department of Health and Human Services and the Veterans Administration are normally the two largest agencies in terms of nondefense purchases. Their combined purchases for health care, including medicare and research, are estimated at $18.6 billion in 1988, over 82 percent of the total purchases for the two agencies. Most of their remaining purchases are for administering social security and income security transfer programs. Both the National Aeronautics and Space Administration, with $9.5 billion in 1988 nondefense purchases, and the Department of Energy, with $2.9 billion in 1988 nondefense purchases, conduct major research and development programs. The Transportation Department's $7.4 billion of 1988 nondefense purchases are mainly for the Federal Aviation Administration and the Coast Guard. The Corps of Engineers has an estimated $3.3 billion in 1988 nondefense purchases, which, along with the Tennessee Valley Authority's $1.0 billion, is primarily used for natural resources public works projects and for power activities.

Table B–5.—**NONDEFENSE PURCHASES OF GOODS AND SERVICES BY AGENCY AND ACTIVITY**

(In billions of dollars)

	Actual								Estimate	
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Legislative and judicial branches	1.6	1.8	1.8	2.1	2.2	2.4	2.6	2.7	3.4	3.6
Department of Agriculture	2.6	5.4	5.6	12.9	9.6	−2.0	12.1	15.7	10.7	6.2
Commodity Credit Corporation	(−1.0)	(1.0)	(1.2)	(8.0)	(4.3)	(−7.6)	(6.3)	(10.7)	(5.1)	(1.6)
Forest Service	(1.5)	(1.7)	(1.9)	(1.9)	(1.8)	(1.8)	(2.0)	(1.9)	(2.0)	(1.9)
All other	(2.1)	(2.7)	(2.6)	(3.0)	(3.5)	(3.9)	(3.9)	(3.1)	(3.6)	(2.7)
Department of Commerce	1.2	1.9	1.5	1.5	1.6	1.6	1.7	1.9	2.0	2.2
Corps of Engineers, Civil	2.9	3.2	3.2	3.0	3.0	3.0	3.0	2.8	3.1	3.3
Department of Education	0.5	0.7	0.8	0.8	0.7	0.9	0.8	0.8	1.1	0.8
Department of Energy	5.1	2.6	7.8	5.2	5.1	4.8	4.9	3.7	3.3	2.9
Department of Health and Human Services	6.6	7.5	8.3	8.7	8.6	9.2	9.8	10.0	10.9	11.0
Health, including medicare	(4.6)	(5.3)	(5.9)	(5.9)	(5.8)	(6.3)	(7.1)	(7.4)	(7.9)	(8.1)
Social security, income security, and other	(2.1)	(2.2)	(2.4)	(2.8)	(2.7)	(2.8)	(2.7)	(2.6)	(3.0)	(2.9)
Department of Housing and Urban Development	0.7	0.5	0.4	0.5	0.7	1.0	1.1	0.8	0.5	0.4
Department of the Interior	3.3	3.9	4.0	3.9	4.2	4.3	4.5	4.5	4.6	4.3
Department of Justice	1.9	2.1	2.3	2.4	2.7	3.0	3.4	3.5	4.4	5.3
Department of Labor	1.7	1.9	1.9	1.9	1.5	1.5	1.4	1.5	1.6	1.7
Department of State	0.9	1.0	1.0	1.1	1.3	1.4	1.6	1.9	2.3	2.5
Department of Transportation	4.3	4.8	5.1	5.3	5.7	6.0	6.3	6.5	6.7	7.4
Coast Guard	(1.3)	(1.4)	(1.6)	(1.8)	(2.1)	(2.2)	(2.2)	(2.1)	(2.2)	(2.4)
Federal Aviation Administration	(2.3)	(2.5)	(2.7)	(2.5)	(2.8)	(3.1)	(3.4)	(3.8)	(3.8)	(4.3)
Other	(0.8)	(0.9)	(0.8)	(0.9)	(0.8)	(0.8)	(0.6)	(0.6)	(0.7)	(0.7)
Department of the Treasury	3.4	4.0	4.2	4.2	4.6	4.7	5.4	5.7	6.6	7.3
Internal Revenue Service	(2.1)	(2.3)	(2.4)	(2.5)	(2.9)	(3.2)	(3.6)	(3.8)	(4.4)	(5.0)
Other	(1.4)	(1.7)	(1.8)	(1.7)	(1.7)	(1.5)	(1.9)	(2.0)	(2.2)	(2.3)
Environmental Protection Agency	0.8	0.9	1.0	0.9	1.0	1.1	1.3	1.4	1.5	1.9
National Aeronautics and Space Administration	4.1	4.7	5.3	5.9	6.5	6.9	7.2	7.3	7.8	9.5
Veterans Administration	6.2	7.1	7.6	8.1	8.9	9.6	10.3	10.6	11.1	11.5
Hospital and medical care	(5.4)	(6.3)	(6.8)	(7.3)	(8.1)	(8.7)	(9.3)	(9.7)	(10.1)	(10.5)
Administration and other	(0.7)	(0.8)	(0.8)	(0.8)	(0.8)	(0.9)	(1.0)	(0.9)	(1.0)	(1.0)
All other	7.6	8.8	9.3	8.8	9.0	9.1	10.1	11.0	12.1	12.1

Table B–5.—**NONDEFENSE PURCHASES OF GOODS AND SERVICES BY AGENCY AND ACTIVITY—Continued**

(In billions of dollars)

	Actual								Estimate	
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
National Science Foundation	(0.4)	(0.4)	(0.4)	(0.5)	(0.5)	(0.5)	(0.6)	(0.7)	(0.7)	(0.8)
Nuclear Regulatory Commission	(0.3)	(0.4)	(0.4)	(0.4)	(0.5)	(0.5)	(0.5)	(0.4)	(0.4)	(0.4)
Office of Personnel Management: Employee health benefits and imputed employee retirement contributions	(1.6)	(1.9)	(2.3)	(2.5)	(2.7)	(3.0)	(3.3)	(3.0)	(3.2)	(3.0)
Postal Service	(0.4)	(0.4)	(0.5)	(0.4)	(0.6)	(0.9)	(1.0)	(1.3)	(1.7)	(2.0)
Tennessee Valley Authority	(2.0)	(1.7)	(1.5)	(1.0)	(0.9)	(0.2)	(0.8)	(1.3)	(1.6)	(1.0)
United States Information Agency	(0.4)	(0.4)	(0.4)	(0.5)	(0.5)	(0.5)	(0.6)	(0.7)	(0.8)	(0.8)
Imputed bank service charges	(0.4)	(0.3)	(0.4)	(0.4)	(0.4)	(0.5)	(0.5)	(0.5)	(0.6)	(0.6)
Other	(2.1)	(3.3)	(3.3)	(3.1)	(2.8)	(3.0)	(2.7)	(3.1)	(3.2)	(3.5)
Total nondefense purchases	**55.5**	**62.8**	**71.1**	**77.1**	**77.0**	**68.7**	**87.5**	**92.3**	**93.8**	**93.8**

Domestic transfer payments.—This is the largest category of Federal sector expenditures. Spending for domestic transfers has expanded rapidly in recent years, mainly as a result of more beneficiaries and higher benefit payments under social insurance programs. As Table B–6 shows, spending on human resources programs, especially social security and medicare, dominates domestic transfer payments. This spending is expected to continue to rise in 1988, largely due to increases in the covered population and cost-of-living adjustments. Social security is estimated to account for 52 percent of total domestic transfer payments in 1988, while medicare accounts for another 20 percent, unemployment assistance for 4 percent, Federal civilian and military employees' retirement and disability for 11 percent, and veterans benefits for 4 percent of the total. Program trends on a unified budget basis are discussed extensively in Part 5 of the *Budget—Supplement* and elsewhere in the budget documents.

Most domestic transfer payments are for income support and are characterized by automatic eligibility of coverage and automatic benefit increases to adjust for changes in the cost of living. For these programs the demographic and economic conditions dominate the growth patterns, and the rate of growth is quite substantial for most years shown. However, due to the sharp decline in the unemployment rate, transfer payments for unemployment benefits are estimated to decline by $13.3 billion between 1983 and 1988. This, combined with legislative and administrative efforts to slow the growth of Federal spending, is thereby significantly slowing the rate of growth for transfer payments as a whole.

Table B-6. **FUNCTIONAL COMPOSITION OF DOMESTIC TRANSFER PAYMENTS**

(In billions of dollars)

Description	Actual										Estimate	
	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
HUMAN RESOURCES PROGRAMS												
Social security (OASDI)	81.1	89.3	99.4	113.7	134.1	149.6	163.3	170.9	181.2	190.9	199.6	210.7
Medicare (HI&SMI)	20.7	24.2	28.1	33.8	41.1	49.0	56.1	60.8	68.3	73.8	75.9	79.6
Income security:												
Railroad retirement	3.7	3.9	4.2	4.7	5.2	5.6	6.0	6.1	6.2	6.3	6.5	6.6
Civil service retirement	9.5	10.8	12.4	14.6	17.6	19.4	20.7	21.8	23.0	23.9	26.4	26.0
Military retired pay	8.1	9.0	10.1	11.8	13.6	14.7	15.8	16.3	15.6	17.5	17.8	18.7
Unemployment benefits	14.2	10.9	9.9	16.4	17.9	22.0	29.4	16.9	16.0	16.2	16.5	16.1
Benefits for coal miners	1.0	1.0	1.6	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.5
Supplemental security income	4.7	4.9	5.2	5.7	6.4	6.9	7.2	8.1	8.7	9.4	9.8	11.2
Food and nutrition	4.4	4.5	5.7	7.9	9.8	9.5	11.1	10.7	10.7	10.6	10.6	10.4
Special payments, Treasury	0.9	0.9	0.8	1.3	1.3	1.2	1.2	1.2	1.1	1.4	1.5	2.9
Workers' compensation	0.6	0.6	0.7	0.8	0.9	0.9	0.9	1.0	1.1	1.1	1.1	1.2
Other	*	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.6	0.6
Subtotal, income security	47.1	46.7	50.6	65.0	74.5	81.9	94.2	83.9	84.1	88.4	92.4	95.3
Health	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.8	0.8
Education, training, employment, and social services:												
Education	2.4	2.8	3.4	4.5	5.7	5.3	5.9	6.1	6.3	6.1	6.3	5.5
Training, employment, and social services	0.6	0.8	0.9	1.5	1.1	0.9	0.8	1.0	1.0	1.0	1.0	1.0
Subtotal, education, training, employment, and social services	2.9	3.5	4.3	6.0	6.8	6.2	6.7	7.1	7.3	7.1	7.3	6.6
Veterans benefits and services	13.3	13.5	14.0	14.4	15.5	16.2	16.5	16.3	16.5	16.6	16.5	16.5

Table B-6. **FUNCTIONAL COMPOSITION OF DOMESTIC TRANSFER PAYMENTS—Continued**

(In billions of dollars)

Description	Actual										Estimate	
	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Total human resources programs	**165.8**	**177.8**	**196.9**	**233.5**	**272.7**	**303.6**	**337.4**	**339.6**	**358.1**	**377.4**	**392.4**	**409.5**
ALL OTHER FUNCTIONS												
National defense: CHAMPUS [1]	0.5	0.6	0.7	0.7	0.9	1.1	1.2	1.3	1.5	1.7	1.5	2.3
Other	0.8	0.9	0.9	1.1	1.1	1.0	1.1	1.4	1.1	1.3	1.3	1.1
Total functions not included in human resources grouping	**1.3**	**1.5**	**1.5**	**1.8**	**1.9**	**2.1**	**2.3**	**2.7**	**2.6**	**3.0**	**2.9**	**3.4**
Total domestic transfer payments	**167.1**	**179.3**	**198.5**	**235.4**	**274.6**	**305.6**	**339.8**	**342.3**	**360.8**	**380.4**	**395.3**	**412.9**

*$50 million or less.

[1] Health care for dependents of active duty personnel and retired military personnel and their dependents.

Grants-in-aid.—These expenditures help State and local governments provide general public services and finance programs for the needy. Table B-7 shows grants-in-aid by budget function and major activity. Grant expenditures are discussed in greater detail in Special Analysis H in this document. While the definition of Federal aid used in that analysis differs somewhat from that used in the NIPA, the two sets of data largely overlap. Special Analysis H explains the relationship between the series.

Grants-in-aid may often substitute for domestic transfer payments and, to a lesser degree, nondefense purchases. For example, low-income veterans could be eligible for free medical care under medicaid (Federal grants to finance State and local transfer payments), in a veterans hospital (nondefense purchases), or perhaps under medicare (transfer payments). Medicaid and most grants in the income security function are grants to assist States to provide income support; most other grants finance State and local services to the public. (The income support may be aid-in-kind, as is the case for medicaid, where much of the State and local spending is to reimburse for the cost of providing medical care for the poor.)

The growth in most Federal grants-in-aid categories has been constrained over the last 6 years as part of the administration's efforts to curb the growth in overall spending. However, expenditures have increased significantly for two categories—medicaid and transportation. Despite reforms to increase program efficiency and effectiveness, medicaid grants rose by 53.5 percent from 1982 to 1987. The administration's proposals to contain medicaid costs would keep expenditures in 1988 at about the 1987 level. Transportation grants rose by 54 percent from 1982 to 1987, largely due to the enactment of the Surface Transportation Assistance Act of 1982. Reflecting the administration's proposals to restrain domestic discretionary spending, they are expected to decline slightly in 1988. The administration also proposes to reduce expenditures for most other grants-in-aid categories.

Table B-7. **FUNCTIONAL COMPOSITION OF FEDERAL GRANTS-IN-AID**

(In billions of dollars)

Description	Actual										Estimate	
	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
HUMAN RESOURCES PROGRAMS												
Income security:												
Family support payments	6.3	6.6	6.5	7.2	8.4	7.9	8.3	8.7	9.1	9.8	10.5	9.7
Child nutrition and other food programs	2.7	2.8	3.3	3.9	4.4	4.2	4.7	5.4	5.8	6.2	6.8	6.3
Other	1.6	1.6	1.7	2.2	4.5	4.7	4.9	4.9	4.9	5.7	6.1	5.3
Subtotal, income security	10.6	11.0	11.5	13.3	17.2	16.7	17.9	19.0	19.8	21.7	23.4	21.3
Health:												
Medicaid	9.8	10.6	12.4	13.9	16.8	17.3	18.9	20.0	22.6	24.9	26.6	26.8
Other (includes research, construction, services, and medical training)	2.7	2.7	2.7	3.0	3.1	3.1	2.8	3.0	3.2	3.3	3.6	3.5
Subtotal, health	12.5	13.4	15.1	16.9	19.9	20.5	21.8	23.0	25.7	28.2	30.2	30.3
Education, training, employment, and social services:												
Education	4.9	5.4	6.6	7.3	7.5	7.0	6.6	6.6	7.9	8.3	7.9	7.2
Training and employment	5.5	8.9	8.5	7.7	6.7	3.3	3.3	2.6	2.9	3.1	2.8	3.1
Social services	4.4	5.0	5.3	6.3	5.4	5.0	5.4	6.2	5.8	6.3	6.6	6.6
Subtotal, education, training, employment, and social services	14.8	19.3	20.3	21.3	19.6	15.3	15.3	15.5	16.6	17.7	17.3	16.9
Other (social security, medicare, and veterans benefits and services)	0.4	0.4	0.4	0.5	0.6	0.7	0.8	0.8	0.8	0.9	1.0	1.0
Total human resources programs	**38.3**	**44.1**	**47.4**	**52.0**	**57.2**	**53.2**	**55.7**	**58.2**	**62.9**	**68.5**	**71.8**	**69.4**

OTHER FUNCTIONS:												
Natural resources and environment:												
EPA	3.7	3.4	3.9	4.6	4.1	4.0	3.2	2.9	3.2	3.4	2.9	2.7
Other	0.4	0.4	0.6	0.7	0.7	0.7	0.6	0.8	0.8	0.8	0.8	0.6
Subtotal, natural resources and environment	4.1	3.8	4.5	5.2	4.8	4.7	3.9	3.7	4.0	4.2	3.8	3.4
Community and regional development:												
Local public works	0.6	2.9	1.6	0.4	0.1	*	*	*	*	*	*	*
Block grants	2.0	2.4	3.1	3.8	3.9	3.7	3.4	3.7	3.7	3.2	3.2	3.0
Other	1.8	1.5	1.7	2.0	1.9	1.5	1.3	1.2	1.3	1.2	1.1	0.8
Subtotal, community and regional development	4.4	6.8	6.4	6.2	5.9	5.2	4.8	4.9	4.9	4.5	4.3	3.8
Transportation	7.7	8.1	9.6	11.8	12.2	10.8	12.1	14.3	16.0	17.7	16.7	16.3
General purpose fiscal assistance:												
General revenue sharing	6.8	6.8	6.8	6.8	5.1	4.6	4.6	4.6	4.6	5.1	0.1	.....
Anti-recession fiscal assistance	1.7	1.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other	0.6	0.9	0.9	1.1	1.1	1.4	1.2	1.6	1.6	1.5	1.7	1.1
Subtotal, general purpose fiscal assistance	9.0	9.1	7.8	7.9	6.3	5.9	5.9	6.1	6.1	6.6	1.8	1.1
All other functions	2.7	2.8	3.5	3.5	3.7	3.6	3.3	3.4	3.7	6.1	6.2	6.1
Total other functions	**27.9**	**30.6**	**31.7**	**34.7**	**32.9**	**30.3**	**29.9**	**32.5**	**34.8**	**39.0**	**32.8**	**30.6**
Total grants-in-aid	**66.3**	**74.7**	**79.1**	**86.7**	**90.1**	**83.4**	**85.7**	**90.7**	**97.7**	**107.4**	**104.6**	**100.0**

*50 million or less.

Foreign transfer payments.—There are three major types of foreign transfer payments: expenditures to assist foreign economic development, grants of surplus agricultural products, and payments under social security and similar programs to individuals living abroad. Although payments to individuals are gradually rising, roughly in proportion to the rise in GNP, total foreign transfer payments have declined to just 0.3 percent of GNP. The peak year for foreign transfer payments was 1949; in that year they were equal to 1.9 percent of GNP.

Net interest paid.—Net interest paid depends on the size of Federal debt, loans outstanding, and the interest rates on borrowing and lending. As noted above, the steady increase in net interest paid is being halted by lower interest rates and smaller deficits, which are slowing the growth of Federal debt.

Subsidies less current surplus of Government enterprises.—This category of expenditures consists of two elements: (1) subsidy payments to resident businesses (including farms); and (2) the "current surplus" or "deficit" of Government enterprises. In this context, a subsidy is a monetary grant to a unit engaged in commercial activities. Examples are housing subsidies, railroad subsidies, and the construction and operating differential subsidies paid to operators of U.S.-flag merchant ships. As Table B–8 shows, normally about half of the subsidies are for housing programs (including Department of Agriculture housing programs). These subsidies are designed mainly to reduce the cost of housing to low- and moderate-income families. The large increase in Commodity Credit Corporation subsidies in 1984 was due to $8.6 billion of payment-in-kind subsidies that year.

"Government enterprise" is the term used in the NIPA to designate certain business-type operations of the Government that usually appear in the budget as public enterprise revolving funds. The operating costs of Government enterprises are, to a great extent, covered by the sale of goods and services to the public rather than from tax receipts. The difference between the sales and the current operating expense of a Government enterprise constitutes its surplus or deficit. As noted above, the capital formation of Government enterprises net of sales of assets is classified as nondefense purchases. The largest Government enterprises are the Commodity Credit Corporation, the Postal Service, and the Tennessee Valley Authority.

Table B–8. SUBSIDIES LESS CURRENT SURPLUS OF GOVERNMENT ENTERPRISES

(In billions of dollars)

Description	Actual 1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	Estimate 1987	1988
Subsidies:												
Commodity Credit Corporation	0.6	2.3	2.0	0.5	1.4	1.6	4.9	10.6	8.0	9.4	11.6	12.0
Rural housing insurance fund	0.4	0.4	0.6	0.6	0.8	1.4	1.7	1.7	1.9	2.0	1.9	1.6
Other Department of Agriculture	0.3	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.3	1.5
Housing (HUD)	2.9	3.5	4.3	5.1	6.3	7.6	9.2	9.7	11.0	11.0	10.6	11.3
Maritime	0.5	0.5	0.5	0.6	0.5	0.6	0.4	0.4	0.3	0.3	0.3	0.2
Railroad and mass transit	1.3	1.4	1.5	2.0	2.2	1.9	1.7	1.7	1.6	1.3	1.3	0.8
Other [1]	0.3	0.3	0.6	0.5	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
Subtotal	6.4	8.9	9.9	9.5	11.7	13.5	18.2	24.4	23.2	24.2	26.1	27.6
Enterprise surpluses (—) or deficits:												
Commodity Credit Corporation	0.2	0.8	1.4	1.5	1.8	2.3	5.5	2.5	2.0	3.6	6.9	6.2
Postal Service	1.6	1.5	0.6	1.6	1.1	−0.1	0.4	0.6	1.1	0.3	0.8	1.2
Bonneville Power Administration	−0.2	−0.2	−0.2	−0.2	−0.3	−0.2	−0.4	−0.7	−0.7	−0.5	−0.7	−0.6
Tennessee Valley Authority	−0.6	−0.6	−0.8	−1.1	−1.0	−1.2	−1.4	−1.5	−2.0	−2.3	−2.6	−2.8
Federal Housing Administration	−0.2	−0.2	−0.2	−0.4	−0.4	−0.5	−0.5	−0.4	−0.5	−2.3	−2.4	−2.0
Federal Deposit Insurance Corporation	−0.2	−0.3	−0.3	−0.2	−0.4	−0.6	−0.6	−1.2	−1.3	−1.5	−1.7	−1.7
Federal Savings and Loan Insurance Corporation	−0.2	−0.3	−0.3	−0.3	*	−0.2	−0.3	−0.4	−0.5	−1.5	−1.6	−1.7
All other [1]	0.1	*	−0.2	*	*	*	−*	0.2	−0.4	−0.1	0.2	0.1
Subtotal	0.5	0.7	−*	1.0	0.9	−0.5	2.7	−0.9	−2.3	−4.3	−1.0	−1.4
Total subsidies less current surplus	**6.9**	**9.7**	**9.9**	**10.4**	**12.5**	**13.0**	**20.9**	**23.5**	**20.9**	**19.9**	**25.1**	**26.1**

* $50 million or less.

[1] Includes wage disbursements less accruals.

Wage disbursements less accruals.—This is an adjustment occasionally made in the NIPA to bridge between the sum of the expenditure components and the totals. This is necessary when wages and salaries are received in a time period that is different from when they are earned. The unified budget records these payments on a cash basis (when they are paid). The NIPA treat such payments on an accrual basis (when they are earned) for nondefense purchases and the current surplus of Government enterprises, but on a cash basis for total expenditures. Wage disbursements less accruals is the timing adjustment necessary to allow the individual expenditure categories to sum to the total expenditures. The net adjustment made is normally small since wage and salary payments disbursed in one year but earned in another are approximately offset by payments disbursed in the next year but earned in the current one.

Quarterly Estimates

Table B–9 presents quarterly NIPA receipts and expenditures estimates at seasonally adjusted annual rates for 1986 to 1988. The translation of the budget into the NIPA categories is inexact. When the annual NIPA estimates are converted into quarterly distributions that are seasonally adjusted at annual rates, greater imprecision must be expected. The data presented in Table B–9 are the best available estimates of the quarterly NIPA receipts and expenditures consistent with the 1988 budget, but should be used with clear recognition of their limitations.

Table B–9. **FEDERAL RECEIPTS AND EXPENDITURES IN THE NIPA, QUARTERLY, 1986–88**

(In billions of dollars; seasonally adjusted at annual rates)

Description	Actual					Estimate						
	Oct.–Dec. 1985	Jan.–Mar. 1986	Apr.–June 1986	July–Sept. 1986	Oct.–Dec. 1986	Jan.–Mar. 1987	Apr.–June 1987	July–Sept. 1987	Oct.–Dec. 1987	Jan.–Mar. 1988	Apr.–June 1988	July–Sept. 1988
RECEIPTS												
Personal tax and nontax receipts	355.6	350.3	355.5	365.8	375.6	340.5	379.3	372.9	382.4	390.0	402.4	398.7
Corporate profits tax accruals	77.2	77.8	80.1	84.3	88.5	111.9	116.1	119.0	120.7	132.0	133.5	134.6
Indirect business tax and nontax accruals	56.0	52.7	50.7	53.4	52.5	53.8	54.3	54.4	57.7	55.7	56.3	56.7
Contributions for social insurance	317.0	325.8	327.2	329.6	333.1	339.2	345.4	352.4	360.3	381.5	389.0	396.5
Total receipts	**805.8**	**806.6**	**813.5**	**833.1**	**849.7**	**845.4**	**895.1**	**898.7**	**921.1**	**959.2**	**981.2**	**986.5**
EXPENDITURES												
Purchases of goods and services	380.9	355.7	367.6	369.3	376.3	381.6	389.5	391.4	397.0	394.8	394.1	393.7
Defense	(268.0)	(266.4)	(278.4)	(286.8)	(281.9)	(287.5)	(296.4)	(298.0)	(301.6)	(301.7)	(300.7)	(300.2)
Nondefense	(112.9)	(89.3)	(89.2)	(82.6)	(94.4)	(94.1)	(93.1)	(93.4)	(95.4)	(93.1)	(93.4)	(93.5)
Transfer payments	385.9	389.3	396.7	403.0	401.1	408.1	411.6	417.3	416.1	428.0	430.0	434.9
Domestic ("to persons")	(370.4)	(378.8)	(381.6)	(387.5)	(387.4)	(394.5)	(397.1)	(402.2)	(400.9)	(414.0)	(416.0)	(420.9)
Foreign	(15.4)	(10.5)	(15.0)	(15.5)	(13.6)	(13.6)	(14.5)	(15.1)	(15.2)	(14.0)	(14.0)	(14.0)
Grants-in-aid to State and local governments	101.6	103.5	106.9	108.0	97.7	105.9	108.6	106.2	102.1	99.9	99.4	98.9
Net interest paid	133.9	135.0	138.1	134.7	135.4	137.9	140.0	140.4	140.4	140.5	140.5	140.6
Subsidies less current surplus of Government enterprises	21.1	18.0	36.5	15.4	32.5	41.4	13.3	14.2	27.0	35.3	21.0	21.3
Wage disbursements less accruals								−8.0				
Total expenditures	**1,023.4**	**1,001.5**	**1,045.7**	**1,030.5**	**1,043.0**	**1,074.9**	**1,063.0**	**1,061.5**	**1,082.6**	**1,098.5**	**1,085.0**	**1,089.4**
Deficit (−)	**−217.6**	**−195.0**	**−232.2**	**−197.4**	**−193.3**	**−229.5**	**−167.9**	**−162.8**	**−161.5**	**−139.3**	**−103.8**	**−102.8**

Note.—Because of the methods normally used to seasonally adjust NIPA data, the average of seasonally adjusted data for the 4 quarters of a fiscal year may not be equal to the unadjusted fiscal year total.

Relationship of the Budget to the Federal Sector, NIPA

Table B-10 shows the major differences between the budget and the Federal sector in the NIPA. Adjustments required to reconcile the budget to the Federal sector in the NIPA are explained below.

Table B-10. **RELATIONSHIP OF THE BUDGET TO THE FEDERAL SECTOR, NIPA**

(In billions of dollars)

Description	1984 actual	1985 actual	1986 actual	1987 estimate	1988 estimate
RECEIPTS					
Total budget receipts [1]	**666.5**	**734.1**	**769.1**	**842.4**	**916.6**
Government contributions for employee retirement (grossing)	29.7	32.3	33.8	35.8	41.5
Other netting and grossing	13.0	14.7	12.3	13.5	17.7
Timing adjustments	5.1	−5.2	0.8	−15.6	−6.1
Geographic exclusions	−1.2	−1.3	−1.4	−1.5	−1.7
Other	−0.3				
Federal sector, NIPA receipts	**712.6**	**774.6**	**814.7**	**874.6**	**968.1**
EXPENDITURES					
Total budget outlays [1]	**851.8**	**946.3**	**989.8**	**1,015.6**	**1,024.3**
Lending and financial transactions	−18.2	−26.4	−12.5	−6.3	4.5
Government contributions for employee retirement (grossing)	29.7	32.3	33.8	35.8	41.5
Other netting and grossing	13.0	14.7	12.3	13.5	17.7
Defense timing adjustment	1.0	1.4	3.2	6.5	3.9
Bonuses on Outer Continental Shelf land leases	3.4	1.9	2.0	1.3	0.8
Geographic exclusions	−5.0	−5.4	−5.4	−5.6	−5.5
Other	−1.8	−2.7	2.0	−0.4	1.5
Federal sector, NIPA expenditures	**873.9**	**962.1**	**1,025.4**	**1,060.5**	**1,088.6**

[1] Includes off-budget amounts.

Lending and financial transactions.—The NIPA conceptually measure the Nation's current income and production, and therefore do not include transactions, such as loans, that are an exchange of existing assets and liabilities rather than current income or production. Loan transactions have a significant economic impact, affecting the allocation and distribution of income and output, but they are analyzed more appropriately within a financial market framework, such as that provided by the flow-of-funds data of the Federal Reserve Board. Special Analysis E, "Borrowing and Debt", and Special Analysis F, "Federal Credit Programs", both contain information on the financial market implications of the budget.

Most of the lending and financial transactions included in Table B-10 are shown in Special Analysis F. However, this total differs from the total for direct loans shown in Special Analysis F because: (a) the NIPA record nonrecourse agricultural commodity loans as purchases rather than loans; and (b) capital contributions to international financial institutions are not loans, but are financial transactions excluded from the NIPA.

The sharp increase in lending and financial transactions in 1985 was largely due to lending for the Public and Indian Housing

Authorities. Changes in tax law in the Deficit Reduction Act of 1984 raised questions about the tax-exempt status of these loans. As a consequence, tax-exempt financing was suspended and replaced by direct Federal lending until the Internal Revenue Service ruled that the tax-exempt status was not jeopardized by this act. The exclusion for lending declines in 1987 and 1988, reflecting the administration's commitment to reduce direct Federal lending.

Government contributions for employee retirement.—The contributions of Government agencies to the retirement trust funds of their employees constitute the largest netting and grossing adjustment. Since these contributions are made by Government accounts to other Government accounts, they are not included in the unified budget totals, which conceptually measure the Government's current transactions with the public. While the contributions are recorded as outlays of the agencies, they are offset by an intragovernmental deduction. However, the NIPA have long counted Government payments for civilian employee retirement as part of the compensation paid to Government employees and, therefore, as Government expenditures. This treatment maintains comparability with the treatment of employee retirement contributions in the rest of the economy. Contributions for employee retirement by Government enterprises such as the Postal Service are recorded as an increase in the current deficit of enterprises. Contributions by other civilian accounts are recorded as purchases of goods and services. The receipt of these retirement contributions is treated in the NIPA as contributions for social insurance. Since receipts and expenditures are increased by identical amounts, this treatment has no net effect on the surplus or deficit. Around 80 percent of these payments go to the civil service retirement and disability trust fund, while most of the remainder is for social security and medicare.

The NIPA treatment of Government contributions for military retirement is similar to the treatment of contributions for civilian employees. In 1985, the budget began financing military retirement on an accrual basis akin to the financing of civil service retirement. A trust fund was created to pay retirement benefits to current and future military retirees. Benefits are financed by payments to the retirement trust fund from three sources: employing agencies, for services currently rendered (the "accrual charge"); the general fund, to cover the unfunded liability that existed when the new retirement trust fund was created; and the interest earned on trust fund balances. These payments are not included in the budget totals since they are offset by intragovernmental deductions. In the NIPA, a social insurance fund and an employer contribution for military retirement are imputed. The imputed contribution is equal to benefits paid. Since an equal amount is added to both receipts and expenditures, imputed accruals have no impact on the surplus or deficit. However, the contributions imputed in the NIPA differ significantly from the budget accruals in many years. The budget estimates are based on benefits earned in the time period when service was rendered, while the NIPA use the cash benefits paid in one period as a proxy for the contributions required to fund benefits earned in that period but paid in a succeeding period.

Other netting and grossing.—The budget normally counts as receipts only income from taxation or similar sources that arises from the exercise of Governmental power to compel payment. Money received in the course of business-type transactions is normally shown as offsets against outlays. For instance, receipts from social insurance programs operated by the Veterans Administration (such as the National Service Life Insurance and U.S. Government Life Insurance) are netted against outlays in the budget since these programs are voluntary, commercial-type activities. However, in the NIPA these insurance premiums are treated as social insurance receipts just as are receipts from compulsory Government programs. Likewise, noncompulsory insurance premiums under the supplementary medical insurance program and similar but much smaller noncompulsory hospital insurance premiums are classified as offsetting collections (negative outlays) in the budget, but are classified as social insurance contributions in the NIPA.

Other netting and grossing includes some imputed contributions for social insurance for Federal employees for unemployment compensation (which adds an equal amount to purchases of goods and services) and workers' compensation (which adds an equal amount to domestic transfer payments). Social insurance contributions are imputed for medical care for military personnel and their dependents and for unemployment benefits for former military personnel.

One major element of netting and grossing in recent years has been due to budgetary collections arising from the Outer Continental Shelf leases. All such collections are recorded in the budget as negative outlays. The rents and royalties component—but not the bonuses—are recorded in the NIPA as indirect business nontaxes; this converts the collections from an offset to outlays in the budget to a receipt in the NIPA.

All netting and grossing items, including Government contributions for employee retirement, have an equal impact on receipts and expenditures, so they have no effect on the calculation of the NIPA deficit.

Timing adjustments.—The budget records receipts at the time the cash is collected regardless of when the liability is incurred. In contrast, the NIPA attempt to record most receipts from the business sector in the time period in which the liability is incurred rather than when taxes are actually collected, while personal income taxes and social insurance contributions are recorded at the time of payment by the individual taxpayer rather than when the liability is incurred or the cash is received by Treasury. Hence, receipts recorded in the budget for one fiscal year are sometimes recorded in the prior fiscal year in the NIPA due to the lags between the time when liability is incurred or payment made and time of collection. The timing adjustments made to budget receipts attempt to account for these time lags.

The principal timing adjustment made to expenditures is for defense purchases. The major defense timing adjustment normally involves procurement items (such as missiles and airplanes) purchased under fixed-price contracts. The Federal Government normally makes progress payments for work in process for major procurement programs. Progress payments are excluded from NIPA Federal sector expenditures, because work in progress is counted in the NIPA as part of private business inventories until the goods are completed and delivered to the Government, when they are recorded as defense purchases. An additional defense timing adjustment is made to convert foreign military sales, which are recorded on a cash basis in the unified budget, to a basis consistent with net exports in the NIPA. In addition, some accounting adjustments are included with the defense timing adjustment in this translation. Nondefense timing adjustments are normally small and are included in the "other" category in Table B–10.

Bonuses on Outer Continental Shelf land leases.—In recent years bonuses paid on the Outer Continental Shelf oil leases have become a significant reconciliation item between the unified budget and the NIPA. As already noted, the budget records these bonuses as proprietary receipts and, therefore, deducts them from budget outlays. The NIPA exclude these transactions as being a transfer of assets, because the payments are not included in calculating book profits under current corporate accounting practice.

Geographic exclusions.—Geographic exclusions arise because Puerto Rico, the Virgin Islands, and other U.S. territories are not included in the United States for purposes of computing the GNP and related data series (such as contributions for social insurance, domestic transfer payments, and grants-in-aid). Nor are they treated as foreign for purposes of producing data on exports, imports, and foreign transfer payments. Since the budget includes receipts from and payments to persons and local governments in these territories, and the NIPA exclude such transactions, this constitutes a major reconciliation item between the two data series.

Other.—This category contains miscellaneous adjustments, such as foreign currency transactions that are included in the NIPA but not in the budget.

Table B-11. FEDERAL TRANSACTIONS IN THE NATIONAL INCOME AND PRODUCT ACCOUNTS, 1977–88

(In billions of dollars)

Description	Actual										Estimate	
	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
RECEIPTS												
Personal tax and nontax receipts	165.9	186.5	222.9	250.7	289.6	310.0	292.5	302.4	340.2	355.8	368.7	396.5
Corporate profits tax accruals	59.0	67.8	75.7	70.2	69.4	52.1	55.7	76.3	71.7	83.0	108.9	130.2
Indirect business tax and nontax accruals	24.5	27.1	29.0	35.3	53.4	50.0	50.2	54.9	56.5	52.2	53.8	56.6
Contributions for social insurance	125.4	142.9	163.6	182.3	211.4	231.1	247.3	279.0	306.2	323.7	343.2	384.8
Total receipts	**374.7**	**424.3**	**491.2**	**538.6**	**623.8**	**643.3**	**645.7**	**712.6**	**774.6**	**814.7**	**874.6**	**968.1**
EXPENDITURES												
Purchases of goods and services	146.8	158.6	173.1	199.9	231.8	264.4	287.4	297.8	341.1	367.1	384.8	394.8
Defense	(99.2)	(106.3)	(117.7)	(137.2)	(160.7)	(187.3)	(210.4)	(229.1)	(253.6)	(274.8)	(291.0)	(301.0)
Nondefense	(47.6)	(52.2)	(55.5)	(62.8)	(71.1)	(77.1)	(77.0)	(68.7)	(87.5)	(92.3)	(93.8)	(93.8)
Transfer payments	171.2	183.6	203.5	241.1	281.3	312.8	347.5	352.3	374.2	394.2	409.5	427.2
Domestic ("to persons")	(167.1)	(179.3)	(198.5)	(235.4)	(274.6)	(305.6)	(339.8)	(342.3)	(360.8)	(380.4)	(395.3)	(412.9)
Foreign	(4.1)	(4.4)	(5.1)	(5.8)	(6.7)	(7.2)	(7.7)	(9.9)	(13.4)	(13.8)	(14.2)	(14.3)
Grants-in-aid to State and local governments	66.3	74.7	79.1	86.7	90.1	83.4	85.7	90.7	97.7	107.4	104.6	100.0
Net interest paid	28.5	33.5	40.7	50.8	66.7	82.2	90.6	109.7	128.3	136.8	138.5	140.5
Subsidies less current surplus of Government enterprises	6.9	9.7	9.9	10.4	12.5	13.0	20.9	23.5	20.9	19.9	25.1	26.1
Wage disbursements less accruals	−0.1	−0.1	*	....	−0.1	*	0.4	−0.1	0.1	....	−2.0	....
Total expenditures	**419.6**	**459.9**	**506.4**	**589.0**	**682.4**	**755.9**	**832.4**	**873.9**	**962.1**	**1,025.4**	**1,060.5**	**1,088.6**
Deficit (−)	**−44.8**	**−35.6**	**−15.2**	**−50.4**	**−58.5**	**−112.6**	**−186.7**	**−161.3**	**−187.5**	**−210.7**	**−185.9**	**−120.5**

*$50 million or less.

Note.—The estimates for 1987 and 1988 are preliminary; revisions will be published in the February 1987 issue of the *Survey of Current Business*.

PART 2

ANALYSES OF THE TOTALS

INTRODUCTION

Part 2 provides analyses and tabulations of the totals that cover the Federal Government's finances and operations as a whole and reflects the ways in which Government finances affect the economy. The data include both on-budget and off-budget amounts (i.e., transactions of the Federal old-age, survivors, and disability insurance trust funds). These special analyses are designated C through J.

Special Analysis C (Funds in the Budget) classifies on-budget and off-budget information by Federal fund and trust fund categories.

Special Analysis D (Federal Investment and Operating Outlays) classifies outlays in terms of the duration and nature of the benefits provided, distinguishing those of an investment or developmental type from those that primarily yield current benefits.

Special Analysis E (Borrowing and Debt) describes current developments and past trends in Federal borrowing and debt. It also considers interest on the Federal debt, investment by Government accounts in Federal securities, the statutory debt limitation, and the total of Federal and federally assisted borrowing from the public.

Special Analysis F (Federal Credit Programs) analyzes direct loan and loan guarantee programs from the perspective of the credit budget. It presents detailed data on these programs, and describes the activities of Government-sponsored enterprises and the Federal Financing Bank. It also analyzes credit subsidies, loan sales, defaults, and tax-exempt financing.

Special Analysis G (Tax Expenditures) provides a list and discussion of provisions of the Federal income tax laws that allow a special exclusion, exemption, or deduction from gross income or that provide a special credit, preferential rate of tax, or deferral of tax liability.

Special Analysis H (Federal Aid to State and Local Governments) contains information on Federal grants to State and local governments and assistance provided through loans and tax expenditures. It shows Federal aid for past years and compares it to the finances of both the Federal Government and State and local governments. This analysis provides a profile of Federal grants by region, a description of the State and local government sector of the national income accounts, and an identification of other grant information sources.

Special Analysis I (Civilian Employment in the Executive Branch) deals with the levels of civilian employment in the executive branch and the systems used to control civilian employment. It also contains data on total Federal personnel costs (including military personnel).

Special Analysis J (Research and Development) identifies Federal programs for the conduct of research and development and for all support facilities related to such activities.

SPECIAL ANALYSIS C

FUNDS IN THE BUDGET

This analysis provides information on transactions of the Federal Government in terms of Federal funds and trust funds, the two major fund groups. Data are provided on receipts, outlays, and surpluses or deficits as well as net obligations and balances.

Federal funds are composed of the general fund, special funds, public enterprise revolving funds, and intragovernmental management and revolving funds. Trust funds are composed of regular (non-revolving) trust funds and trust revolving funds.

Total governmental receipts include only payments by the public that result from exercise of the Government's sovereign powers (i.e., taxes and similar payments). All income of a business-type nature (interest, loan repayments, sale of property or services, etc.) is offset against outlays (spending) rather than included in receipts. Similarly, any income to any Federal Government account arising from the spending by any Federal Government account is also offset against Federal Government outlays. This approach means that outlays measure the net payments to the public that must be financed by taxes or borrowing.

When the budget is disaggregated by fund group, any payments by accounts within a fund group to receipt accounts within the same fund group ("intrafund transactions") continue to be deducted before arriving at total receipts and outlays for the fund group. However, when payments are made by Federal fund accounts to on-budget trust fund receipt accounts, and from on-budget trust fund accounts to Federal fund receipt accounts ("interfund transactions"), the income is normally included on the receipts side of the collecting fund group. As a result of this treatment, when Federal fund and on-budget trust fund receipts are aggregated to arrive at total receipts, these interfund transactions must be deducted to arrive at a figure of total budget (governmental) receipts from the public. Likewise, when the Federal fund and on-budget trust fund outlays are aggregated to arrive at total budget outlays, the interfund transactions must be deducted to avoid double-counting. These deductions are shown in table C–1.

The Balanced Budget and Emergency Deficit Control Act of 1985 (Public Law 99–177) eliminated the off-budget status of formerly off-budget Federal entities, but it also required that the receipts and outlays of the two social security trust funds (the Federal old-age and survivors insurance and the Federal disability insurance trust funds) be moved off-budget. Beginning with the 1987 Budget, these changes were made retroactively for all years presented to make the data comparable over time. Data shown for 1986 also reflect the effects of sequestration of budgetary resources in that year.

The movement of the previously off-budget Federal entities on-budget means that all Federal funds are on-budget. However, the movement of the two trust funds off-budget means that there are now off-budget as well as on-budget trust funds. As a result, there are:

—trust intrafund payments from off-budget to on-budget accounts;
—interfund payments from on-budget Federal funds to off-budget trust funds; and
—interfund payments from off-budget trust funds to on-budget Federal funds.

While all of these amounts are included in the gross receipts of the receiving fund group, they are deducted from the receipts and offset against the outlays of that group to arrive at net receipts and outlays by fund group. This is done so that off-budget receipts can be added to on-budget receipts without requiring further deductions to arrive at total Federal Government receipts. In the same manner, off-budget outlays can be added directly to on-budget outlays to arrive at total outlays. These transactions, gross and net, are shown in table C–1.

Table C–1. **FEDERAL GOVERNMENT RECEIPTS AND OUTLAYS BY FUND GROUP**

(In millions of dollars)

Description	1986 actual	1987 estimate	1988 estimate
RECEIPTS			
On-budget:			
Federal funds:			
Total in fund accounts	512,621	563,673	609,209
Intrafund transactions	−21,599	−18,446	−19,159
Interfund receipts from off-budget	−516	−595	−615
Proprietary receipts from the public	−17,021	−18,541	−20,396
Subtotal, Federal fund receipts	473,484	526,091	569,040
Trust funds:			
Total in fund accounts	227,997	235,741	257,027
Intrafund receipts from on-budget	−2	−2	−2
Intrafund receipts from off-budget	−3,036	−2,746	−2,850
Proprietary receipts from the public	−18,027	−17,844	−21,638
Subtotal, trust fund receipts	206,933	215,149	232,537
Interfund transactions	−111,555	−112,868	−127,104
Total on-budget receipts	**568,862**	**628,372**	**674,473**
Off-budget:			
Trust funds:			
Total in fund accounts	216,545	227,980	259,673
Intrafund transactions	−159	....	....
Interfund receipts from on-budget	−16,158	−13,962	−17,575
Total off-budget (trust fund) receipts [1]	**200,228**	**214,018**	**242,098**
Total receipts	**769,091**	**842,390**	**916,571**
OUTLAYS			
On-budget:			
Federal funds:			
Total in fund accounts	795,622	806,679	820,639
Intrafund transactions	−21,599	−18,446	−19,159
Interfund receipts from off-budget	−516	−595	−615
Proprietary receipts from the public	−17,021	−18,541	−20,396
Subtotal, Federal fund outlays	756,486	769,097	780,469
Trust funds:			
Total in fund accounts	182,451	185,437	193,024
Intrafund receipts from on-budget	−2	−2	−2
Intrafund receipts from off-budget	−3,036	−2,746	−2,850
Proprietary receipts from the public	−18,027	−17,844	−21,638
Subtotal trust fund outlays	161,387	164,845	168,534
Interfund transactions	−111,555	−112,868	−127,104
Total on-budget outlays	**806,318**	**821,074**	**821,900**
Off-budget:			
Trust funds:			
Total in fund accounts	199,815	208,460	220,003
Intrafund transactions	−159	....	....
Interfund receipts from on-budget	−16,158	−13,962	−17,575
Total off-budget (trust fund) outlays [1]	**183,498**	**194,498**	**202,427**
Total outlays	**989,815**	**1,015,572**	**1,024,328**

Table C–1. **FEDERAL GOVERNMENT RECEIPTS AND OUTLAYS BY FUND GROUP—Continued**

(In millions of dollars)

Description	1986 actual	1987 estimate	1988 estimate
Surplus or deficit (−):			
On-budget:			
Federal funds	−283,001	−243,006	−211,430
Trust funds	45,546	50,304	64,003
Total on-budget deficit	−237,455	−192,702	−147,427
Off-budget (trust funds) surplus	16,731	19,520	39,671
Total deficit	**−220,725**	**−173,182**	**−107,756**

[1] Net of $314 thousand of proprietary receipts from the public in 1986.

Federal Funds

The Federal fund group is composed of the *general fund, special fund, public enterprise (revolving) fund,* and *intragovernmental fund accounts.* Intragovernmental funds include both revolving funds and management funds. Collections received by the general fund and special fund accounts are normally deposited in receipt accounts and outlays are made from expenditure accounts. In the case of revolving funds, collections are credited directly to the revolving funds. Thus, revolving funds report outlays that are net of receipts at the account level. The five types of appropriation (expenditure or fund) accounts and two types of receipt accounts associated with the Federal fund group are described as follows:

- General fund expenditure accounts—Appropriation accounts established to record amounts appropriated by law for the general support of Federal Government activities and the subsequent outlay of these funds.
- General fund receipt accounts—Receipt accounts credited with all collections not earmarked by law for a specific purpose. Receipt accounts, in turn, are categorized as being governmental or offsetting (i.e., proprietary receipts from the public, intrafund receipts, and interfund receipts).
- Special fund expenditure accounts—Appropriation accounts established to record special fund amounts appropriated by law for specific programs and the subsequent outlay of the fund. Special fund income is recorded in receipt accounts rather than being credited to expenditure accounts.
- Special fund receipt accounts—Receipt accounts credited with collections that are earmarked by law for a specific purpose. Special fund receipts may be governmental or offsetting receipts.
- Public enterprise revolving fund accounts—Appropriation accounts authorized to be credited with collections, primarily

from outside the Government, that are earmarked to finance a continuing cycle of business-type operations.

- Intragovernmental revolving fund accounts—Appropriation accounts authorized to be credited with collections, primarily from other agencies and accounts, that are earmarked to finance a continuing cycle of business-type operations, for example: working capital funds, industrial funds, stock funds, and supply funds.
- Management fund accounts—Appropriation accounts authorized by law to credit collections from two or more appropriations to carry a common purpose or project not involving a continuing cycle of business-type operations. These accounts facilitate the administration and accounting for intragovernmental activities.

Federal fund receipts and outlays.—In 1988, the Federal fund receipts are estimated at $569 billion and outlays are estimated at $780 billion. Table C-2 presents the distribution of receipts by source and outlays by agency for the Federal fund group; all Federal funds are on-budget.

The Federal fund receipts shown in the table are composed of the amounts collected by the general and special funds that are governmental in nature, plus interfund receipts from on-budget trust funds. The interfund receipts included in the table are all in the category entitled "miscellaneous receipts." Proprietary receipts from the public of the general and special funds are offset against outlays rather than being included in the receipts by source.

Table C-2. **FEDERAL FUND RECEIPTS AND OUTLAYS**

(In millions of dollars)

Description	1986 actual	1987 estimate	1988 estimate
RECEIPTS BY SOURCE			
Individual income taxes	348,959	364,002	392,821
Corporation income taxes	63,143	104,761	117,207
Excise taxes	16,053	14,111	12,228
Estate and gift taxes	6,958	5,998	5,817
Customs duties	13,297	14,392	15,221
Miscellaneous receipts	25,074	22,827	25,746
Total receipts, Federal funds	**473,484**	**526,091**	**569,040**
OUTLAYS BY AGENCY			
Legislative branch	1,662	2,127	2,204
The Judiciary	1,066	1,237	1,423
Executive Office of the President	107	118	127
Funds appropriated to the President	12,389	11,331	10,974
Agriculture	58,718	55,022	50,718
Commerce	2,057	2,412	2,297
Defense—Military [1]	265,604	274,156	289,271
Defense—Civil	13,325	13,627	14,285
Education	17,673	16,752	14,718

Table C-2. **FEDERAL FUND RECEIPTS AND OUTLAYS—Continued**

(In millions of dollars)

Description	1986 actual	1987 estimate	1988 estimate
Energy	11,013	10,611	10,164
Health and Human Services, except social security	91,809	94,948	98,647
Housing and Urban Development	14,139	14,622	13,917
Interior	4,734	5,087	4,224
Justice	3,768	4,788	5,753
Labor	4,948	5,042	5,846
State	2,968	3,404	3,592
Transportation	10,203	9,986	5,841
Treasury	178,823	180,655	188,731
Environmental Protection Agency	4,646	4,688	3,783
General Services Administration	223	−73	−418
National Aeronautics and Space Administration	7,403	7,876	9,534
Office of Personnel Management	17,495	17,515	17,535
Small Business Administration	557	125	−329
Veterans' Administration	26,055	26,208	26,352
Other independent agencies	10,889	13,538	10,441
Allowances [2]			−770
Undistributed offsetting receipts:			
Other interest	−1,072	−901	−604
Rents and royalties on the Outer Continental Shelf	−4,716	−3,903	−3,686
Sale of major assets		−1,900	−4,100
Total outlays, Federal funds	**756,486**	**769,097**	**780,469**
Excess of outlays (−)	**−283,001**	**−243,006**	**−211,430**

[1] Includes allowances for civilian and military pay raises and other legislation for the Department of Defense.
[2] Includes allowances for civilian agency pay raises and military pay raises for the Coast Guard.

Obligations.—The obligations (net) for Federal funds are estimated at $777 billion for 1988, as set forth in table C-3. These transactions flow largely from budget authority for Federal funds of $795 billion for the year, although some flow from prior years' budget authority.

Table C-3. **OBLIGATIONS INCURRED, NET, IN FEDERAL FUNDS**

(In millions of dollars)

Department or other unit	1986 actual	1987 estimate	1988 estimate
Legislative branch	1,700	2,122	2,210
The Judiciary	1,056	1,281	1,439
Executive Office of the President	107	119	127
Funds appropriated to the President	16,702	11,282	10,585
Agriculture	55,548	47,960	41,697
Commerce	1,939	2,156	2,126
Defense—Military [1]	282,509	287,489	303,879
Defense—Civil	13,228	13,755	14,471
Education	18,215	15,964	14,329
Energy	10,617	11,124	10,484
Health and Human Services, except social security	91,771	95,405	99,161
Housing and Urban Development	16,293	11,352	6,576
Interior	4,633	4,818	4,080
Justice	3,911	5,327	5,545
Labor	4,746	4,846	7,105

Table C–3. **OBLIGATIONS INCURRED, NET, IN FEDERAL FUNDS—Continued**

(In millions of dollars)

Department or other unit	1986 actual	1987 estimate	1988 estimate
State	3,168	3,731	3,752
Transportation	10,237	9,439	3,858
Treasury	178,896	180,633	188,846
Environmental Protection Agency	3,739	4,104	3,451
General Services Administration	−296	336	−160
National Aeronautics and Space Administration	7,420	8,582	9,835
Office of Personnel Management	17,390	17,649	17,560
Small Business Administration	719	102	−363
Veterans Administration	26,167	26,789	26,595
Other independent agencies:			
Export-Import Bank	−1,412	−2,150	−1,559
Federal Home Loan Bank Board	5,835	886	−1,336
U.S. Postal Service	2,419	3,047	3,147
Railroad Retirement Board	3,721	2,942	2,742
All other independent agencies	6,335	7,731	6,565
Allowances:			
Coast Guard military pay raises			48
Civilian agency pay raises			656
Savings from reform of Davis-Bacon and Service Contracts Acts			−163
Credit reform initiative			−1,284
Proposed change in Government contribution for employee health benefits			−140
Undistributed offsetting receipts:			
Other interest	−1,072	−901	−604
Rents and royalties on the Outer Continental Shelf	−4,716	−3,903	−3,686
Sale of major assets		−1,900	−4,100
Total	**781,527**	**772,116**	**777,473**

[1] Includes allowances for civilian and military pay raises and other legislation for the Department of Defense.

Balances of Federal fund budget authority.—Table C–4 shows the balances of budget authority carried forward in Federal funds at the end of each fiscal year. To the extent that valid Government obligations have been incurred and remain unpaid, amounts sufficient to pay them (obligated balances) may be carried over into the next year. Unobligated balances may be carried forward in accordance with specific provisions of law, usually in order to permit completion of major procurement or construction programs that are fully funded, to provide for activities of a continuing nature (such as research and development), for loan programs, for standby emergency purposes or for reserves for losses and debt redemption.

Table C–4. **FEDERAL FUND BALANCES OF BUDGET AUTHORITY**

(In millions of dollars)

Department or other unit	Start 1986		End 1986		End 1987		End 1988	
	Obligated	Unobligated	Obligated	Unobligated	Obligated	Unobligated	Obligated	Unobligated
Legislative branch	400	387	387	400	382	181	387	138
The Judiciary	124	40	115	9	159	4	176	2
Executive Office of the President	21	*	17	*	18	*	19	*

Table C-4. **FEDERAL FUND BALANCES OF BUDGET AUTHORITY—Continued**

(In millions of dollars)

Department or other unit	Start 1986		End 1986		End 1987		End 1988	
	Obligated	Unobligated	Obligated	Unobligated	Obligated	Unobligated	Obligated	Unobligated
Funds appropriated to the President	13,655	31,212	14,893	29,626	14,763	29,431	14,299	29,369
Agriculture	24,628	1,632	29,525	1,656	22,460	657	13,439	433
Commerce	1,635	348	1,437	382	1,121	165	938	158
Defense—Military [1]	182,564	61,390	196,135	58,972	209,223	50,414	223,831	49,657
Defense—Civil	699	418	607	426	735	237	921	19
Education	13,683	1,993	13,670	1,676	11,877	2,221	11,488	1,320
Energy	7,854	2,450	7,029	2,648	7,532	562	7,802	130
Health and Human Services, except social security	7,233	4,641	7,122	495	7,565	501	8,079	2,861
Housing and Urban Development	212,131	58,427	203,883	56,698	189,933	59,027	171,998	59,605
Interior	2,300	824	2,072	747	1,803	361	1,659	283
Justice	728	440	881	335	1,419	279	1,211	380
Labor	4,213	1,780	3,791	1,990	3,581	1,686	4,824	1,114
State	702	512	865	1,013	1,192	647	1,351	758
Transportation	8,863	2,471	11,693	1,835	11,146	1,194	9,163	757
Treasury	2,266	22,479	952	19,074	930	19,011	1,045	18,741
Environmental Protection Agency	9,706	947	8,440	950	7,856	915	7,524	914
General Services Administration	970	1,244	402	1,879	811	1,587	1,069	1,512
National Aeronautics and Space Administration	1,631	913	1,640	1,249	2,347	3,096	2,647	2,651
Office of Personnel Management	113	141	9	914	143	699	168	471
Small Business Administration	260	1,952	421	589	398	850	363	1,176
Veterans Administration	3,397	2,617	3,455	2,552	4,028	1,789	4,270	1,623
Other independent agencies:								
Export-Import Bank	3,109	439	1,732	797	2,628	2,023	2,153	2,650
Federal Home Loan Bank Board	1,907	3,920	6,671	1,084	3,812	199	3,175	1,535
All other independent agencies	11,801	3,250	13,221	3,583	14,764	3,532	14,518	3,991
Allowances [2]							−113	
Total	**516,596**	**206,866**	**531,068**	**191,579**	**522,625**	**181,271**	**508,407**	**182,248**

*500 thousand or less.
[1] Includes balances of allowances for civilian and military pay raises and other legislation for the Department of Defense.
[2] Includes balances of allowances for civilian agency pay raises and savings from reform of Davis-Bacon and Service Contract Acts.

Public enterprise revolving funds.—The public enterprise funds conduct a cycle of business-type operations, primarily with the public, on behalf of the Government. These funds are usually supplied with capital from the general fund, directly or through the Federal Financing Bank (FFB), and, in a few cases, borrowing from the public.

Data on public enterprise funds are included net of collections in tables C-1 through C-4. Additional information on the gross outlays and applicable collections is shown in table C-5. Collections of public enterprise funds are estimated at $109 billion in 1988, and gross outlays are planned to total $132 billion, resulting in net outlays of $23 billion.

Table C–5. **PUBLIC ENTERPRISE FUND TRANSACTIONS**

(In millions of dollars)

Description	Applicable collections			Gross outlays		
	1986 actual	1987 estimate	1988 estimate	1986 actual	1987 estimate	1988 estimate
Funds appropriated to the President:						
International Security Assistance	795	943	891	1,050	951	891
Overseas Private Investment Corporation	127	115	119	27	17	26
Military Sales Program	256	330	280	238	257	279
Agriculture:						
Commodity Credit Corporation	15,356	23,107	20,625	41,197	48,370	41,897
Farmers Home Administration:						
Rural housing insurance fund	3,144	4,987	3,911	6,378	5,485	4,745
Agricultural credit insurance fund	4,025	3,742	3,707	7,258	6,929	6,462
Rural development insurance fund	787	1,711	1,358	1,743	1,721	1,725
Federal Crop Insurance Corporation	549	368	463	870	796	781
Rural Electrification Administration	2,838	3,472	3,126	3,126	3,233	3,510
Commerce	96	97	92	64	193	59
Education:						
College housing loans	206	780	698	132	232	160
Energy:						
Bonneville Power Administration fund	2,661	2,874	3,165	2,633	2,850	3,010
Colorado River Basins Power Marketing fund	103	124	143	45	79	87
Health and Human Services, except social security	51	51	87	50	70	57
Housing and Urban Development:						
Public and Indian Housing programs	398	37	39	1,375	1,909	1,644
Federal Housing Administration fund	5,154	6,555	7,555	3,464	4,158	4,494
Housing for the elderly or handicapped fund	512	572	1,063	1,043	1,087	1,110
Government National Mortgage Association	1,551	2,025	903	412	1,394	829
Community Planning and Development	142	169	274	107	145	67
Other	59	50	51	24	84	*
Interior:						
Lower Colorado River Basin development fund	228	212	292	256	212	292
Upper Colorado River Basin fund	101	138	199	137	138	199
Other	39	36	89	37	53	43
Labor	344	527	871	238	522	696
Transportation	575	320	585	1,625	1,001	370
Treasury	1,168	38	37	397	7	8
General Services Administration	206	131	281	21	102	134
Small Business Administration:						
Business loan and investment fund	754	743	1,160	1,181	1,007	826
Disaster loan fund	749	952	791	578	495	487

Table C–5. **PUBLIC ENTERPRISE FUND TRANSACTIONS—Continued**

(In millions of dollars)

Description	Applicable collections			Gross outlays		
	1986 actual	1987 estimate	1988 estimate	1986 actual	1987 estimate	1988 estimate
Veterans Administration:						
Loan guaranty revolving fund	2,502	2,516	2,761	2,665	2,703	2,625
Other	510	529	532	508	473	488
Other independent agencies:						
Export-Import Bank	3,944	4,635	3,943	2,778	2,246	2,380
Federal Emergency Management Agency	428	467	577	587	460	584
Federal Savings and Loan Insurance Corporation fund	2.909	3,644	5,604	3,970	7,401	4,904
National Credit Union Administration	724	516	659	354	312	331
Postal Service	31,312	33,263	35,982	31,354	34,315	38,956
Tennessee Valley Authority	4,858	5,623	5,766	5,763	6,547	6,182
All other not included above	233	210	698	269	289	817
Total	**90,393**	**106,610**	**109,377**	**123,956**	**138,243**	**132,152**
Offsetting collections from the public	(−82,620)	(−99,745)	(−102,190)			
Offsetting collections from other accounts	(−7,773)	(−6,865)	(−7,187)			

*500 thousand or less.

Trust Funds

The trust fund group is composed of the regular *trust funds* and a few *trust revolving funds.* The regular trust funds collect certain taxes, and other receipts for specified purposes, such as payment of social security benefits, in accordance with the terms of a statute or trust agreement. The two types of appropriation accounts and one type of receipt account associated with the trust fund are as follows:

- Trust fund expenditure accounts—Appropriation accounts established to record appropriated trust fund amounts that finance specific purposes or programs.
- Trust fund receipt accounts—Receipt accounts credited with collections generated by statute or the terms of a trust agreement. These receipts may be classified as either governmental or offsetting receipts.
- Trust revolving fund accounts—Appropriation accounts authorized to be credited with collections and used to carry out a cycle of business-type operations in accordance with a statute.

Trust revolving funds are similar to intragovernmental revolving funds and public enterprise revolving funds in that they conduct a cycle of business-type operations and their outlays are normally stated net of collections. Trust fund receipts, outlays, and balances are presented in tables C–6 through C–9. Both on-budget and off-budget (social security) trust funds are shown.

Cash operations.—Trust fund receipts are estimated at $475 billion in 1988, with outlays planned at $371 billion, as shown in tables C-1 and C-6. This includes $242 billion in receipts and $202 billion in outlays for transactions of the Federal old-age and survivors insurance and disability insurance funds that are off-budget.

In fiscal years 1986-88, trust funds receipts exceeded outlays by following amounts:

(In millions of dollars)

	1986 actual	1987 estimate	1988 estimate
Total receipts, trust funds	407,161	429,167	474,635
On-budget	(206,933)	(215,149)	(232,537)
Off-budget	(200,228)	(214,018)	(242,098)
Total outlays, trust funds	344,884	359,343	370,962
On-budget	(161,387)	(164,845)	(168,534)
Off-budget	(183,498)	(194,498)	(202,427)
Excess of receipts or outlays (—), trust funds	62,277	69,824	103,673
On-budget	(45,546)	(50,304)	(64,003)
Off-budget	(16,731)	(19,520)	(39,671)

Trust fund receipts.—Table C-7 presents information classifying the trust fund receipts by major fund and by source for each such fund.

Trust fund outlays.—Corresponding information on trust fund outlays, classifying the data for the larger funds, is found in table C-8.

Trust fund balances.—Total balances of the trust funds continue to increase, as shown by the following figures:

	1985 actual	1986 actual	1987 estimate	1988 estimate
Open book balances	28,755	19,689	8,083	5,246
On-budget	(25,674)	(19,103)	(7,482)	(4,645)
Off-budget	(3,081)	(586)	(601)	(601)
Investments in U.S. securities:				
Public debt	285,961	357,828	438,843	545,855
On-budget	(249,290)	(312,545)	(374,054)	(441,396)
Off-budget	(36,671)	(45,283)	(64,789)	(104,459)
Agency debt	765	765	715	
Total	315,481	378,282	447,641	551,101

A summary of the balances by fund is presented in table C-9. Included are amounts on deposit with the Treasury (open-book balances) and investments in U.S. securities. These balances include both obligated and unobligated balances. The balances on a budget authority basis differ from the cash balances because, for a few accounts, contract authority (a form of budget authority) has been provided to a trust fund in advance of receiving moneys while unappropriated receipts are included in the cash balances but are not a part of the balances of budget authority. The note to table C-9 lists these accounts and reconciles the balances on a budget authority basis with the cash balances.

For 1988, the largest net investments are expected to be those of the Federal employees retirement funds. The investments reported above differ from the amounts reported by the Treasury Department. Special Analysis E, "Borrowing and Debt", provides further information.

Table C–6. **OUTLAYS AND RECEIPTS OF TRUST FUNDS**

(In millions of dollars)

Description	Outlays			Receipts		
	1986 actual	1987 estimate	1988 estimate	1986 actual	1987 estimate	1988 estimate
On-budget:						
Railroad retirement trust funds	8,133	8,638	8,957	9,920	9,372	9,676
Black lung disability trust fund	618	646	1,697	600	643	1,697
Veterans life insurance trust funds	1,082	1,090	1,126	1,387	1,389	1,391
Federal employees retirement funds	24,271	26,793	26,727	43,330	45,391	50,027
Military retirement fund	17,611	17,946	18,882	29,896	31,246	33,409
Unemployment trust fund	21,819	20,262	22,119	26,073	25,600	24,329
Health insurance trust funds	75,903	78,159	81,913	81,428	90,417	103,239
Highway trust funds	14,813	13,641	14,272	14,700	14,896	16,273
Airport and airway trust fund	2,365	2,576	4,523	3,565	3,929	4,200
State and local government fiscal assistance trust fund	5,114	76	....	4,185	....	....
Foreign military sales trust fund	9,709	9,414	9,096	10,725	8,914	8,896
Other trust funds (nonrevolving)	1,808	2,519	3,127	2,189	3,943	3,890
Trust revolving funds	−795	3,677	586	....	....	....
Subtotal	182,451	185,437	193,024	227,997	235,741	257,027
Intrafund receipts from on-budget	−2	−2	−2	−2	−2	−2
Intrafund receipts from off-budget	−3,036	−2,746	−2,850	−3,036	−2,746	−2,850
Proprietary receipts from the public	−18,027	−17,844	−21,638	−18,027	−17,844	−21,638
Total on-budget	**161,387**	**164,845**	**168,534**	**206,933**	**215,149**	**232,537**
Off-budget:						
Federal old-age, survivors, and disability insurance trust funds	199,815	208,460	220,003	216,545	227,980	259,673
Intrafund transactions	−159	....	....	−159	....	....
Interfund receipts from on-budget	−16,158	−13,962	−17,575	−16,158	−13,962	−17,575
Total off-budget [1]	**183,498**	**194,498**	**202,427**	**200,228**	**214,018**	**242,098**
Total	**344,884**	**359,343**	**370,962**	**407,161**	**429,167**	**474,635**

[1] Net of $314 thousand of proprietary receipts from the public in 1986.

Trust revolving funds.—The activities of the trust revolving fund subgroup are shown in table C–10. The largest of these funds are those used by the Office of Personnel Management to buy health and life insurance for Government employees.

Trust fund obligations.—The obligations (net) for trust funds are estimated at $375 billion for 1988, as set forth in table C–11. This includes $215 billion in obligations (net) for transactions of the Federal old-age, survivors, and disability insurance trust funds that are off-budget.

Table C–7. **TRUST FUND RECEIPTS (in millions of dollars)**

[Amounts under proposed legislation are shown separately]

Description	1986 actual	1987 estimate	1988 estimate
On-budget:			
Railroad retirement trust funds:			
Social insurance taxes and contributions	3,498	3,419	3,471
Railroad debt repayment		174	153
Interest on Federal securities	422	471	506
Receipts from other trust funds	2,653	2,746	2,850
Other (mainly receipts of advances and Federal payments)	3,346	2,562	2,466
Proposed legislation			230
Subtotal, railroad retirement trust funds	9,920	9,372	9,676
Black lung disability trust fund:			
Excise taxes	547	608	656
Advances from general fund	51	34	30
Other receipts	2	2	2
Proposed legislation			1,010
Subtotal, black lung disability trust fund	600	643	1,697
Veterans life insurance trust funds:			
Interest on Federal securities	944	984	986
Other receipts	443	405	404
Subtotal, veterans life insurance trust funds	1,387	1,389	1,391
Federal employees retirement funds:			
Social insurance taxes and contributions	4,742	5,136	5,639
Interest on Federal securities	15,272	15,719	16,606
Federal payment as employer for employee retirement (including payment on prior year liabilities)	23,315	24,534	27,696
Other receipts	2	2	2
Proposed legislation			85
Subtotal Federal employees retirement funds	43,330	45,391	50,027
Military retirement fund:			
Federal payment as employer for employee retirement	17,429	18,193	18,782
Federal contribution	10,500	10,524	11,200
Interest on Federal securities	1,967	2,529	3,427
Subtotal, military retirement fund	29,896	31,246	33,409
Unemployment trust fund:			
Social insurance taxes and contributions	24,098	23,607	21,964
Interest on Federal securities	1,683	1,655	1,903
Advances from the general fund	292	338	333
Proposed legislation			129
Subtotal, unemployment trust fund	26,073	25,600	24,329
Health insurance trust funds:			
Social insurance taxes and contributions	51,335	55,811	59,962
Premiums and other charges	5,739	6,545	8,311
Interest on Federal securities	4,037	5,098	5,759

Table C–7. **TRUST FUND RECEIPTS (in millions of dollars)—Continued**

[Amounts under proposed legislation are shown separately]

Description	1986 actual	1987 estimate	1988 estimate
Federal payment as employer for employee retirement	1,604	1,685	1,872
Other (mainly receipts of special Federal payments)	18,713	21,273	26,120
Proposed legislation	....	5	1,215
Subtotal, health insurance trust funds	81,428	90,417	103,239
Highway trust funds:			
Excise taxes	13,363	13,651	14,241
Interest on Federal securities	1,337	1,245	1,210
Proposed legislation	....	....	822
Subtotal, highway trust funds	14,700	14,896	16,273
Airport and airway trust fund:			
Excise taxes	2,736	3,126	3,450
Interest on Federal securities	829	803	750
Subtotal, airport and airway trust fund	3,565	3,929	4,200
State and local government fiscal assistance trust fund: Deposits for general revenue sharing	4,185	....	....
Foreign military sales trust fund	10,725	8,914	8,896
Other trust funds (nonrevolving):			
Current law	2,189	3,943	3,852
Proposed legislation	....	....	38
Subtotal, other trust funds (nonrevolving)	2,189	3,943	3,890
Subtotal	227,997	235,741	257,027
Intrafund receipts from on-budget	−2	−2	−2
Intrafund receipts from off-budget	−3,036	−2,746	−2,850
Proprietary receipts from the public	−18,027	−17,844	−21,638
Total on-budget receipts	**206,933**	**215,149**	**232,537**
Off-budget:			
Federal old-age, survivors, and disability insurance trust funds:			
Social insurance taxes and contributions	200,228	214,018	241,708
Interest on Federal securities	4,329	5,084	6,586
Federal payment as employer for employee retirement	2,857	3,275	5,367
Other (mainly receipts of special Federal payments)	9,131	5,603	5,497
Proposed legislation	....	....	515
Subtotal, Federal old-age, survivors, and disability insurance trust funds	216,545	227,980	259,673
Intrafund transactions	−159	....	....
Interfund receipts from on-budget	−16,158	−13,962	−17,575
Total off-budget receipts [1]	**200,228**	**214,018**	**242,098**
Total receipts	**407,161**	**429,167**	**474,635**

Table C–7. **TRUST FUND RECEIPTS (in millions of dollars)—Continued**

[Amounts under proposed legislation are shown separately]

Description	1986 actual	1987 estimate	1988 estimate
On-budget	(206,933)	(215,149)	(232,537)
Off-budget	(200,228)	(214,018)	(242,098)

[1] Net of $314 thousand of proprietary receipts from the public in 1986.

Table C–8. **TRUST FUND OUTLAYS (in millions of dollars)**

[Amounts under proposed legislation are shown separately]

Description	1986 actual	1987 estimate	1988 estimate
On-budget:			
Railroad retirement trust funds:			
Benefit payments and claims	5,969	6,163	6,371
Repayment of benefit advances	2,108	2,417	2,467
Administrative expenses and other	56	58	54
Proposed legislation			65
Subtotal, railroad retirement trust funds	8,133	8,638	8,957
Black lung disability trust fund:			
Benefit payments	574	596	595
Federal administrative expenses	44	50	54
Repayment of advances			39
Proposed legislation			1,010
Subtotal, black lung disability trust fund	618	646	1,697
Veterans life insurance trust funds	1,082	1,090	1,126
Federal employees retirement:			
Benefit payments and claims	23,642	24,650	25,974
Refunds to former employees	580	2,075	2,071
Investments and loans			106
Administrative expenses and other	49	68	81
Proposed legislation			−1,505
Subtotal, Federal employees retirement	24,271	26,793	26,727
Military retirement fund	17,611	17,946	18,882
Unemployment trust fund:			
Withdrawals for benefit payments	16,217	16,432	16,159
Repayment of advances from general fund	2,963	1,203	3,300
Administrative expenses and other	2,639	2,645	2,723
Proposed legislation			9
Supplemental now requested		−18	−72
Subtotal, unemployment trust fund	21,819	20,262	22,119
Health insurance trust funds:			
Benefit payments	74,033	76,215	84,562
Administrative expenses and other	1,870	1,934	2,038
Proposed legislation			−4,687
Supplemental now requested		10	
Subtotal, health insurance trust funds	75,903	78,159	81,913
Highway trust funds (mainly grants to States):			
Current	14,813	13,626	14,272

Table C–8. **TRUST FUND OUTLAYS (in millions of dollars)—Continued**

[Amounts under proposed legislation are shown separately]

Description	1986 actual	1987 estimate	1988 estimate
Supplemental now requested	....	15	....
Subtotal, highway trust funds	14,813	13,641	14,272
Airport and airway trust fund:			
Current	2,365	2,534	4,523
Supplemental now requested	....	42	....
Subtotal, airport and airway trust fund	2,365	2,576	4,523
State and local government fiscal assistance trust fund: Payments for general revenue sharing	5,114	76	....
Foreign military sales trust fund	9,709	9,414	9,096
Other trust funds (nonrevolving):			
Current law	1,808	2,440	3,103
Proposed legislation	....	....	23
Supplemental now requested	....	79	*
Subtotal, other trust funds (nonrevolving)	1,808	2,519	3,127
Trust revolving funds	−795	3,677	586
Subtotal	182,451	185,437	193,024
Intrafund receipts from on-budget	−2	−2	−2
Intrafund receipts from off-budget	−3,036	−2,746	−2,850
Proprietary receipts from the public	−18,027	−17,844	−21,638
Total on-budget outlays	**161,387**	**164,845**	**168,534**
Off-budget:			
Federal old-age, survivors, and disability insurance trust funds:			
Benefit payments	193,890	202,703	214,010
Payments to other trust funds	3,195	2,746	2,850
Administrative expenses and other	2,730	3,011	3,147
Proposed legislation	....	....	−4
Subtotal, Federal old-age, survivors, and disability insurance trust funds	199,815	208,460	220,003
Intrafund transactions	−159	....	....
Interfund receipts from on-budget	−16,158	−13,962	−17,575
Total off-budget outlays [1]	**183,498**	**194,498**	**202,427**
Total outlays	**344,884**	**359,343**	**370,962**
On-budget	(161,387)	(164,845)	(168,534)
Off-budget	(183,498)	(194,498)	(202,427)

*500 thousand or less.

[1] Net of $314 thousand of proprietary receipts from the public in 1986.

Table C–9. **TRUST FUND BALANCES**

(In millions of dollars)

Description	As of Sept. 30			
	1985 actual	1986 actual	1987 estimate	1988 estimate
Railroad retirement trust funds	4,240	6,027	6,761	7,710
Black lung disability trust fund	2	3	....	....
Veterans life insurance funds	9,718	10,022	10,322	10,587
Federal employees retirement funds	143,483	162,543	181,141	204,441
Military retirement fund	11,393	23,679	36,979	51,506
Unemployment trust fund	18,688	22,942	28,280	30,259
Health insurance trust funds	31,967	48,105	60,363	81,689
Highway trust funds	12,886	12,773	14,029	16,030
Airport and airway trust fund	7,426	8,625	9,978	9,656
State and local government fiscal assistance trust fund	1,188	259	3	3
Foreign military sales trust fund	5,491	6,507	6,007	5,807
Other trust funds (nonrevolving)	3,904	4,790	5,929	6,478
Trust revolving funds	25,342	26,137	22,460	21,874
Federal old-age, survivors, and disability insurance trust funds (off-budget)	39,753	45,870	65,390	105,060
Total	**315,481**	**378,282**	**447,641**	**551,101**
On-budget	(275,728)	(332,412)	(382,251)	(446,040)
Off-budget	(39,753)	(45,870)	(65,390)	(105,060)

Note.—The following table reconciles balances on a budget authority basis with the cash balances shown above:

	1985	*1986*	*1987*	*1988*
Balance available on an authorization basis	345,578	405,276	473,167	576,234
Unfinanced contract authority:				
Airport and airway trust fund	–1,728	–1,994	–2,123	–2,190
Highway trust funds	–29,726	–30,659	–30,774	–30,982
Foreign military sales trust fund	–14,588	–11,554	–11,966	–12,207
Other	–80	–61	–42	–25
Unappropriated receipts:				
Available for appropriation by Congress:				
Soldiers' Home permanent fund	162	163	162	175
Airport and airway trust fund	4,596	5,883	7,314	6,618
Highway trust funds	10,941	10,797	11,173	12,702
Hazardous substance response trust fund	....	9	....	35
Inland waterways trust fund	172	240	295	342
Aquatic resources trust fund	128	153	186	187
Other	21	24	64	207
Balances lapsing	....	....	180	....
Retained as permanent endowment	5	5	5	5
Balance available on a cash basis	315,481	378,282	447,641	551,101

Table C–10. **TRUST REVOLVING FUND TRANSACTIONS**

(In millions of dollars)

Description	Offsetting collections			Gross outlays		
	1986 actual	1987 estimate	1988 estimate	1986 actual	1987 estimate	1988 estimate
Office of Personnel Management (employees' life insurance and health benefits)	8,532	8,933	10,222	7,533	8,592	9,312
All other trust revolving funds	5,789	6,837	6,802	5,992	10,855	8,298
Total trust revolving funds [1]	**14,321**	**15,770**	**17,024**	**13,525**	**19,448**	**17,610**
Receipts from the public	(8,035)	(8,167)	(8,982)	....	....	....
Receipts from other accounts	(6,286)	(7,603)	(8,042)	....	....	....

[1] Excludes right-of-way revolving fund which is a part of the highway trust funds.

Table C–11. **OBLIGATIONS INCURRED, NET, IN TRUST FUNDS**

(In millions of dollars)

Department or other unit	1986 actual	1987 estimate	1988 estimate
Legislative Branch	2	5	3
The Judiciary	3	5	3
Funds appropriated to the President	−3,027	419	241
Agriculture	−6	69	45
Commerce	31	35	35
Defense—Military	28	30	16
Defense—Civil	17,710	18,255	19,327
Education	*	*	....
Energy	*	*	*
Health and Human Services, except social security	69,893	74,268	74,970
Health and Human Services, social security	191,782	203,868	214,508
Housing and Urban Development	....	*	*
Interior	110	200	219
Justice	2	*	....
Labor	21,720	21,028	23,905
State	247	262	279
Transportation	18,080	16,001	20,248
Treasury	3,977	86	16
Environmental Protection Agency	379	1,118	1,554
General Services Administration	....	....	*
Office of Personnel Management	23,914	26,219	25,384
Veterans Administration	667	835	903
Federal Retirement Thrift Investment Board	....	−644	−1,827
Railroad Retirement Board	5,151	5,960	6,202
All Other Independent Agencies	68	3,217	1,111
Undistributed offsetting receipts	−7,186	−8,359	−12,078
Total	**343,545**	**362,875**	**375,063**
On-budget	(151,763)	(159,007)	(160,555)
Off-budget	(191,782)	(203,868)	(214,508)

*500 thousand or less.

SPECIAL ANALYSIS D

FEDERAL INVESTMENT AND OPERATING OUTLAYS

This analysis classifies Federal spending into two categories: outlays for investment, which yield long-term benefits; and outlays for operating and other purposes, which yield current benefits. For the most part, the investment data presented herein are not shown net of depreciation. However, an estimate of net Federal and federally financed nondefense public physical capital investment (i.e., new investment less estimated depreciation) is presented on pages D-10-13. This special analysis focuses on gross Federal investment-type outlays that reflect the President's budget proposals, for the years 1986 through 1988. In addition, data on historical trends in gross Federal physical capital investment are provided in this analysis and in section 9 of the separate volume entitled *Historical Tables, Budget of the United States Government, Fiscal Year 1988.* In accordance with the requirements of the Federal Capital Investment Program Information Act of 1984 (Title II of P.L. 98-501) a supplement to this special analysis is being prepared for separate transmittal to the Congress. This supplement will present 10-year projections of Federal physical investment spending, in current and constant dollars, and assessments of civilian investment needs for selected purposes.[1]

Federal investment-type outlays take several forms and are made for many purposes. They are in the form of grants or direct outlays and they range from lending, which yields a monetary return; to the acquisition of physical assets, which yields a stream of services over a period of years; to expenditures for human capital in the form of the conduct of research, development, education, and training, which provide less tangible long-term benefits.

While the data in this analysis are shown in considerable detail, classification problems are so complex that these data often are only approximate. There are several reasons for this imprecision:

- For some grants to State and local governments, the recipient jurisdiction, not the Federal Government, ultimately determines whether the money is used to finance investment-type or current account programs. This analysis classifies all of the outlays in the category where the recipient jurisdictions are expected to spend most of the money. Hence, shared revenues

[1] The "Supplement to Special Analysis D" will be available at the Government Printing Office bookstores.

are classified as current spending although some may be spent by recipient jurisdictions on physical capital investments. Community development block grants are classified as investment although some may be spent for current purposes.

- Some spending could be classified into more than one subcategory. For example, grants for construction of education facilities finance the acquisition of physical assets, but they also contribute to the provision of education and training. To avoid double counting, the outlays are classified in the subcategory that is considered most capital-like. Consequently the conduct of education and training does not include the cost of education facilities, because these facilities are included in the category for construction and rehabilitation for physical assets.

The order of presentation of outlays for investment begins with outlays for *loans and financial investments*, followed by *construction and rehabilitation*, *acquisition of major equipment*, *conduct of research and development*, *conduct of education and training*, and *other investments*. Table D-1 summarizes Federal outlays that are classified as being of an investment nature.

Composition of Federal Investment

Investment-type programs.—Investment-type outlays are estimated to decrease from $229.5 billion in 1986 to $220.3 billion in 1987 and decline further to $218.8 billion in 1988. A total of $2.0 billion in 1988 outlays are for *loans and financial investments*, a dramatic decline from the $32.5 billion level in 1985 and the $20.5 billion level in 1986. In 1985, loan volume was enlarged by a one-time changeover of financing for low-rent public housing that converted large scale loan guarantees into direct loans. The decline projected for 1987 and 1988 is due to proposed loan asset sales and to reductions in loans by the Commodity Credit Corporation, which were $12.3 billion in 1986 but projected to drop to $5.6 billion in 1987 and decline further to $4.9 billion in 1988. Other decreases in lending are projected in mortgage credit and deposit insurance loan programs, and education loan programs. *Acquisition, construction, and rehabilitation of physical assets* are projected to increase from $120.7 billion in 1986 to $127.0 billion in 1987 and then to decline to $126.3 billion in 1988. The *conduct of education, training, research, and development* and for *other investment-type programs* remains roughly level at $88.2 billion in 1986, $88.1 billion in 1987 and $90.4 billion in 1988. Defense investment-type outlays, which account for 60 percent of total investment-type outlays in 1988, are primarily for the *acquisition of major equipment and other physical assets* and for the *conduct of research and development*. Civil programs are primarily for *construction and rehabilitation of physical*

Table D–1. **SUMMARY OF TOTAL FEDERAL INVESTMENT-TYPE OUTLAYS, 1984–88**

(In billions of dollars)

	1984	1985	1986	1987 estimate	1988 estimate
Loans and financial investments	5.2	32.5	20.5	5.2	2.0
Construction and rehabilitation:					
National defense	5.1	5.9	6.7	6.5	6.7
Nondefense:					
Grants to State and local governments	22.7	24.4	25.7	24.3	22.9
Other	6.8	8.1	8.0	9.2	9.0
Subtotal	34.5	38.5	40.4	40.0	38.6
Acquisition of major equipment:					
National defense	62.2	70.8	77.0	83.3	83.3
Nondefense	2.6	3.6	3.3	3.7	4.4
Subtotal	64.9	74.4	80.3	87.0	87.7
Conduct of research and development:					
National defense	25.8	30.4	35.7	37.7	41.7
Nondefense	15.2	16.9	16.5	17.4	17.8
Subtotal	41.0	47.2	52.1	55.1	59.5
Conduct of education and training:[1]					
Grants to State and local governments	10.6	11.4	12.6	12.0	12.3
Other	11.5	11.6	11.2	11.6	9.9
Subtotal	22.1	23.0	23.7	23.6	22.2
Other (including commodity inventories):					
National defense	1.1	1.2	1.1	1.2	1.2
Nondefense	6.0	6.4	11.3	8.4	7.5
Subtotal	7.2	7.6	12.4	9.4	8.7
Total	175.0	223.2	229.5	220.3	218.8

[1] Virtually all nondefense.

assets, the *conduct of education and training,* and the *conduct of research and development.*

Loans and financial investments.—The Federal Government conducts a wide variety of credit activities including both direct loans and loan guarantees. Federal direct loans are a form of investment because the Government acquires an income-yielding asset. However, most Federal loans are not intended to be profitable; indeed, they often result in substantial subsidies to loan recipients. The large reduction in net lending proposed in the budget reflects the administration's policy of reducing the role of Government in favor of seeing more lending done—where it is done most efficiently—in the private sector. This category includes amounts for direct loans by the Government and, as an offset, principal repayments including the expected $5.3 billion of proceeds from the sale of loan assets in 1988. Direct loans are discussed in detail in both Parts 3b and 5 of the *Budget of the United States Government, Fiscal Year 1988—*

Supplement and in Special Analysis F, "Federal Credit Programs". Other financial investment includes funding for such programs as international financial institutions and acquisition of enterprise capital stock. This category also includes the expected $1.9 billion in 1987 proceeds from the sales of Conrail stock and $1.0 billion of offsetting collections in 1988 from the sale of Amtrak assets.

Construction and rehabilitation of physical assets is one of the largest components of Federal investment spending. As Table D-1 shows, the bulk of Federal outlays in this category is in the form of grants to State and local governments to finance construction or rehabilitation of physical assets, such as highways and mass transportation facilities, rather than for procurement of assets by the Federal Government. Special Analysis H, "Federal Aid to State and Local Governments" contains a detailed analysis of all Federal grants. The administration proposes large scale sales of physical assets beginning in 1988 as part of the privatization initiative. The proceeds from these sales are recorded as offsets in the *other investment* category.

Acquisition of major equipment is composed almost entirely of investment in national defense weapons systems. National defense spending is discussed in greater detail in the national defense section in Part 5 of the *Budget of the United States Government, Fiscal Year 1988—Supplement.*

Federal outlays for the *conduct of research and development* are devoted to increasing our basic scientific knowledge and to meeting related Federal needs. These outlays are designed to increase our national security, to improve the marginal productivity of capital and labor for both public and private purposes, and to improve the quality of life. In recent years, the defense share of these outlays has been increasing. The national defense component is estimated to increase to 70 percent of the total by 1988.

From the early 1960's to the beginning of this decade, development of space-related technology had been the largest component of nondefense outlays for the conduct of research and development, but in 1982 it was overtaken by health research. The decline in outlays for space research was largely due to concluding the major research and development phase of the space shuttle. However, outlays for nondefense research and development are projected to increase by $0.9 billion in 1987, and $0.4 billion in 1988. Increases in outlays for the conduct of research and development for general science, space and technology reflect the administration's policies of restoring America's economic competitiveness, and strengthening "leading edge" technologies to meet national needs. Major research and development programs are discussed in Part 5 of the *Budget of the United States Government, Fiscal Year 1988—Supple-*

ment while Special Analysis J, "Research and Development", discusses Federal research and development in its entirety.

Federal outlays for the *conduct of education and training* are intended to increase the knowledge and skills of people. Most of these outlays are either grants to State and local governments to assist in the operation of education institutions or income transfers to students under the student assistance and veterans readjustment benefits programs. Federal outlays for education and training are discussed in Part 5 of the *Budget of the United States Government, Fiscal Year 1988—Supplement.*

The *other investment* category is composed of an assortment of activities, primarily related to the acquisition and disposition of major commodity inventories such as agricultural products for the farm price support program and oil for the strategic petroleum reserve. As part of the privatization initiative, the administration proposes the sale of the naval petroleum reserves, which is projected to produce $2.5 billion of offsetting collections in 1988. Other investment programs include Census Bureau activities designed to improve the nation's information base, and foreign assistance programs designed to promote international development.

Investment in Public Works and Other Public Physical Assets

The budget documents traditionally contain a significant amount of historical information that can be used to analyze major trends in specialized segments of Federal investment-type spending. For example, historical data for education and training outlays are available as part of the functional tabulations, historical data on credit are shown in Special Analysis F, historical data on grants appear in Special Analysis H, and historical data on research and development are published in Special Analysis J.

Table D–2 shows Federal outlay data for public physical investment at 5-year intervals from 1960 to 1980 and annually from 1983 to 1988; Table D–3 summarizes the same data in constant prices and as a percent of the gross national product (GNP). The data focus on public works; to the extent feasible, the investment in private physical assets, major commodity inventories, and land conservation are excluded from these tables.

The data in these tables indicate that:

- National defense physical capital investment is estimated to increase in nominal terms through 1988, but in real terms (adjusted for inflation) defense physical investment peaks in 1987. The constant dollar totals are well above the lowest levels immediately before and after the Vietnam War and in 1987 surpass the levels during the post-Korean War period.

- Direct Federal investment in nondefense physical assets is at relatively high historical levels and is expected to increase through 1987. The decline in 1988 is due to the proposed sale of the naval petroleum reserves, which produces and estimated $2.5 billion of offsetting collections.
- Grants for physical capital investment grew rapidly in real terms and as a percent of GNP between 1950 and 1965. Between 1965 and 1980, grants for this purpose grew overall in real terms, but remained roughly level as a percentage of GNP. However, the composition shifted significantly. Transportation grants were roughly constant in real terms while declining as a percent of GNP; in contrast, other grants grew rapidly. From 1983 through 1986, there was a major increase in transportation grants due to enactment of the Surface Transportation Assistance Act of 1982. Grants for physical capital investment are expected to decline through 1988.

Table D-2. **FEDERAL OUTLAYS FOR MAJOR PUBLIC PHYSICAL CAPITAL INVESTMENT** [1]

(In billions of dollars)

	1960	1965	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987 estimate	1988 estimate
Assets acquired by the Federal Government:													
National defense:													
Military procurement	13.3	11.8	21.6	16.0	29.0	35.2	43.3	53.6	61.9	70.3	76.5	82.7	82.8
Military construction and family housing	2.1	1.3	1.3	1.8	2.4	2.4	2.9	3.4	3.6	4.4	5.1	5.1	5.5
Atomic energy defense	1.7	1.1	0.7	0.9	1.0	1.5	1.8	2.2	2.7	3.2	3.0	3.0	2.9
Subtotal, national defense	17.2	14.2	23.6	18.7	32.5	39.1	48.0	59.2	68.2	78.0	84.7	90.8	91.2
Nondefense:													
Construction and rehabilitation:													
Water and power projects	1.0	1.4	1.5	3.0	4.6	4.9	4.4	4.6	3.9	4.6	4.3	5.2	4.7
Other	0.8	1.5	0.8	1.4	2.7	2.8	2.8	2.5	3.3	3.5	3.7	4.0	4.3
Acquisition of major equipment	0.1	0.2	0.2	0.4	0.7	1.0	1.3	0.8	2.6	3.6	3.3	3.7	4.4
Sale of physical assets	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	−2.5
Subtotal, nondefense	1.9	3.0	2.5	4.8	8.1	8.8	8.5	8.0	9.8	11.7	11.3	12.9	10.9
Total Federal assets	19.1	17.3	26.1	23.5	40.5	47.9	56.4	67.2	78.0	89.7	95.9	103.7	102.1
Grants to State and local governments for physical capital investment:													
Transportation:													
Highways	2.9	4.0	4.3	4.6	9.0	8.8	7.7	8.8	10.4	12.7	13.9	12.4	12.6
Urban mass transportation and airports	0.1	0.1	0.2	1.0	2.6	3.1	2.9	3.2	3.8	3.2	3.6	4.1	3.5
Community and regional development	0.1	0.6	1.6	2.5	5.8	5.6	5.2	4.7	4.9	5.0	4.5	4.6	4.0

Table D-2. **FEDERAL OUTLAYS FOR MAJOR PUBLIC PHYSICAL CAPITAL INVESTMENT [1]—Continued**

(In billions of dollars)

	1960	1965	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987 estimate	1988 estimate
Natural resources and environment:													
Pollution control facilities	*	0.1	0.2	1.9	4.3	3.9	3.8	3.0	2.6	2.9	3.2	2.7	2.5
Other	*	0.1	0.2	0.3	0.6	0.6	0.3	0.6	0.7	0.7	0.7	0.6	0.5
All other [2]	0.1	0.2	0.6	0.5	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.3
Total grants for physical capital investment [2]	3.3	5.0	7.1	10.9	22.5	22.1	20.2	20.5	22.7	24.9	26.3	24.9	23.4
Total public assets financed by the Federal Government	22.4	22.3	33.2	34.4	63.0	70.0	76.6	87.7	100.7	114.6	122.2	128.6	125.5
Memorandum													
National defense	17.2	14.2	23.6	18.7	32.5	39.1	48.0	59.2	68.2	78.0	84.7	90.8	91.2
Nondefense	5.2	8.0	9.6	15.7	30.5	30.9	28.6	28.5	32.5	36.6	37.5	37.8	36.6

[1] Excludes outlays for private asset acquisition (such as ship construction subsidies) and major commodity inventories (agricultural commodities and the strategic petroleum reserve).
[2] Includes National Guard shelters and civil defense grants classified in the national defense function.
*$50 million or less.

Table D-3. **SUMMARY COMPARISONS OF FEDERAL OUTLAYS FOR MAJOR PUBLIC PHYSICAL CAPITAL INVESTMENTS**

	1960	1965	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987 estimate	1988 estimate
	In billions of constant (fiscal year 1982) dollars												
Assets acquired by the Federal Government:													
National defense	51.7	40.4	55.8	33.1	39.6	42.8	48.0	56.9	63.5	71.9	77.4	80.3	77.7
Nondefense	5.9	8.7	6.1	8.2	9.1	9.3	8.5	8.0	9.7	11.6	11.5	12.8	10.5

Subtotal	57.6	49.1	61.9	41.3	48.7	52.1	56.4	64.9	73.2	83.5	88.9	93.1	88.4
Grants to State and local governments for physical capital investment:													
Transportation	11.0	14.2	12.4	9.4	12.7	12.2	10.7	11.9	13.7	14.7	15.7	14.4	13.5
Community and regional development	0.4	2.0	4.5	4.2	6.3	5.7	5.2	4.7	4.7	4.6	4.1	4.0	3.4
Natural resources and evironment	0.3	0.6	1.0	3.8	5.4	4.6	4.1	3.5	3.2	3.3	3.4	2.9	2.5
All other	0.5	0.5	1.5	0.9	0.3	0.2	0.2	0.2	0.2	0.4	0.4	0.4	0.3
Subtotal grants	12.2	17.3	19.4	18.3	24.6	22.7	20.2	20.3	22.0	22.9	23.5	21.6	19.7
Total	69.8	66.4	81.3	59.6	73.3	74.8	76.6	85.3	95.2	106.4	112.4	114.7	108.0
	As a percent of Gross National Product												
Assets acquired by the Federal Government:													
National defense	3.39	2.12	2.38	1.23	1.22	1.31	1.53	1.81	1.88	1.98	2.03	2.05	1.93
Nondefense	0.38	0.45	0.26	0.32	0.30	0.29	0.27	0.24	0.27	0.30	0.27	0.29	0.28
Subtotal	3.77	2.57	2.64	1.54	1.52	1.60	1.80	2.05	2.15	2.28	2.30	2.35	2.21
Grants to State and local governments for physical capital investment:													
Transportation	0.59	0.61	0.46	0.37	0.43	0.40	0.34	0.36	0.39	0.40	0.42	0.37	0.34
Community and regional development	0.02	0.09	0.16	0.16	0.22	0.19	0.16	0.14	0.13	0.13	0.11	0.10	0.08
Natural resources and environment	0.02	0.02	0.04	0.15	0.18	0.15	0.13	0.11	0.09	0.09	0.09	0.07	0.06
All other	0.03	0.02	0.06	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Subtotal grants	0.66	0.74	0.71	0.71	0.84	0.74	0.64	0.62	0.62	0.63	0.63	0.56	0.50
Total	4.42	3.31	3.35	2.26	2.36	2.34	2.44	2.64	2.73	2.91	2.93	2.91	2.71

CALCULATIONS OF NET FEDERAL AND FEDERALLY FINANCED NONDEFENSE PUBLIC PHYSICAL CAPITAL INVESTMENT

Federal nondefense public investment spending falls into two categories: direct Federal investment and investment financed by grants to State and local governments. Investment made through Federal grants is owned by the State or local governments receiving the grants.

For many years, current and constant-dollar data on the estimated value of most forms of both public and private physical capital—e.g. roads, factories, housing—have been developed by the Department of Commerce and published in the *Survey of Current Business*. (See, for example, pp. 36–39 of the August 1986 issue.) However, the Commerce data on the net capital stock and net investment are not directly linked to the Federal budget and do not include estimates for the years covered by the budget. The OMB historical data base for Federal nondefense physical capital investment and grants to State and local governments for physical capital investment was extended back to 1915 by broad category. These data were then converted to constant prices to approximate replacement costs and depreciated. The product is a price-adjusted estimate of nondefense federally financed public net investment.

The historical budget data were adjusted to constant fiscal year 1987 dollars using price deflators for Federal nondefense capital purchases. The resulting constant dollar series is shown as new investment in Table D–4. These constant dollar historical data were then depreciated on a straight-line basis over the following assumed useful lives: 40 years for investments financed by grants; 30 years for all other nondefense construction and rehabilitation; and 16 years for major equipment. The difference between new investment and depreciation is shown as net investment. Because of space constraints, only net figures are shown for some of the components.

Table D–4. COMPOSITION OF NEW AND NET FEDERAL AND FEDERALLY FINANCED INVESTMENT IN NONDEFENSE PUBLIC PHYSICAL CAPITAL IN CONSTANT (1987) PRICES

(In billions of dollars)

Year	Total investment			Net direct Federal investment			Investment financed from Federal grants-in-aid						
										Composition of net investment			
	New	Depreciation	Net	Total	Water and power	Other	New	Depreciation	Net	Transportation (mainly highways)	Community and regional development	Natural resources and environment	Other
1970	29.3	–15.6	13.8	0.8	0.9	–*	21.5	–8.6	12.9	8.1	3.6	0.2	1.1
1971	30.9	–16.1	14.8	1.5	1.5	–*	22.4	–9.1	13.3	7.7	4.0	0.9	0.8
1972	32.3	–16.8	15.5	2.5	1.7	0.8	22.6	–9.6	13.0	7.0	4.6	0.7	0.7
1973	31.8	–17.5	14.3	2.1	1.0	1.0	22.4	–10.1	12.3	6.7	4.0	1.3	0.4
1974	31.9	–18.1	13.8	1.6	1.1	0.5	22.7	–10.6	12.2	5.0	3.6	3.2	0.4
1975	32.7	–18.7	13.9	2.3	2.1	0.2	22.6	–11.0	11.6	4.5	3.2	3.5	0.4
1976	36.2	–19.3	16.9	2.2	2.0	0.2	26.1	–11.4	14.8	6.9	3.4	4.2	0.3
TQ	10.0	–5.0	5.0	0.6	0.5	*	7.4	–2.9	4.4	1.7	1.2	1.6	*
1977	39.3	–19.9	19.5	2.3	2.4	–0.1	29.0	–11.7	17.2	5.9	5.4	5.7	0.2
1978	42.1	–20.5	21.6	3.0	2.5	0.5	30.8	–12.2	18.5	5.3	8.8	4.7	–0.2
1979	43.0	–21.2	21.9	3.5	2.8	0.8	31.0	–12.7	18.3	6.3	7.1	5.3	–0.3
1980	42.6	–21.8	20.8	2.6	1.7	0.9	31.3	–13.1	18.2	7.6	5.7	5.5	–0.5
1981	39.1	–22.6	16.4	2.2	1.3	0.9	28.0	–13.8	14.2	6.1	4.5	4.1	–0.5
1982	33.7	–23.4	10.4	1.0	0.2	0.8	23.7	–14.4	9.4	3.4	3.4	3.1	–0.5
1983	32.3	–24.0	8.2	–*	0.2	–0.3	23.2	–14.9	8.3	4.1	2.5	2.3	–0.6
1984	35.5	–24.8	10.7	1.4	–0.8	2.3	24.8	–15.5	9.3	5.6	2.4	1.7	–0.5
1985	38.6	–25.7	12.9	2.8	–0.3	3.1	26.2	–16.1	10.1	6.5	2.2	1.8	–0.5
1986	38.6	–26.6	12.0	1.7	–0.8	2.5	27.0	–16.7	10.2	7.4	1.5	1.9	–0.5
1987	37.7	–27.3	10.4	2.9	0.2	2.7	24.8	–17.3	7.5	5.4	1.3	1.1	–0.4
1988	35.5	–28.0	7.5	2.8	–0.4	3.1	22.5	–17.8	4.8	4.1	0.5	0.7	–0.5

* $50 million or less.

These data should be viewed as approximations; they have substantial margins of estimating error. The sources of error include:

- The *extended historical outlay series*.—The historical data series was extended back from 1940 to 1915 using data from budget documents published during that period. There are no specific outlay data on nondefense physical capital investment for this period, and estimates were made on the basis of program authorizations.
- *Price adjustments*.—The replacement cost of the Federal stock of nondefense physical capital has increased through time. Unfortunately, the rate of increase is not known exactly. For this presentation, an estimate of replacement costs in 1987 prices was made through the application of a deflator series for Federal purchases of durables and structures indexed to 1987 prices. There are no specific price indexes for Federal purchases of durables and structures for 1915 through 1929, and estimates were made on the basis of Census Bureau historical statistics on constant price public capital formation.
- *Depreciation estimates*.—The assumed useful lives for each of the categories of nondefense capital investment are very uncertain. Since they are for broad classes of investment, they do not apply to specific cases. Also, straight-line depreciation may not be the most accurate method to apply to the different categories of Federal nondefense physical capital investment.

Hence, the data should be viewed as approximations only—not precise estimates.

The data in Table D–4 show that net investment, adjusted for inflation, rose between 1970 and 1979 due to the fact that new investment exceeded depreciation by increasing amounts. During the 1970's, depreciation was largely based on the relatively low investments of the 1940's and 1950's. However, with the passage of time, the capital stock became larger, and consequently depreciation continued to grow. The value of newer assets being depreciated was greater than the value of older assets being retired (and thus no longer depreciated). After 1979, new investment declined slightly and then leveled off while depreciation continued to rise due largely to relatively high investment in the 1970's and early 1980's. As a result, net investment declined.

The composition of nondefense public physical capital investment—both on a gross and net basis—has changed substantially over time. Before the mid-1950s, direct nondefense gross investment exceeded grants for investment, but by the end of the 1970's, grants-in-aid for investment exceeded direct investment by a ratio of 2½ to 1. Due to the slower rate of direct investment from 1970 to 1986, net capital formation (new investments less depreciation) financed by grants-in-aid was about six times greater than net capital formation for stocks directly owned by the Federal Government.

Federal grants for transportation facilities and equipment—predominantly highways but also mass transit and airport grants—were the most prevalent form of Federal grants-in-aid for physical capital. From 1970 to 1986, transportation grants contributed 39 percent to total new investment. Over this same timespan they have added virtually the same percentage to the net stock of nondefense public physical capital.

Both new and net investments funded by grants for transportation increase substantially from 1982 to 1986 due largely to the expansion financed by the Surface Transportation Assistance Act of 1982, which expired at the end of 1986. Funding for programs supported by the highway trust fund in 1988 is proposed, beginning with the 1987 reauthorization, at the level of anticipated user fee receipts so as to be deficit neutral.

Detailed Data Presentation [2]

The remaining tables in this analysis provide detail on the composition of investment-type spending, and current outlays. They provide two basic displays of Federal spending. Table D–5 is a summary table showing the data split between national defense spending and civil (i.e., nondefense) spending. Table D–7 provides detailed data for the same categories. Table D–6 is a summary table identifying the grants and loans to State and local governments separately from all other Federal outlays. Table D–8 provides details.

The classification structure used to compile this information is designed primarily to focus on investment-type outlays; data on all other current spending is a residual. The categories of expenditure in current outlays cover only the noncapital portion of Federal spending for such activities. For example, the category *aids to agriculture, commerce, and transportation* includes current benefits, such as some agricultural subsidies; but it does not include price support lending or commodity inventories, both of which are investment-type outlays. Nor does it include assistance provided by the Federal Government through loan guarantees, tax expenditures, other provisions of the Tax Code, or the privately owned, Government-sponsored enterprises. Although they are not quantified in this analysis, loan guarantees, tax expenditures, and other provisions of the Tax Code are methods by which the Federal Government also affects the type and amount of public and private investment. Federally guaranteed loans, for example, are substi-

[2] For the remainder of the analysis, "investment" is more broadly defined to include loans, investment in commodity inventories, research and development, and education and training.

tutes for direct loans and can result in the creation of certain assets in place of others.[3] As another example, the investment tax credit (repealed in the Tax Reform Act of 1986) for many years provided a tax expenditure subsidy for private investment.

Program Trends

Loans and financial investments.—A loan involves an exchange of cash for financial assets. If the loans are made at competitive market rates, the value of the assets are equal to the outlays. Federal loans are generally made at lower rates than comparable private lending. A fundamental reform proposed in the budget is to specifically identify and appropriate loan subsidies. To the extent that borrowing is subsidized, the recorded loan outlays exceed the value of the asset created. See Part 3b of the *Budget of the United States Government, Fiscal Year 1988—Supplement* and Special Analysis F, "Federal Credit Programs" for a discussion of the credit reform proposals. Most Federal domestic loans finance the acquisition or improvement of either physical assets or human capital. Loans to foreign borrowers are intended to promote mutual defense, economic development, or United States exports including military equipment and farm commodities.

Nondefense loans and financial investments are estimated to decline from $20.1 billion in 1986 to $5.3 billion in 1987, and decline further to $2.2 billion in 1988. The decline is due, in large part, to projected reductions in domestic agriculture lending used to support farm prices by the Commodity Credit Corporation (CCC). Farmers have access to price-support loans that enable them to hold their crops for later sale. If market prices remain below the price-support loan rate determined by law, the producer can default on the loan without penalty, forfeiting the loan collateral as settlement for the loan. In 1986, outlays associated with CCC lending reached $12.3 billion, up $6.5 billion from 1985. The administration proposes to reduce high price-supports to market clearing levels and thus to reduce outlays associated with CCC lending to $5.6 billion in 1987, and $4.9 billion in 1988. See the discussion of the agriculture function in Part 5 of the *Budget of the United States Government, Fiscal Year 1988—Supplement* for details on the administration's proposals for farm price-supports. Other reductions in this category reflect the sales of loan assets from the rural housing insurance fund portfolio which account for $1.7 billion of offsetting collections in 1987, and $0.8 billion in 1988. See Special Analysis F, "Federal Credit Programs" for details of loan asset sales to the public.

[3] See 1988 Budget, Special Analysis F, "Federal Credit Programs."

Table D–5. **SUMMARY OF FEDERAL INVESTMENT AND OPERATING OUTLAYS BY DEFENSE—NONDEFENSE**

(In millions of dollars)

	1986 actual	1987 estimate	1988 estimate
National Defense:			
Investment-type programs:			
Construction and rehabilitation	6,723	6,494	6,710
Acquisition of major equipment and other physical assets	77,853	84,355	84,394
Conduct of research and development	35,656	37,676	41,696
Other investment-type programs	657	19	−1
Subtotal, investment-type programs	120,889	128,544	132,800
Current programs:			
Provision of benefits	101	126	135
Repair, maintenance, and operation of physical assets	79,735	81,059	86,038
Other current programs	72,931	72,777	78,803
Subtotal, current programs	152,767	154,396	165,530
Unclassified	−281	−260	−227
Total, national defense	273,375	282,246	297,550
Civil:			
Investment-type programs:			
Loans and financial investments	20,065	5,338	2,201
Construction and rehabilitation	33,695	33,511	31,898
Acquisition of major equipment	3,315	3,718	4,427
Conduct of research and development	16,485	17,421	17,790
Conduct of education and training	23,711	23,614	22,206
Commodity inventories and other physical assets	7,587	3,955	3,230
Other investment-type programs	3,734	4,248	4,264
Subtotal, investment-type programs	108,592	91,805	86,017
Current programs:			
Provision of benefits:			
On-budget	242,936	252,844	261,567
Off-budget	194,432	202,703	214,006
Subtotal, provision of benefits	437,368	455,547	475,573
Administrative expenses of benefit programs:			
On-budget	10,855	11,492	10,195
Off-budget	2,207	2,391	2,508
Subtotal, administrative expenses of benefit programs	13,063	13,884	12,704
Social services and related programs	9,615	10,550	10,630
Aids to agriculture, commerce, and transportation	19,075	28,537	26,040
Repair, maintenance, and operation of physical assets	3,940	3,594	4,429
General purpose fiscal assistance	7,191	2,439	1,720
Regulation, control, and law enforcement	13,682	21,820	15,382
Net interest:			
On-budget	140,298	142,544	145,626
Off-budget	−4,329	−5,084	−6,594
Subtotal, net interest	135,969	137,461	139,032
Other current programs	9,205	12,386	13,318
Subtotal, current programs	649,108	686,217	698,827

Table D-5. **SUMMARY OF FEDERAL INVESTMENT AND OPERATING OUTLAYS BY DEFENSE—NONDEFENSE—Continued**

(In millions of dollars)

	1986 actual	1987 estimate	1988 estimate
Unclassified:			
On-budget	−40,513	−44,167	−55,432
Off-budget	−746	−529	−2,635
Subtotal, unclassified	−41,260	−44,696	−58,066
Total, civil	716,440	733,326	726,777
Outlay totals	**989,815**	**1,015,572**	**1,024,328**
On-budget	*(806,318)*	*(821,074)*	*(821,900)*
Off-budget	*(183,498)*	*(194,498)*	*(202,427)*

Physical assets.—The benefits provided by the *construction and rehabilitation of physical assets* and by the *acquisition of major equipment* are of a long-term nature, while *commodity inventories* are for reserves or stockpiles rather than direct current use. Budget outlays designed specifically to purchase such assets are treated as investment-type outlays regardless of whether the asset is owned by the Federal Government, or by State, local, or in a few cases, private entities (such as for land conservation). Total outlays for physical assets—including acquisition of major commodity inventories—are estimated at $130.7 billion in 1988; of that amount $91.1 billion are for national defense. Most national defense outlays for physical assets are for the procurement of military equipment. About 60 percent of Federal outlays for nondefense physical assets are in the form of grants-in-aid to State and local governments, especially for construction of highways, mass transit, and pollution control facilities. *Commodity inventories* include crops acquired as part of the farm price support program and also oil purchases for the strategic petroleum reserve. As noted above, these inventories were excluded from the major public physical capital investment data in Tables D-2 and D-3. The *other physical assets category* includes an estimated $2.5 billion of offsetting collections from the sale of the naval petroleum reserves in 1988.

Conduct of research and development.—Research and development increases the Nation's base of information and knowledge. Outlays are estimated at $59.5 billion in 1988. Most of the increase in 1988 is for national defense, reflecting the Administration's commitment to strengthening the Nation's defense. Nondefense outlays for the conduct of research and development account for 30 percent of all research and development outlays in 1988. Within the total spending for research and development, there is a continuing increase in 1987 and 1988 for basic research, with emphasis on the support of research in the physical sciences. See Special Analysis J, "Research and Development" for additional details.

Table D–6. **SUMMARY OF FEDERAL INVESTMENT AND OPERATING OUTLAYS BY GRANTS-IN-AID AND DIRECT FEDERAL PROGRAMS**

(In millions of dollars)

	1986 actual	1987 estimate	1988 estimate
Grants-in-aid:			
Investment-type programs:			
Construction, rehabilitation, and acquisition of physical assets	26,261	24,871	23,422
Conduct of research and development	319	313	330
Conduct of education and training	12,556	11,996	12,292
Other investment-type programs	*	*	....
Subtotal, investment-type programs	39,136	37,180	36,045
Current programs:			
Provision of benefits	49,378	51,847	50,637
Administrative expenses of benefit programs	5,978	6,373	6,148
Social service and related programs	8,526	9,632	9,559
Aids to agriculture, commerce, and transportation	759	894	997
General purpose fiscal assistance	7,263	2,509	1,781
Regulation, control, and law enforcement	545	772	783
Other current programs	772	672	329
Subtotal, current programs	73,222	72,699	70,234
Total, grants-in-aid	112,357	109,879	106,278
Direct Federal Programs:			
Investment-type programs:			
Loans and other financial investments	20,504	5,160	2,031
Construction and rehabilitation of physical assets	14,575	15,597	15,624
Acquisition of major equipment	80,298	87,036	87,747
Acquisition of commodity inventories and other physical assets	8,038	4,530	3,867
Conduct of research and development	51,822	54,785	59,157
Conduct of education and training	11,166	11,628	9,923
Other investment-type programs	3,942	4,435	4,424
Subtotal, investment-type programs	190,345	183,170	182,772
Current programs:			
Provision of benefits:			
On-budget	193,659	201,123	211,065
Off-budget	194,432	202,703	214,006
Subtotal, provision of benefits	388,091	403,826	425,070
Administrative expenses of benefit programs:			
On-budget	4,877	5,119	4,048
Off-budget	2,207	2,391	2,508
Subtotal, administrative expenses of benefit programs	7,085	7,511	6,556
Social service and related programs	1,089	917	1,071
Aids to agriculture, commerce, and transportation	18,316	27,643	25,043
Repair, maintenance, and operation of physical assets	83,120	84,183	90,227
Regulation, control, and law enforcement	13,137	21,048	14,599
Net interest:			
On-budget	140,298	142,544	145,626
Off-budget	−4,329	−5,084	−6,594
Subtotal, net interest	135,969	137,461	139,032

Table D–6. **SUMMARY OF FEDERAL INVESTMENT AND OPERATING OUTLAYS BY GRANTS-IN-AID AND DIRECT FEDERAL PROGRAMS—Continued**

(In millions of dollars)

	1986 actual	1987 estimate	1988 estimate
Other current programs	81,846	84,891	91,971
Subtotal, current programs	728,653	767,480	793,569
Unclassified:			
On-budget	−40,794	−44,427	−55,658
Off-budget	−746	−529	−2,635
Subtotal, unclassified	−41,541	−44,956	−58,293
Total, direct Federal programs	877,458	905,693	918,049
Outlay totals	**989,815**	**1,015,572**	**1,024,328**
On-budget	*(806,318)*	*(821,074)*	*(821,900)*
Off-budget	*(183,498)*	*(194,498)*	*(202,427)*

*50 million or less.

Conduct of education and training.—Outlays classified in this category are designed to add to the stock of human capital by developing a more skilled and productive labor force. These outlays are primarily grants to State and local governments to operate educational institutions, but they include some direct payments to individuals that are conditional upon participation in educational or training programs. Outlays are estimated at $22.2 billion in 1988, of which $12.3 billion are grants to State and local governments.

Other investment-type programs.—This category includes *collection of information,* such as censuses and topographic surveys for which outlays are estimated to be $2.0 billion in 1988, and foreign assistance for *international development* for which outlays are estimated to be $2.3 billion in 1988.

Operating Outlays.—Programs that provide benefits in the current year are divided into several subcategories. Some outlays classified as current may be used in part by their recipients for investment-type purposes. However, the principal effect of these outlays—such as for unemployment compensation and retirement benefits—is to provide benefits that will be used for current purposes such as for consumption and for operating expenses rather than for future benefit purposes. Total outlays for current programs are 84 percent of 1988 estimated outlays. Of current outlays in 1988, $165.5 billion is for defense programs and $698.8 billion for civil programs.

Provision of benefits is the largest category of current outlays in the budget. The total of these outlays is estimated to increase from $437.5 billion in 1986 to $475.7 billion in 1988. Social security and other disability and retirement benefits constitute the largest element in this category; they are estimated to total $278.4 billion in 1988. Other major outlays in this category include medicaid, medicare, unemployment compensation, and food and nutrition programs.

Current outlays for *social services and related programs* are those for human development and child welfare services and employment programs. Outlays in 1988 are estimated to be $10.6 billion, of which $9.6 billion are for grants to State and local governments.

Aids to agriculture, commerce, and transportation include price support subsidies and small business and transportation programs. Outlays for these programs are estimated to increase from $19.1 billion in 1986 to $28.5 billion in 1987 and then decline to $26.0 billion in 1988.

Other current outlays are largely for operation of the Federal Government, including the *repair, maintenance, and operation of physical assets* (primarily defense related); *regulation and law enforcement*; *net interest*; and other administrative or operating expenses. These outlays are $339.3 billion or an estimated 33 percent of budget outlays in 1988. Because proprietary receipts from the public—such as receipts from the sale of electric power, the sale of publications and reproductions, and the sale of timber and other natural land products—are offsets against the outlays to which they most nearly apply, net outlays are negative in some cases.

Unclassified.—The unclassified category includes the undistributed offsetting receipts, most payments from the Government to itself, and the associated offsetting collections. Outlays for this category are estimated to be −$58.3 billion in 1988, of which −$0.2 billion is in the national defense category.

Table D–7. **DETAIL OF FEDERAL INVESTMENT AND OPERATING OUTLAYS BY DEFENSE—NONDEFENSE**

(In millions of dollars)

	1986 actual	1987 estimate	1988 estimate
National defense investment-type programs			
Construction and rehabilitation of physical assets:			
Military construction	4,888	4,792	5,026
Family housing	343	435	555
Atomic energy defense activities and other	1,493	1,267	1,129
Subtotal, construction and rehabilitation of physical assets	6,723	6,494	6,710
Acquisition of major equipment:			
Procurement	76,500	82,696	82,798
Atomic energy defense activities	483	623	523
Subtotal, acquisition of major equipment	76,983	83,319	83,320
Other physical assets	870	1,036	1,074
Conduct of research and development:			
Defense military	33,396	35,346	39,252
Atomic energy and other	2,260	2,330	2,445
Subtotal, defense research and development	35,656	37,676	41,696
Other investment-type programs	657	19	−1
Subtotal, investment-type programs	120,889	128,544	132,800
National defense current programs			
Provision of benefits	101	126	135
Repair, maintenance, and operation of physical assets:			
Department of Defense, Military	77,591	78,895	83,554
Other	2,144	2,164	2,484
Subtotal, repair, maintenance and operation of physical assets	79,735	81,059	86,038
Other current programs:			
Military personnel	70,401	69,642	74,693
Other national defense	2,530	3,135	4,111
Subtotal, other current programs	72,931	72,777	78,803
Subtotal, current programs	152,767	153,961	164,976
Unclassified	−281	−260	−227
Total, national defense	273,375	282,246	297,550
Civil investment-type programs			
Loans:			
International affairs	4,601	2,691	2,359
Agriculture	12,600	4,748	3,852
Mortgage credit and deposit insurance	437	−2,243	−2,009
Aids to commerce	128	−135	−665
Transportation	1,151	609	−104
Disaster relief	−324	−606	−438
Other community and regional development	196	−684	−979
Education	1,061	−155	−552
Other	−7	1,820	570

Table D–7. **DETAIL OF FEDERAL INVESTMENT AND OPERATING OUTLAYS BY DEFENSE—NONDEFENSE—Continued**

(In millions of dollars)

	1986 actual	1987 estimate	1988 estimate
Subtotal, loans	19,843	6,046	2,034
Other financial investments:			
International development	164	1,078	1,639
Other	59	−1,786	−1,473
Subtotal, other financial investments	223	−708	166
Construction and rehabilitation of physical assets:			
Highways	13,949	12,441	12,649
Mass transportation	2,729	3,208	2,512
Rail transportation	141	172	94
Air transportation	918	938	1,001
Water transportation	238	226	197
Community development block grants	3,326	3,292	3,047
Urban development acton grants	461	428	355
Other community and regional development	870	950	695
Pollution control and abatement	3,292	2,874	2,825
Water resources	2,132	2,458	2,669
Other natural resources and environment	917	933	890
Energy	2,288	2,858	2,107
Veterans hospitals and other health	749	825	811
Other programs	1,685	1,909	2,047
Subtotal, construction and rehabilitation of physical assets	33,695	33,511	31,898
Acquisition of major equipment:			
Transportation	1,065	1,113	1,194
Space flight, control and data communications	1,050	1,292	1,985
General science and basic research	120	126	147
Postal Service	146	181	172
Other	933	1,006	930
Subtotal, acquisition of major equipment	3,315	3,718	4,427
Commodity inventories and other physical assets:			
Commodity inventories:			
Agriculture	4,129	685	2,531
Other	411	428	260
Subtotal, commodity inventories	4,540	1,113	2,791
Other physical assets	3,047	2,841	439
Subtotal, commodity inventories and other physical assets	7,586	3,954	3,230
Conduct of research and development:			
General science, space and technology:			
NASA	2,863	3,160	3,638
NSF	1,399	1,395	1,609
Other general science	510	582	639
Subtotal, general science, space and technology	4,772	5,137	5,886
Energy (Department of Energy)	2,622	2,557	2,080
Transportation:			
Department of Transportation	489	436	355

Table D–7. **DETAIL OF FEDERAL INVESTMENT AND OPERATING OUTLAYS BY DEFENSE—NONDEFENSE—Continued**

(In millions of dollars)

	1986 actual	1987 estimate	1988 estimate
NASA	568	539	587
Subtotal, transportation	1,057	975	942
Health:			
NIH	4,837	5,211	5,457
All other health	738	916	893
Subtotal, health	5,574	6,127	6,351
Agriculture	798	825	867
Natural resources and environment	924	944	874
All other research and development	738	856	791
Subtotal, conduct of research and development	16,485	17,421	17,790
Conduct of education and training:			
Department of Education:			
Higher education	7,349	7,628	5,994
Elementary, secondary, and vocational education	7,518	7,168	7,420
Other	238	322	207
Subtotal, Department of Education	15,104	15,118	13,622
Veterans readjustment benefits	888	727	617
Training and employment programs	3,707	3,611	3,968
Health training	981	913	844
Other education and training	3,031	3,246	3,156
Subtotal, conduct of education and training	23,711	23,615	22,207
Other investment-type programs:			
Collection of information	1,736	1,865	1,992
International development	1,998	2,382	2,272
Subtotal, other investment-type programs	3,734	4,248	4,264
Subtotal, investment-type programs	108,592	91,805	86,017
Civil current programs			
Provision of benefits:			
Retirement, survivor, and disability benefits:			
Social security (off-budget):			
Retirement and survivor benefits	174,906	182,718	193,291
Disability benefits	19,526	19,985	20,715
Subtotal, social security (off-budget)	194,432	202,703	214,006
Civil service:			
Retirement and survivor benefits	19,003	19,805	20,681
Disability benefits	4,321	4,503	4,744
Subtotal, civil service	23,323	24,309	25,425
Military retirement	17,621	17,953	18,887
Railroad retirement and disability benefits	5,125	6,120	6,434
Veterans disability benefits	10,588	10,670	10,774
Other retirement and disability benefits	1,736	1,790	2,834
Subtotal, retirement, survivor, and disability benefits	252,826	263,545	278,360
Other provision of benefits:			
Veterans pension benefits	3,874	3,830	3,840

Table D–7. **DETAIL OF FEDERAL INVESTMENT AND OPERATING OUTLAYS BY DEFENSE—NONDEFENSE—Continued**

(In millions of dollars)

	1986 actual	1987 estimate	1988 estimate
Medicare	74,033	76,225	81,076
Medicaid	23,606	25,259	25,692
Other health benefits	1,119	1,138	1,129
Unemployment compensation	16,263	16,564	16,218
Housing programs	11,285	10,841	11,626
Food and nutrition programs	18,320	18,990	18,196
Supplemental security income	9,315	9,863	11,210
Family support payments to States	8,236	8,836	8,001
Other	9,217	10,719	9,969
Subtotal, other provision of benefits	175,269	182,265	186,956
Direct provision of services:			
Hospital and medical care for veterans	8,040	8,365	8,808
Other health	1,169	1,222	1,243
Other	65	149	206
Subtotal, direct provision of services	9,274	9,737	10,256
Subtotal, provision of benefits	437,368	455,547	475,573
Administrative expenses of benefit programs:			
Social Security retirement and disability (off-budget)	2,207	2,391	2,508
Medicare and medicaid	3,108	3,206	1,833
Unemployment compensation, assistance payments, and other	7,748	8,286	8,363
Subtotal, administrative expenses of benefit programs	13,063	13,884	12,704
Social service and related programs:			
Human development services	1,862	1,945	2,225
Employment training programs	1,539	1,378	1,216
Social services block grant	2,671	2,661	2,697
Other	3,544	4,566	4,492
Subtotal, social service and related programs	9,615	10,550	10,630
Aids to agriculture, commerce, and transportation:			
Agriculture	11,853	22,614	17,157
Postal service	−182	671	1,811
Small business assistance	699	822	722
Mortgage credit and thrift insurance	−434	−371	−438
Ground transportation	1,483	1,517	1,020
Air transportation	2,534	2,525	2,934
Water transportation and waterways	1,866	2,163	1,758
Other	1,256	−1,404	1,075
Subtotal, aids to agriculture, commerce and transportation	19,075	28,537	26,040
Repair, maintenance and operation of physical assets:			
Natural resources:			
Water resources	794	525	497
Conservation and land management	−920	−1,006	−1,115
Recreational resources and other	898	552	1,157
Subtotal, natural resources	772	71	539
Energy (net of offsetting receipts)	−2,420	−2,762	−3,035
Other, net	5,587	6,284	6,924

Table D–7. **DETAIL OF FEDERAL INVESTMENT AND OPERATING OUTLAYS BY DEFENSE—NONDEFENSE—Continued**

(In millions of dollars)

	1986 actual	1987 estimate	1988 estimate
Subtotal, repair, maintenance and operation of physical assets	3,940	3,594	4,429
General purpose fiscal assistance:			
General revenue sharing	5,114	76	....
Other general purpose grants-in-aid	648	703	646
Shared revenues	1,428	1,660	1,074
Subtotal, general purpose fiscal assistance	7,191	2,439	1,720
Regulation, control and law enforcement:			
Regulatory and inspection activities:			
Natural resources and environment	1,188	1,223	1,300
Transportation	957	1,078	1,166
Health	1,064	1,149	809
Energy	492	437	442
Agriculture	308	321	221
Deposit insurance institutions	1,376	7,623	459
Tax collection	1,086	1,201	1,405
Other	805	952	927
Subtotal, regulatory and inspection activities	7,277	13,983	6,729
Law enforcement activities:			
Federal litigative and judicial	2,152	2,525	2,658
Federal correctional activities	561	624	727
Other law enforcement assistance	117	269	312
Subtotal, law enforcement activities	6,405	7,837	8,653
Subtotal, regulation, control and law enforcement	13,682	21,820	15,382
Net interest:			
Interest on the public debt	190,166	191,749	198,394
Interest received by on-budget trust funds	−26,570	−28,685	−31,608
Interest received by off-budget trust funds	−4,329	−5,084	−6,594
Other interest	−23,298	−20,520	−21,159
Subtotal, net interest	135,969	137,461	139,032
General Administration:			
International affairs	1,451	3,961	3,965
Legislative branch	1,418	1,685	1,863
Other general government	3,649	3,799	4,304
Other	366	1,187	643
Subtotal, general administration	6,884	10,633	10,775
Other current programs:			
International security assistance	5,433	4,555	4,679
Other	−3,112	−2,801	−2,136
Subtotal, other current programs	2,321	1,753	2,543
Subtotal, current programs	649,108	686,217	698,827
Unclassified:			
Employer share, employee retirement:			
On-budget	−25,434	−28,013	−32,128
Off-budget	−2,857	−3,275	−5,484

Table D–7. **DETAIL OF FEDERAL INVESTMENT AND OPERATING OUTLAYS BY DEFENSE—NONDEFENSE—Continued**

(In millions of dollars)

	1986 actual	1987 estimate	1988 estimate
Subtotal, employer share, employee retirement	−28,291	−31,288	−37,612
Other unclassified:			
On-budget	−10,363	−12,251	−19,617
Off-budget	2,111	2,746	2,849
Subtotal, Unclassified	−41,260	−44,696	−58,066
Total, civil	716,440	733,326	726,777
Outlay total	**989,815**	**1,015,572**	**1,024,328**
On-budget	*(806,318)*	*(821,074)*	*(821,900)*
Off-budget	*(183,498)*	*(194,498)*	*(202,427)*

Table D–8. **DETAIL OF FEDERAL INVESTMENT AND OPERATING OUTLAYS BY GRANTS-IN-AID AND DIRECT FEDERAL PROGRAMS**

(In millions of dollars)

	1986 actual	1987 estimate	1988 estimate
Grants-in-aid			
Investment-type programs:			
Construction, rehabilitation, and acquisition of physical assets:			
Highways	13,939	12,418	12,629
Mass transportation	2,729	3,208	2,512
Rail transportation	18	42	12
Air transportation	853	889	950
Pollution control and abatement	3,158	2,675	2,462
Other natural resources and environment	248	166	106
Community development block grants	3,326	3,292	3,047
Urban development action grants	461	428	355
Other community and regional development	744	833	605
Other construction	366	456	305
Subtotal, construction and rehabilitation of physical assets	25,843	24,408	22,984
Equipment and other physical assets	418	463	438
Conduct of research and development	319	313	330
Conduct of education and training:			
Employment and training assistance	3,019	2,885	3,209
Elementary and secondary education	7,386	6,844	7,148
Other	2,152	2,267	1,935
Subtotal, conduct of education and training	12,556	11,996	12,292
Collection of information	*	*	....
Subtotal, investment-type programs	39,136	37,180	36,045
Current programs:			
Provision of benefits:			
Medicaid	23,606	25,259	25,692
Nutrition and food programs	7,662	8,205	7,594
Family support payments to States	8,236	8,836	8,001
Other assistance payments	2,326	2,128	1,520
Housing payments and related activities	6,438	6,289	6,709
Other	1,110	1,131	1,121
Subtotal, provision of benefits	49,378	51,847	50,637
Administrative expenses of benefit programs:			
Unemployment compensation	1,570	1,599	1,700
Medicaid	1,389	1,441	1,172
Nutrition and food programs	1,375	1,561	1,498
Assistance payments	1,640	1,770	1,774
Other administrative expenses	4	2	3
Subtotal, administrative expenses of benefit programs	5,978	6,373	6,148
Social service and related programs:			
Employment programs	1,255	1,095	926
Human development services	1,792	1,875	2,158
Social service and child welfare services	3,461	3,564	3,457
Other	2,019	3,098	3,019

Table D–8. **DETAIL OF FEDERAL INVESTMENT AND OPERATING OUTLAYS BY GRANTS-IN-AID AND DIRECT FEDERAL PROGRAMS—Continued**

(In millions of dollars)

	1986 actual	1987 estimate	1988 estimate
Subtotal, social service and related programs	8,526	9,632	9,559
Aids to agriculture, commerce, and transportation:			
Transportation	758	886	996
Other	2	8	1
Subtotal, aids to agriculture, commerce, and transportation	759	894	997
Repair, maintenance, and operation of physical assets	554	469	239
General purpose fiscal assistance:			
General revenue sharing	5,114	76	....
Shared revenues	1,428	1,660	1,074
Other	721	773	707
Subtotal, general purpose fiscal assistance	7,263	2,509	1,781
Regulation, control, and law enforcement:			
Law enforcement assistance	81	175	233
Other	463	597	550
Subtotal, regulation, control, and law enforcement	545	772	783
Other current programs	218	203	89
Subtotal, current programs	73,222	72,699	70,234
Total, grants-in-aid	112,357	109,879	106,278
Direct Federal programs			
Investment-type programs:			
Loans and financial investments:			
Loans:			
International affairs	4,601	2,691	2,359
Energy supply	483	1,909	749
Agriculture	12,600	4,748	3,852
Commerce and housing credit	128	−135	−665
Mortgage credit and deposit insurance	437	−2,243	−2,009
Transportation	1,151	609	−104
SBA disaster loan fund	−324	−606	−438
Education	1,061	−155	−552
Veterans	40	148	61
Low-rent public housing	−35	−37	−39
Other	138	−1,062	−1,349
Subtotal, loans	20,282	5,868	1,865
Financial investments	223	−708	166
Subtotal, loans and financial investments	20,504	5,160	2,031
Construction and rehabilitation of physical assets:			
National defense	6,625	6,403	6,610
Water resource projects	1,963	2,357	2,609
Other natural resources and environment	971	1,067	1,206
Energy	2,288	2,858	2,107
Transportation	435	428	349
Veterans hospitals and other health facilities	733	794	777
Postal service	786	913	1,045

Table D–8. **DETAIL OF FEDERAL INVESTMENT AND OPERATING OUTLAYS BY GRANTS-IN-AID AND DIRECT FEDERAL PROGRAMS—Continued**

(In millions of dollars)

	1986 actual	1987 estimate	1988 estimate
Other construction	774	778	920
Subtotal, construction and rehabilitation of physical assets	14,575	15,597	15,624
Acquisition of major equipment:			
National defense	76,983	83,317	83,320
NASA	1,050	1,292	1,985
Postal service	146	181	172
Other	2,118	2,245	2,270
Subtotal, acquisition of major equipment	80,298	87,036	87,747
Commodity inventories:			
Atomic energy defense activities	1,055	1,066	1,224
Strategic petroleum reserve	411	428	260
Commodity credit corporation	4,129	685	2,531
Other commodity inventories	−185	−30	−149
Subtotal, commodity inventories	5,409	2,149	3,866
Other physical assets	2,629	2,381	1
Conduct of research and development	51,822	54,785	59,157
Conduct of education and training:			
Assistance to veterans	951	843	763
Higher education	7,246	7,551	6,074
Elementary and secondary education	356	571	486
Employment and training assistance	634	661	693
Health training	978	911	828
Other	1,001	1,091	1,079
Subtotal, conduct of education and training	11,166	11,628	9,923
Collection of information	1,764	1,892	1,992
International development	2,178	2,542	2,432
Subtotal, investment-type programs	190,345	183,170	182,772
Current programs:			
Provision of benefits:			
Social security retirement and disability (off-budget)	174,906	182,718	193,291
Other retirement and disability benefits	81,896	84,783	89,044
Medicare	74,033	76,225	81,076
Medical care for veterans	8,040	8,365	8,808
Other health	1,178	1,230	1,250
Unemployment compensation	16,263	16,564	16,218
Food and nutrition programs	10,747	10,855	10,683
Housing payments and related activities	7,241	7,282	7,641
Supplemental security income	9,315	9,863	11,210
Earned income tax credit	1,415	1,491	2,910
Other	3,058	4,451	2,939
Subtotal, provision of benefits	388,091	403,826	425,070
Administrative expenses of benefit programs:			
Social security retirement and disability (off-budget)	2,207	2,391	2,508
Medicare	1,718	1,765	661

Table D-8. **DETAIL OF FEDERAL INVESTMENT AND OPERATING OUTLAYS BY GRANTS-IN-AID AND DIRECT FEDERAL PROGRAMS—Continued**

(In millions of dollars)

	1986 actual	1987 estimate	1988 estimate
Unemployment compensation, assistance payments and other	3,159	3,355	3,387
Subtotal, administrative expenses of benefit programs	7,085	7,511	6,556
Social service and related programs	1,089	917	1,071
Aids to agriculture, commerce, and transportation:			
Agriculture	11,853	22,614	17,157
Postal service	−182	671	1,811
Small business assistance	699	822	722
Mortgage credit and deposit insurance	−434	−371	−438
Ground transportation	730	635	30
Air transportation	2,534	2,525	2,934
Water transportation and waterways	1,866	2,163	1,758
Other	1,250	−1,416	1,068
Subtotal, aids to agriculture, commerce, & transportation	18,316	27,643	25,043
Repair, maintenance, and operation of physical assets:			
National defense	79,735	81,053	86,038
Other (includes offsetting collections)	3,385	3,130	4,190
Subtotal, repair, maintenance, and operation of physical assets	83,120	84,183	90,227
Regulation, control, and law enforcement	13,137	21,048	14,599
Net interest:			
On-budget	140,298	142,544	145,626
Off-budget	−4,329	−5,084	−6,594
Subtotal, net interest	135,969	137,461	139,032
Other current programs:			
Military personnel	70,401	69,642	74,693
Allowance for Department of Defense pay raises			2,475
Other national defense	2,458	3,065	1,574
Allowance for civilian agency pay raises			678
Other	8,988	12,183	12,551
Subtotal, other current programs	81,846	84,891	91,971
Subtotal, current programs	728,653	767,480	793,569
Unclassified:			
Employer share, employee retirement:			
On-budget	−25,434	−28,013	−32,128
Off-budget	−2,857	−3,275	−5,484
Subtotal, employer share, employee retirement	−28,291	−31,288	−37,612
Rents and royalties on the Outer Continental Shelf	−4,716	−3,903	−3,686
Other unclassified:			
On-budget	−10,644	−12,511	−19,843
Off-budget	2,111	2,746	2,849
Subtotal, other unclassified	−8,533	−9,765	−16,994
Subtotal, unclassified	−41,541	−44,956	−58,293

Table D–8. **DETAIL OF FEDERAL INVESTMENT AND OPERATING OUTLAYS BY GRANTS-IN-AID AND DIRECT FEDERAL PROGRAMS—Continued**

(In millions of dollars)

	1986 actual	1987 estimate	1988 estimate
Total, direct Federal programs	877,458	905,693	918,049
Outlay total	**989,815**	**1,015,572**	**1,024,328**
On-budget	*(806,318)*	*(821,074)*	*(821,900)*
Off-budget	*(183,498)*	*(194,498)*	*(202,427)*

SPECIAL ANALYSIS E

BORROWING AND DEBT

The major fiscal operations of the Federal Government include not only taxation and expenditure but also:

- borrowing cash to meet outlays not covered by receipts and to refinance maturing debt;
- investing balances that trust funds and other Government accounts do not currently need for outlays; and
- providing guarantees and other types of assistance to certain borrowing by the public.

This analysis summarizes current developments in Federal borrowing. It also discusses the size and growth of the Federal debt and the interest on the Federal debt, the amount of U.S. Government debt held by foreign residents, agency borrowing, investment in Federal securities by Government accounts, the statutory debt limitation, Government-guaranteed borrowing, and borrowing by Government-sponsored enterprises. The analysis concludes with a brief discussion of the trend in Federal and federally assisted borrowing and the relationship of this trend to the total borrowing by the nonfinancial sector of the economy. Excluded from this analysis are other types of Federal liabilities, which include accounts payable, obligations for undelivered orders, long-term contracts, insurance commitments, and the obligation for such future payments as social security and employee retirement.[1] Supplementary data on debt since 1940 are published in a separate volume, *Historical Tables, Budget of the United States Government, Fiscal Year 1988.*

The data for borrowing and debt in 1985 and 1986 have been revised in several ways from the figures previously published in the budget documents and by the Treasury. A separate section of this special analysis on pages E–24 to E–30 discusses these revisions and a change in concept for certain transactions that takes effect in 1987.

Special Analysis F, "Federal Credit Programs," examines the related subject of Federal credit programs, which provide direct loans, loan guarantees, and loans by Government-sponsored enter-

[1] Data on many of these liabilities are contained in "Statement of Liabilities and Other Financial Commitments of the United States Government," an annual report prepared by the Financial Management Service of the Department of the Treasury and published in the *Treasury Bulletin*. The 1985 data were published in the winter (1st quarter) issue, 1986, pp. 196–207.

prises. The factors discussed in both Special Analyses E and F are significant in appraising the impact on financial markets and the economy of the programs contained in the 1988 Federal budget.

BORROWING AND REPAYING DEBT

The Federal Government issues debt for two principal reasons. First, it issues debt to the public, largely in order to finance the Federal deficit. Second, it issues debt to Government accounts, primarily trust funds, that accumulate surpluses required by law to be invested in Federal securities. Nearly all of the Federal debt has been issued by the Treasury and is called "public debt," but a small portion has been issued by other Government agencies and is called "agency debt." [2]

Borrowing from the public—whether by the Treasury or by an agency—has a significant impact on financial markets and the rest of the economy, and is consequently an important concern of Federal fiscal policy. Borrowing from the public includes borrowing from the Federal Reserve Banks as well as borrowing from commercial banks, foreign central banks, other financial institutions and businesses, and individuals. The term "borrowing from the Federal Reserve Banks" does not mean that the Treasury sells debt securities directly to the Federal Reserve. In fact, the Federal Reserve now buys securities only in the open market. The previous authority for the Federal Reserve to buy limited amounts of securities directly from the Treasury under exceptional circumstances expired in 1981.

For most purposes borrowing from the Federal Reserve Banks should be distinguished from borrowing from the rest of the public. Federal Reserve purchases of debt are undertaken to carry out monetary policy, not to earn income, and affect the economy by expanding bank reserves and the money stock. They thus have a markedly different motivation and effect on financial markets than do purchases by other sectors of the public. The debt held outside the Federal Reserve Banks enters into investment portfolios of businesses and individuals and by this means affects interest rates, other financial conditions, and the size and composition of private assets. Almost all interest received by the Federal Reserve Banks is returned to the Treasury as receipts, called deposits of earnings, so the Federal Reserve holdings of debt have only a small direct effect on the budget surplus or deficit. The estimates in this analysis for the current and future years do not divide the debt held by the public between the Federal Reserve Banks and the rest of the public, despite the significance of this distinction, because the Fed-

[2] The term "agency debt" is defined more narrowly in the budget than in the securities market, where it may include not only the debt of the Government agencies listed in table E–7 but also certain Government-guaranteed securities and the debt of the Government-sponsored enterprises listed in table E–12.

eral Reserve's open market operations depend on future economic developments and on policy decisions not yet made.

Table E-1 summarizes Federal borrowing from 1986 through 1992. In 1986, the total Federal borrowing (net of the refunding of securities that matured)—i.e., the rise in gross Federal debt—was $305.7 billion. The issue of debt to Government accounts was $69.4 billion, and the sale of debt to the public was $236.3 billion. The Federal Reserve Banks increased their holdings of Federal debt by $21.0 billion, so the increase in debt held by the rest of the public was $215.2 billion. As a result of this borrowing, Federal debt held by the public increased to $1,746.1 billion at the end of 1986. Gross Federal debt was $2,132.9 billion. As noted previously, these data reflect revisions beginning in 1985 that are discussed in a later section of the special analysis.

Table E-1. **FEDERAL BORROWING**

(In billions of dollars)

Description	Borrowing or repayment (—) of debt							Debt outstanding, end of year	
	1986 actual	1987 estimate	1988 estimate	1989 estimate	1990 estimate	1991 estimate	1992 estimate	1988 estimate	1992 estimate
Gross Federal debt:									
Treasury debt	305.3	236.5	215.7	212.8	195.9	171.3	147.3	2,580.3	3,307.7
Agency debt	0.4	3.1	−2.6	−1.5	−1.5	—*	−0.1	5.1	2.2
Gross Federal debt	305.7	239.5	213.0	211.4	194.4	171.3	147.3	2,585.5	3,309.8
Less debt held by Gov. accounts:									
Treasury debt	69.4	77.3	107.2	NA	NA	NA	NA	570.3	NA
Agency debt	—*	−0.1	−0.9	NA	NA	NA	NA	0.1	NA
Debt held by Gov. accounts [1]	69.4	77.3	106.3	119.0	135.4	150.4	160.0	570.4	1,135.2
Total, debt held by public	236.3	162.2	106.7	92.3	59.1	20.9	−12.7	2,015.1	2,174.7
Composed of:									
Debt held by the Federal Reserve Banks	21.0	NA	NA	NA	NA	NA	NA	NA	NA
Debt held by others	215.2	NA	NA	NA	NA	NA	NA	NA	NA

* $50 million or less.

[1] Investment by Government accounts during 1989–92 is estimated as equal to the total trust fund surplus.

NA=Not available.

Borrowing from the public has usually fluctuated widely in the past in response to fluctuations in the economy. Recently, from 1981 to 1983, it increased substantially from $79.3 billion to $212.3 billion. This was due to both the temporary effects of recession and disinflation and a more lasting, structural imbalance between receipts and outlays. In the past three years the recovery has helped to restrain the growth of borrowing, but the level of borrowing has not diminished.

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The decline in real gross national product (GNP) during the recession of 1981-82 reduced money incomes, which decreased income and social security tax receipts almost immediately; the associated rise in unemployment raised outlays for unemployment compensation and certain other programs. The decrease in the rate of inflation, which was unusually sharp, reduced both receipts and outlays, but receipts fell more quickly. Tax collections fell almost immediately below what they otherwise would have been, because the lower inflation reduced the money incomes on which most taxes are based. In contrast, for example, cost-of-living adjustments to benefit programs occur at fixed intervals and are not made until some months after the price changes that determine them; and lower interest rates in response to lower inflation do not reduce interest outlays on existing debt securities. Therefore, the lower real GNP and the disinflation both widened the Federal deficit. These effects are an example of the sensitivity of the budget to economic conditions, which is discussed in Part 3a of the *Budget—Supplement.*

With strong economic recovery starting in early 1983 and with a more stable rate of inflation, these factors ceased to widen the Federal deficit and borrowing. Instead, the rapid expansion of real GNP and the sharp decline in the unemployment rate increased receipts, reduced outlays, and thus decreased the Federal deficit and borrowing from what they would otherwise have been. However, the effects of the still remaining unemployed resources continue to keep the deficit and borrowing at greater levels than they would be at high employment.

The present large deficit and borrowing are also due to causes that do not go away during the forecast period, even with the steady and strong economic expansion assumed in this budget. Although the estimated total unemployment rate falls to 5.5% by 1992, a deficit of $77.9 billion nevertheless remains under these conditions of high employment unless policy actions are taken to diminish it. The effect is shown in table E-2 by the estimated borrowing from the public based on the current services estimates of the deficit. The current services estimates of the budget, as explained in Special Analysis A, "Current Services Estimates," show the receipts, outlays, and deficit that would be realized under existing policies with regard to spending programs and taxes (and under the same economic assumptions as used for the budget). As shown in table E-2, they imply large continued borrowing through 1992, though with a significant downward trend, despite the assumption of continual improvement in economic conditions.

In contrast, the policies proposed in this budget are estimated to eliminate the deficit and borrowing from the public. As shown in tables E-1 and E-2, borrowing from the public under these policies

Table E–2. **COMPARISON OF CURRENT SERVICES AND POLICY ESTIMATES OF BORROWING AND DEBT**

(Dollar amounts in billions)

Description	1987 estimate	1988 estimate	1989 estimate	1990 estimate	1991 estimate	1992 estimate
Borrowing from the public:						
Current services	163.6	149.1	146.5	125.3	100.7	77.9
Policy	162.2	106.7	92.3	59.1	20.9	−12.7
Debt held by the public:						
Current services	1,909.7	2,058.8	2,205.3	2,330.6	2,431.4	2,509.2
Policy	1,908.4	2,015.1	2,107.5	2,166.5	2,187.4	2,174.7
Debt held by the public as percentage of GNP:						
Current services	43.2	43.5	43.4	42.9	42.0	40.9
Policy	43.2	42.6	41.5	39.9	37.8	35.5

is estimated to decrease steadily from its 1986 level of $236.3 billion, falling to $106.7 billion in 1988 and turning into a $12.7 billion repayment of debt in 1992. As a result, the debt held by the public under the policies proposed by the Administration is $2,174.7 billion in 1992, which is $334.5 billion less (or 13.3% less) than the debt under the current services estimates. The economic assumptions behind these estimates are presented and discussed in Part 2 of the *Budget* and in Part 3a of the *Budget—Supplement.*

Borrowing and Government Deficits

Table E–3 shows the relationship between borrowing from the public and the Federal deficit. The total deficit of the Federal Government includes not only the budget deficit but also the surplus or deficit of the off-budget Federal entities, which have been excluded from the budget by law. Under present law the off-budget Federal entities are the old-age and survivors insurance trust fund and the disability insurance trust fund.[3] Since they had a combined surplus in 1986 and are estimated to continue having surpluses during 1987–92, they currently reduce the requirements for Treasury to borrow from the public.

The total Federal deficit is financed either by borrowing from the public or by several other means. The other means of financing are:

- a decrease in Treasury's operating cash balance;
- an increase in monetary liabilities for checks outstanding, accrued interest payable on debt held by the public, etc.;
- an increase in deposit fund balances, which are discussed on pages E–22 to E–24, together with their effect on the means of financing; and
- seigniorage, which is the face value of minted coins less the cost of their production.

[3] Off-budget Federal entities are discussed in the *Budget—Supplement, Fiscal Year 1988,* Part 6a.

Table E–3. **MEANS OF FINANCING THE DEFICIT** [1]

(In millions of dollars)

Description	1986 actual	1987 estimate	1988 estimate	1989 estimate	1990 estimate	1991 estimate	1992 estimate
Surplus or deficit (−)	−220,725	−173,182	−107,756	−92,766	−59,501	−21,290	12,267
On-budget	*−237,455*	*−192,702*	*−147,427*	*−144,491*	*−123,755*	*−95,701*	*−69,114*
Off-budget [2]	*16,731*	*19,520*	*39,671*	*51,726*	*64,254*	*74,411*	*81,380*
Means of financing other than borrowing from the public:							
Decrease or increase (−) in Treasury operating cash balance	−14,324	11,384					
Increase or decrease (−) in:							
Checks outstanding, etc. [3]	1,854	1,889	1,769				
Deposit fund balances [4]	−3,481	−2,769	−1,167				
Seigniorage on coins	392	430	433	419	431	431	440
Total, means of financing other than borrowing from the public	−15,559	10,934	1,035	419	431	431	440
Total, requirements for borrowing from the public	−236,284	−162,248	−106,721	−92,347	−59,070	−20,859	12,707
Change in debt held by the public	236,284	162,248	106,721	92,347	59,070	20,859	−12,707

[1] Several amounts have been assumed to be zero during 1988–92 because they are usually small and cannot be estimated accurately.

[2] The off-budget Federal entities consist of the old-age and survivors insurance trust fund and the disability insurance trust fund.

[3] Besides checks outstanding, includes accrual of interest payable on Treasury debt, miscellaneous liability accounts, allocations of special drawing rights, and, as an offset, cash and monetary assets other than the Treasury operating cash balance, miscellaneous asset accounts, profit on sale of gold, and a technical error in recording FDIC outlays in 1986.

[4] Does not include investment in Federal debt by deposit funds classified as part of the public.

All of these other means of financing except seigniorage are changes in the Government's balance sheet—either its asset or its liability accounts—and so may be either positive or negative. In most years they add up to a positive total amount, in which case they finance part of the deficit. Sometimes, however, they add up to a negative total amount, in which case they, like the deficit, must themselves be financed by borrowing from the public. In 1986, the Government borrowed $236.3 billion from the public. Most of this amount, $220.7 billion, was used to finance the Government deficit. The remaining $15.6 billion was used to finance the "other means of financing," which had a negative total amount.

The other means of financing are normally small relative to borrowing from the public. This is because they are limited by their own nature. Decreases in cash balances, for example, are necessarily limited by past accumulations, which themselves required financing when they were built up. Thus, the extent to which means other than borrowing can finance a deficit are limited in any single year and are still more limited over a longer period of time. When the total Government deficit is sizable, it is necessarily the principal determinant of borrowing from the public.

Nevertheless, as a whole, these other accounts did require a significant amount of borrowing from the public in 1986 in order to be financed. This was due mostly to the large increase in Treasury's operating cash balance. Because the $31.4 billion cash balance on September 30, 1986, was more than the $20 billion needed for normal operations at that time of year, Treasury estimates an $11.4 billion decrease in cash balance during 1987. Since a decrease in cash balance is a means of financing the Government, this will allow borrowing in 1987 to be appreciably less than the size of the deficit rather than being appreciably more. As a result, the estimated borrowing from the public is $74.0 billion less in 1987 than in 1986, whereas the estimated deficit is $47.5 billion less.

The structure of table E–3 demonstrates that the off-budget Federal entities affect borrowing from the public in exactly the same way as the on-budget entities. Thus, balancing the budget as defined under current law is not enough to prevent an increase in the Federal debt held by the public, if the off-budget entities have a deficit. Likewise, a budget deficit does not require borrowing from the public so long as the off-budget Federal entities have a surplus that is as large as the budget deficit or larger. The outlays of the entire Government must be in balance with receipts in order for the Government not to have to borrow from the public, regardless of whether particular Federal entities are defined as being included in the budget totals (aside from the relatively small effect of the other means of financing).

The amount of Federal debt issued to Government accounts depends largely on the surpluses of the trust funds, both on-budget and off-budget, which own over nine-tenths of the total Federal debt held by Government accounts. Investment by these accounts in Federal securities and the total trust fund surplus during 1985–88 are compared in the table below (in billions of dollars):

	1985 actual	*1986 actual*	*1987 estimate*	*1988 estimate*
Investment by Government accounts in Federal debt	53.2	69.4	77.3	106.3
Total trust fund surplus	54.4	62.3	69.8	103.7

Investment in Federal securities by Government accounts is roughly similar in size to the total trust fund surplus throughout this period. This relationship has historically been close, with the small differences accounted for by two factors. Certain accounts other than trust funds buy or sell Federal debt, as shown in table E–8, and the trust funds may change the amount of their cash assets not currently invested in debt.[4]

Size and Growth of Federal Debt

Gross Federal debt has risen substantially over the past half century, from $16.9 billion in 1929 to $2,132.9 billion at the end of 1986. Table E–4 compares the trends since 1955 in gross Federal debt and the amounts of debt held by Government accounts, the public (including the Federal Reserve Banks), and the Federal Reserve Banks. During this period the gross Federal debt increased by nearly eight times, and the amount of debt held in Federal Government accounts (primarily trust funds) rose by a similar proportion. The average annual growth rates of gross Federal debt, debt held by the public, and debt held by the public apart from the Federal Reserve Banks were all about the same: around 6.8%. In the latter part of the period, the growth of debt accelerated. Whereas the debt held by the public increased at an average annual rate of 2.8% from 1955 to 1975, it grew at a rate of 11.9% from 1975 to 1980 and at a rate of 16.0% from 1980 to 1986.

[4] These "open book balances" are very small relative to trust fund holdings of Federal debt, as shown in Special Analysis C, "Funds in the Budget."

Table E–4. **TRENDS IN FEDERAL DEBT** [1]

(Dollar amounts in billions)

Fiscal year	Debt outstanding, end of year					GNP	Debt held by public as percent of GNP
	Gross Federal debt	Held by					
		Federal Government accounts	The public				
			Total	Federal Reserve Banks	Other		
1955	274.4	47.8	226.6	23.6	203.0	386.4	58.6
1956	272.8	50.5	222.2	23.8	198.5	418.1	53.2
1957	272.4	52.9	219.4	23.0	196.4	440.5	49.8
1958	279.7	53.3	226.4	25.4	200.9	450.2	50.3
1959	287.8	52.8	235.0	26.0	209.0	481.5	48.8
1960	290.9	53.7	237.2	26.5	210.7	506.7	46.8
1961	292.9	54.3	238.6	27.3	211.4	518.2	46.0
1962	303.3	54.9	248.4	29.7	218.7	557.7	44.5
1963	310.8	56.3	254.5	32.0	222.4	587.8	43.3
1964	316.8	59.2	257.6	34.8	222.8	629.2	40.9
1965	323.2	61.5	261.6	39.1	222.5	672.6	38.9
1966	329.5	64.8	264.7	42.2	222.5	739.0	35.8
1967	341.3	73.8	267.5	46.7	220.8	794.6	33.7
1968	369.8	79.1	290.6	52.2	238.4	849.4	34.2
1969 [2]	367.1	87.7	279.5	54.1	225.4	929.5	30.1
1970 [3]	382.6	97.7	284.9	57.7	227.2	990.2	28.8
1971	409.5	105.1	304.3	65.5	238.8	1,055.9	28.8
1972	437.3	113.6	323.8	71.4	252.3	1,153.1	28.1
1973 [4]	468.4	125.4	343.0	75.2	267.9	1,281.4	26.8
1974	486.2	140.2	346.1	80.6	265.4	1,416.5	24.4
1975	544.1	147.2	396.9	85.0	311.9	1,522.5	26.1
1976 [5]	631.9	151.6	480.3	94.7	385.6	1,698.2	28.3
TQ	646.4	148.1	498.3	96.7	401.6	1,794.7	27.8
1977	709.1	157.3	551.8	105.0	446.8	1,933.0	28.5
1978	780.4	169.5	610.9	115.5	495.5	2,171.8	28.1
1979	833.8	189.2	644.6	115.6	529.0	2,447.8	26.3
1980	914.3	199.2	715.1	120.8	594.3	2,670.6	26.8
1981	1,003.9	209.5	794.4	124.5	670.0	2,986.4	26.6
1982	1,147.0	217.6	929.4	134.5	794.9	3,139.1	29.6
1983	1,381.9	240.1	1,141.8	155.5	986.2	3,321.9	34.4
1984	1,576.7	264.2	1,312.6	155.1	1,157.5	3,686.8	35.6
1985 [6]	1,827.2	317.4	1,509.9	169.8	1,340.1	3,937.2	38.4
1986	2,132.9	386.8	1,746.1	190.9	1,555.3	4,163.3	41.9
1987 estimate	2,372.4	464.0	1,908.4	NA	NA	4,418.9	43.2
1988 estimate	2,585.5	570.4	2,015.1	NA	NA	4,731.2	42.6
1989 estimate	2,796.9	689.4	2,107.5	NA	NA	5,076.0	41.5
1990 estimate	2,991.3	824.8	2,166.5	NA	NA	5,434.2	39.9
1991 estimate	3,162.6	975.2	2,187.4	NA	NA	5,789.9	37.8
1992 estimate	3,309.8	1,135.2	2,174.7	NA	NA	6,133.3	35.5

[1] Data from 1940 to 1992 in millions of dollars are published in *Historical Tables, Budget of the United States Government, Fiscal Year 1988,* section 7. Earlier historical data are presented on a different basis in *Statistical Appendix to Annual Report of the Secretary of the Treasury on the State of the Finances, Fiscal Year 1980,* table 19.

[2] During 1969, 3 Government-sponsored enterprises became completely privately owned, and their debt was removed from the totals for the Federal Government. At the dates of their conversion, gross Federal debt was reduced $10.7 billion, debt held by Government accounts was reduced $0.6 billion, and debt held by the public was reduced $10.1 billion.

[3] Gross Federal debt and debt held by the public increased $1.6 billion due to a reclassification of the Commodity Credit Corporation certificates of interest from loan assets to debt.

[4] A procedural change in the recording of trust fund holdings of Treasury debt at the end of the month increased gross Federal debt and debt held in Government accounts by about $4.5 billion.

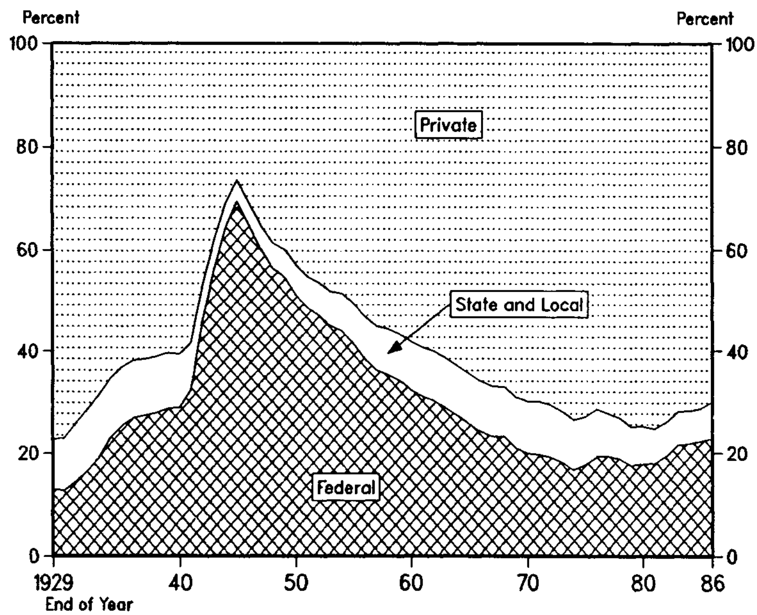
[5] Gross Federal debt and debt held by the public increased $0.5 billion due to a retroactive reclassification of the Export-Import Bank certificates of beneficial interest from loan assets to debt.

[6] Gross Federal debt and debt held by Government accounts decreased $0.3 billion due to a retroactive requantification of certain trust fund investments.

NA = Not available.

During the depression of the 1930's and during World War II, Federal debt held by the public increased greatly, not only in absolute amount but also, as shown in the chart below, as a proportion of the total credit market debt owed by nonfinancial sectors of the economy: Federal, State and local, and private.[5] Whereas Federal debt held by the public was only 13% of total debt at the end of calendar year 1929, it had risen to 69% by the end of calendar year 1945. Federal borrowing was large during these years, especially to finance World War II, and borrowing by other sectors was restricted by low incomes and poor credit-worthiness during the depression and by controls and scarcities during the war.

Percentage Distribution of Debt*



*Federal Debt is Debt Held by the Public (Including the Federal Reserve Banks)

From 1945 to 1974, however, in every single year but one, private debt increased as a proportion of total credit market debt and Federal debt held by the public decreased as a proportion. During this period the average annual rate of growth was 1.1% for Federal debt held by the public, 10.0% for State and local debt, and 9.7% for private credit market debt. By 1974, Federal debt held by the

[5] The estimates for 1946 to the present are from the Federal Reserve Board flow-of-funds accounts; the estimates for earlier years are from the Bureau of Economic Analysis of the Department of Commerce and are linked to the flow-of-funds estimates on the basis of their respective 1946 levels. The data are for calendar years during 1929–51 and for fiscal years thereafter. The private sector debt includes debt of foreigners incurred in U.S. credit markets.

public had declined to 16.7% of total credit market debt, and private debt had risen to 73.5% of the total. As a result of these trends, Federal debt, though still important, became a relatively much smaller part of the financial markets than it had been at the end of World War II.

This trend ended in 1975. A recession caused large Federal deficits in 1975 and 1976, and as a result the Federal debt held by the public rose as a percentage of total credit market debt in both years. After a brief decline and a short period of stability, Federal debt held by the public increased year-by-year from 17.9% of credit market debt in 1980 to 22.9% in 1986. This is the highest percentage since 1968. The counterpart to a higher proportion of Federal debt in the last six years has been a lower proportion of private debt.

During the same period following World War II, Federal debt decreased relative to GNP. Debt held by the public was 110.7% of GNP at the end of 1945 but, as shown in table E–4, declined to 58.6% of GNP by the end of 1955 and 24.4% by the end of 1974. For several years thereafter debt held by the public fluctuated as a percentage of GNP in about the same way as it fluctuated as a percentage of total credit market debt. In 1982, however, debt held by the public rose sharply from 26.6% of GNP to 29.6%, and by 1986 it had risen to 41.9%. This percentage is higher than in any other year since 1963.

Federal borrowing is estimated to remain large in 1987, despite a sharp decline, and then to decrease by further significant amounts in 1988 and later years. As a result, debt held by the public is estimated to rise further to 43.2% of GNP in 1987 before decreasing to 42.6% of GNP in 1988 and then steadily declining to 35.5% in 1992. This decline could not occur, however, without policy measures to cut the deficit greatly. Under the current services estimates for the budget, as shown in table E–2, Federal borrowing from the public would be much larger. Debt held by the public as a percentage of GNP would rise to 43.5% of GNP in 1988 and then decline only moderately in the following years.

The interest cost of the debt is more significant than the amount of the debt for some types of comparison designed to measure the importance of Federal indebtedness. Interest payments on the debt must be financed by either higher taxes or more borrowing, and more borrowing raises still further the debt and therefore the amount of interest that must be paid in the future. The interest on the debt held by the public has generally risen much faster than the debt itself, due to a strong upward trend for most of the period since World War II in the interest rates that must be paid on new borrowings and on refunded debt. The interest rate on 91-day Treasury bills, for example, averaged 2.0% in the 1950's, 4.0% in the 1960's, and 6.3% in the 1970's. It then averaged 12.1% in calendar years 1980-82 before falling to 7.5% in 1985 and 6.0% in 1986. Consequently, whereas the Federal debt held by the public increased by nearly eight times between 1955 and 1986, table E-5 shows that the interest paid on this debt increased by thirty times.

Table E-5. **TRENDS IN INTEREST ON FEDERAL DEBT**

(Dollar amounts in billions)

Fiscal year	Interest on the gross Federal debt					Interest on debt held by the public as a percent of	
	Total [1]	Paid to					
		Federal Government accounts	The public				
			Total	Federal Reserve Banks [2]	Other	GNP	Outlays [3]
1955	6.4	1.2	5.2	.4	4.8	1.34	7.56
1956	6.8	1.3	5.6	.5	5.1	1.33	7.90
1957	7.3	1.4	5.9	.7	5.3	1.35	7.73
1958	7.8	1.4	6.3	.7	5.6	1.41	7.68
1959	7.8	1.4	6.4	.8	5.6	1.33	6.96
1960	9.5	1.5	8.1	1.0	7.1	1.59	8.73
1961	9.3	1.5	7.8	1.0	6.8	1.50	7.96
1962	9.5	1.6	7.9	1.0	6.9	1.42	7.40
1963	10.3	1.6	8.7	1.1	7.6	1.47	7.78
1964	11.0	1.8	9.2	1.2	8.0	1.47	7.80
1965	11.8	2.0	9.8	1.4	8.4	1.46	8.29
1966	12.6	2.1	10.4	1.7	8.7	1.41	7.75
1967	14.2	2.6	11.6	2.0	9.6	1.47	7.39
1968	15.6	3.0	12.6	2.4	10.2	1.49	7.09
1969	17.6	3.5	14.1	2.9	11.2	1.52	7.70
1970	20.0	4.4	15.6	3.5	12.2	1.58	7.99
1971	21.6	5.3	16.3	3.7	12.6	1.55	7.78
1972	22.5	5.8	16.6	3.7	12.9	1.44	7.20
1973	24.8	6.3	18.5	4.3	14.2	1.44	7.53
1974	30.0	7.7	22.4	5.5	16.9	1.58	8.30
1975	33.5	8.8	24.7	6.1	18.6	1.62	7.42
1976	37.7	9.0	28.7	6.3	22.5	1.69	7.73
TQ	8.3	.6	7.6	NA	NA	1.70	7.96
1977	42.6	9.6	33.0	6.8	26.2	1.71	8.07
1978	49.3	10.2	39.2	8.0	31.2	1.80	8.54
1979	60.3	12.1	48.3	9.6	38.6	1.97	9.59
1980	75.2	14.8	60.4	12.5	47.9	2.26	10.22
1981	96.0	17.1	78.9	13.4	65.5	2.64	11.63
1982	117.5	19.9	97.7	15.4	82.4	3.11	13.10
1983	128.9	21.3	107.7	15.3	92.3	3.24	13.32
1984	154.1	25.2	129.0	16.3	112.7	3.50	15.14
1985	179.4	31.2	148.2	16.8	131.4	3.76	15.66
1986	191.5	36.2	155.4	18.1	137.3	3.73	15.70
1987 estimate	193.7	38.9	154.8	NA	NA	3.50	15.24
1988 estimate	200.0	42.8	157.2	NA	NA	3.32	15.35

[1] Total interest on gross Federal debt is significantly larger than the outlays for the net interest function in the budget, because the net interest function includes as deductions the interest paid to trust funds and Government collections of interest.

[2] These figures are approximate. They are estimated as the average of calendar year amounts or as an adjustment to deposits of earnings. The 1986 estimate is preliminary.

[3] Includes off-budget outlays. Historical series of outlays are published in the *Budget—Supplement*, Part 6c, tables 22 and 23.

NA=Not available.

As a result, interest payments to the public have tended to grow faster than GNP over this entire period, despite the decline of debt as a percentage of GNP until the middle 1970's. In the latter half of the 1950's, interest paid to the public was equal to about 1.4% of GNP, whereas by 1970 it had risen to 1.6% and by 1980 to 2.3%. In 1985, interest paid on debt held by the public reached a peak of 3.8% of GNP, which was more than twice as high a proportion as ten years earlier. This was due in very large part to the rapid expansion of debt, which increased sharply the ratio of debt to GNP. Interest as a percentage of GNP declined slightly to 3.7% in 1986 and is estimated to fall moderately more in 1987 and 1988, despite large Federal borrowing, because of a decrease in market interest rates.

Interest paid to the public as a percentage of total Federal outlays does not show the same sustained trend over the period as a whole. From 1955 to the middle 1970's, interest averaged 7.7% of total outlays and tended neither to increase nor to decrease. The percentage of outlays paid in interest then began to increase, however, both steadily and substantially. It rose rapidly to 10.2% in 1980, 13.3% in 1983, and 15.7% in 1986, although it is estimated to be a little lower in 1987 and 1988. The importance of interest on the debt [relative to either GNP or Federal outlays is this much more now than in earlier years, although it is estimated to be less in 1987 and 1988 than it was in 1986. Under the current services estimates of the budget, as defined on page E–4, it would be greater than shown in this table for 1987 and 1988 because of the larger debt.

Since the end of World War II the composition of the Federal debt has changed. Until some years ago an increasingly large proportion of marketable securities had a short maturity. One contributing factor was the statutory ceiling of 4¼% that has been maintained since 1918 on the interest rate for Treasury bonds. Long-term market rates exceeded 4¼% after 1965, so after that year the ceiling prevented the Treasury from selling long-term obligations.

This restriction on Treasury borrowing has been relaxed in two ways. One method has been to increase the maximum maturity of notes, which are not subject to the interest rate ceiling. The maximum maturity was raised by law from 5 to 7 years in 1967 and to 10 years in 1976. As of December 31, 1986, the amount of notes outstanding with an original maturity over 5 years was $435.3 billion, of which $274.2 billion had an original maturity over 7 years.

The other method of relaxing the restriction has been to allow limited amounts of bonds to be sold at interest rates above the ceiling. In 1971, the Treasury was allowed by law to issue up to $10 billion of bonds at interest rates above 4¼%. In 1973, the bonds held by Government accounts and the Federal Reserve Banks were exempted from the interest rate limit, and since 1976 the amount of the exemption for other bonds has been raised in 10 steps. The last increase to the exemption was from $150 to $250 billion, enacted in April 1986. As of December 31, 1986, $246.8 billion of the bonds outstanding had been sold since the change of law in 1971, whereas only $3.0 billion of bonds issued in earlier years were still outstanding. The public exclusive of the Federal Reserve Banks held $219.0 billion of the bonds issued since 1971. The effective interest rate on bonds issued since 1971 has ranged from 6.1% to 15.8%.

Notwithstanding the initial relaxations of the interest rate ceiling, the average maturity of privately held, marketable Treasury debt decreased steadily from about 5 years at the end of 1967 to about 2½ years at the end of 1975. Since then, however, as the restriction has been relaxed further, the average maturity has gradually lengthened to almost 5½ years.

Debt Held by Foreign Residents

During most of American history the debt of the Federal Government was held almost entirely by individuals and institutions within the United States. In 1946, just after World War II, the debt held in foreign official balances and international accounts was about $2 billion, less than 1.0% of the total debt held by the public. In the following years the debt held by foreign residents tended to grow gradually, and, as shown in table E-6, rose to just over $10.0 billion by the late 1960's. This was still less than 5% of the total Federal debt held by the public. Interest paid to foreign residents was a correspondingly small proportion of the total interest paid on debt held by the public.

Foreign holdings began to grow much faster starting in 1970. This change arose in part out of decisions by foreign monetary institutions to intervene in foreign exchange markets. Because of the role of the dollar as an international currency, large amounts of the official reserves and other financial assets of foreign nations are held in dollar-denominated form. Thus, the exchange market intervention by foreign monetary institutions often acted to increase their official reserves of dollars. U.S. Government securities are the safest and one of the most liquid forms of holding dollar assets. Consequently, as foreign countries acquired more dollar-denominated official reserves, they purchased a large amount of U.S. Government securities.

The second principal reason for the growth of foreign holdings was the massive current account surpluses of some countries, particularly the OPEC nations, beginning in 1974. The counterpart to their surpluses was their acquisition of financial assets, and the

Table E–6. **FOREIGN HOLDINGS OF FEDERAL DEBT**

(In billions of dollars)

Fiscal year	Debt held by the public		Borrowing from the public		Interest on debt held by the public	
	Total	Foreign [1]	Total [2]	Foreign	Total	Foreign [3]
1965	261.6	12.3	4.1	0.3	9.8	0.5
1966	264.7	11.6	3.1	−.7	10.4	.5
1967	267.5	11.4	2.8	−.2	11.6	.6
1968	290.6	10.7	23.1	−.7	12.6	.7
1969	279.5	10.3	−1.0	−.4	14.1	.7
1970	284.9	14.0	3.8	3.8	15.6	.8
1971	304.3	31.8	19.4	17.8	16.3	1.3
1972	323.8	49.2	19.4	17.3	16.6	2.4
1973	343.0	59.4	19.3	10.3	18.5	3.2
1974	346.1	56.8	3.0	−2.6	22.4	4.1
1975	396.9	66.0	50.9	9.2	24.7	4.5
1976	480.3	69.8	82.9	3.8	28.7	4.4
TQ	498.3	74.6	18.0	4.9	7.6	1.2
1977	551.8	95.5	53.5	20.9	33.0	5.1
1978	610.9	121.0	59.1	25.5	39.2	7.9
1979 [4]	644.6	120.3	33.6	−.7	48.3	10.7
1980	715.1	121.7	70.5	1.4	60.4	12.0
1981	794.4	130.7	79.3	9.0	78.9	16.1
1982	929.4	140.6	135.0	9.9	97.7	17.9
1983	1,141.8	160.1	212.3	19.5	107.7	18.0
1984	1,312.6	175.5	170.8	15.4	129.0	19.0
1985	1,509.9	209.8	197.3	34.3	148.2	21.2
1986	1,746.1	256.3	236.3	46.5	155.4	22.3

[1] Estimated by Treasury Department. These estimates exclude agency debt, the holdings of which are believed to be small.
[2] Borrowing from the public is defined as equal to the change in debt held by the public from the beginning of the year to the end, except to the extent that the amount of debt is changed by reclassification. Reclassifications are identified in the footnotes to table E–4.
[3] Estimated by Bureau of Economic Analysis, Department of Commerce. These estimates include small amounts of interest from other sources, including the debt of Government-sponsored enterprises, which are not part of the Federal Government.
[4] A benchmark revision as of December 1978 reduced the estimated foreign holdings of Federal debt. As a result, the data on foreign holdings for 1965–78 are not strictly comparable with the data for later years, and the estimated "borrowing" from foreign residents in 1979 reflects the benchmark revision as well as transactions in Federal debt securities.

financial assets acquired in the United States largely took the form of U.S. Government securities.

Both of these factors were subsequently reversed. Many foreign countries have drawn down their dollar reserves from time to time to finance intervention in the foreign exchange market, and the aggregate OPEC current account surplus shifted to a deficit. However, these reversals have been more than offset by the large amount of private capital inflow that has accompanied the growing deficit in the U.S. current account. The net result has been a large increase in holdings of dollar assets by foreigners, and this is reflected in the further increase in the Federal debt held by foreigners.

In the late 1970's, almost all of the Federal debt held by foreign residents was owned by foreign central banks or official international financial institutions. Since then, however, the holdings by private foreign investors have generally grown much faster. During fiscal year 1985, private investors made about two-thirds of the net purchases by foreign residents, and during fiscal year 1986 they made nearly two-fifths. By the end of 1986 they owned nearly one-third of the Federal debt held by foreign residents. The growth in holdings of private foreign investors has been encouraged by several actions taken by the Federal Government, including the repeal in 1984 of the 30% withholding tax on interest paid to non-resident aliens on portfolio debt (including corporate as well as Treasury securities). All of the Federal debt held by foreign residents is currently denominated in dollars.

The increase in foreign holdings of U.S. Government securities since 1970 has therefore been primarily the product of foreign decisions, both official and private, rather than the direct marketing of these securities to foreign residents. By the end of fiscal year 1986 foreign holdings of Treasury debt had reached $256.3 billion, which was 15% of the total debt held by the public. This was a somewhat smaller proportion of total debt held by the public than during most of the 1970's and the very early 1980's, due to the rapid growth recently in total Federal debt. Because of the rising interest rates until 1982, the interest paid on foreign holdings of debt grew faster than did the foreign holdings themselves over the period as a whole.

In the years before 1970, when debt held by foreign residents was relatively small, borrowing from the public was approximately the same as borrowing from the domestic public. Since 1970, though, borrowing from the domestic public has in some years been quite different from total borrowing. As table E–6 shows, borrowing from foreign residents was nearly all or a major part of total borrowing from the public during some years of the 1970's. For the period since 1970 as a whole, borrowing from foreign residents has been 17% of borrowing from the public. This percentage was higher during the 1970's than the 1980's, however, being 30% in the earlier period compared to 12% later. In 1986, despite the $46.5 billion of Federal securities purchased by foreign residents, the largest amount in any year, the total Federal borrowing was so large that foreign purchases equalled only 20% of borrowing from the public. This does not measure the full impact of the capital inflow on the market for Federal debt securities, however, since the capital inflow supplied additional funds to the securities market generally and included deposits in U.S. financial intermediaries that themselves buy Federal debt.

Borrowing by Federal Agencies

A few Government agencies are authorized to sell their own debt instruments to the public and to other Government accounts. This

Table E–7. **AGENCY BORROWING**

(In millions of dollars)

Description	Borrowing or repayment (–) of debt: 1986 actual	1987 estimate	1988 estimate	Debt end 1988 estimate
Borrowing from the public:				
Agriculture: Farmers Home Administration [1]			–141	
Defense	–43	–32	–5	3
Education:				
College housing loans [1]	0	–3	–239	
Higher education facilities [1]	0	–14	–47	
Health and Human Services [1]			–5	
Housing and Urban Development:				
Federal Housing Administration	5	15	85	134
Housing for elderly or handicapped [1]			–52	
Government National Mortgage Association:				
Participation certificates [1]		–39	–202	
Management and liquidation functions fund: Other			301	301
Revolving fund (liquidating programs) [1]		–11	–32	
Interior	–2	–2	–3	10
Small Business Administration:				
Participation certificates: SBIC and section 505 development company	67	7		74
Participation certificates: Other [1]		–67	–25	
Veterans Administration [1]			–309	
Export-Import Bank	–3	–6		
Federal Deposit Insurance Corporation	472	3,482	–1,051	2,903
Postal Service				250
Tennessee Valley Authority	–100	–245		1,380
Total, borrowing from the public	**396**	**3,084**	**–1,725**	**5,055**
Borrowing from other funds:				
Agriculture: Farmers Home Administration [1]			–118	
Defense	–1	–*		
Education:				
College housing loans [1]		–2	–208	
Higher education facilities [1]		–7	–41	
Health and Human Services [1]			–5	
Housing and Urban Development:				
Federal Housing Administration	–6	–1	–*	82
Housing for elderly or handicapped [1]			–45	
Government National Mortgage Assoc. [1]		–19	–170	
Revolving fund (liquidating programs) [1]		–5	–28	
Small Business Administration [1]		–32	–31	
Veterans Administration [1]			–269	
Total, borrowing from other funds	**–6**	**–66**	**–913**	**82**
Total, agency borrowing included in gross Federal debt	**390**	**3,018**	**–2,638**	**5,137**
ADDENDUM				
Borrowing from Federal Financing Bank:				
Export-Import Bank	–1,141	–2,401	–1,815	10,052
National Credit Union Central Liquidity Facility	–118	25	25	154
Postal Service	1,164	1,499	1,499	5,852
Tennessee Valley Authority	696	1,396	314	16,788
United States Railway Association		–39		35
Total, agency borrowing from Federal Financing Bank	**601**	**480**	**23**	**32,881**

* $500 thousand or less. [1] Certificates of participation in loans issued by GNMA on behalf of several agencies.

agency debt is part of the gross Federal debt, and the disbursement of the proceeds from borrowing is an outlay.

Agency borrowing was shown in total in table E-1 and is shown by agency in table E-7 for 1986-88. In 1986 and 1987, more debt is newly issued than is repaid, due to the new notes issued by the Federal Deposit Insurance Corporation. Over the period as a whole total agency debt increases by $0.8 billion. The agency debt outstanding is less than 1.0% of gross Federal debt.

As implied by the addendum to table E-7, the amount of agency borrowing has been profoundly affected by the Federal Financing Bank (FFB).[6] The FFB was created in December 1973 under the Treasury Department and began financial operations in May 1974. Its purposes are to assist and coordinate agency borrowing and guaranteed borrowing and to reduce the cost to the Government of some of its borrowing operations. It has the authority to purchase agency debt, to purchase agency loan assets, and, with an agency guarantee, to make direct loans to the public; in turn, it finances these transactions by borrowing from the Treasury. With the approval of the Secretary of the Treasury, the FFB is authorized to borrow from the Treasury without a statutory limit on the amount. Since the FFB can borrow from the Treasury at lower interest rates than other agencies would have to pay in the market, this practice reduces the cost of borrowing by those agencies that would otherwise borrow from the public. The FFB thus serves as a conduit for agency borrowing, and Treasury securities replace the securities of other agencies in the market. Agency borrowing from the FFB is not included in gross Federal debt. It would be triple counting to add together the agency borrowing from the FFB, the FFB borrowing from Treasury, and the Treasury borrowing from the public that was necessary to provide the FFB with funds to lend to the agencies.

As a result of the FFB, several agencies that would otherwise borrow mostly in the investment securities market borrowed $601 million from the FFB in 1986 and are estimated to borrow $480 million in 1987 and $23 million in 1988. Since these agencies now borrow almost exclusively from the FFB instead of the public, almost no new agency borrowing in the market took place in the last 13 years or is scheduled to take place in the future except for borrowing that is inherent in the operation of certain programs.

[6] The operations of the FFB are discussed in some detail in Special Analysis F.

Because the latter reason for borrowing was not relatively important until 1986, the change in agency debt since the establishment of the FFB has generally been determined almost entirely by the repayment of maturing debt. Consequently, until 1986, agency debt outstanding normally declined each year. If the FFB had not been created, the agency component of gross Federal debt would be much greater than it is now. The Treasury component would be correspondingly less.

By the end of 1988, $1.6 billion of agency debt, or nearly one-third of the total, will be obligations of two of the five agencies listed in table E–7 that in recent years have borrowed almost exclusively from the FFB: the Postal Service and Tennessee Valley Authority. In contrast, $32.7 billion in debt will be owed to the FFB by these two agencies together with the Export-Import Bank, which is estimated to have repaid all its borrowings from the public before that date. The Small Business Administration issued $74 million of participation certificates in 1986 and 1987 but does not plan to issue any more. A further $15 million of agency debt will be family housing mortgages assumed by the Department of Defense under two programs, much the larger of which was terminated about two decades ago. A total of $2.2 billion of agency debt at the end of 1986 consisted of certificates of participation in pools of loans issued by the Government National Mortgage Association as trustee on behalf of several agencies, which are identified in table E–7. These certificates have not been issued since 1968, and those still outstanding will all mature during 1987 and 1988.

The remaining agency debt at the end of 1988—three-fifths of the total—will have been issued by three agencies whose borrowing from the public is inherent in the way they operate certain programs. These agencies may issue special instruments in lieu of cash as a means of paying specified bills. As a rule, budget outlays are recorded when cash is used to pay the Government's bills for wages and salaries, equipment, social security benefits, etc. In these three cases, where the payments are instead in the form of special instruments, budget outlays are likewise recorded because the payments likewise pay the Government's bills. The instruments themselves are classified as agency debt. None of these agencies have any occasion to sell these debt instruments to the FFB.

One of these agencies, the Federal Housing Administration (FHA), may issue either checks or debentures in paying claims to the public that arise from defaults on FHA-insured mortgages. The FHA is estimated to have $216 million of debentures outstanding at the end of 1988 (4% of total agency debt). A second agency, the Interior Department, is authorized to acquire certain lands and mineral rights from the public in exchange for a type of instrument generically termed "monetary credits." The recipients of monetary credits can use them for specified purposes such as payments for Federal coal or mineral leases. An estimated $10 million of monetary credits will be outstanding at the end of 1988.

Finally, the Federal Deposit Insurance Corporation (FDIC) began to issue notes in June 1986 as part of some agreements with prospective purchasers to buy failing banks. This is discussed further in a subsequent section. The FDIC notes comprise almost all the new agency borrowing during 1986–88. An estimated $2.9 billion of these notes will be outstanding at the end of 1988 (over half of total agency debt). Because these notes have a one-year maturity, the amount outstanding at the end of 1988 is the amount of new notes issued during that year.

The Treasury supplies capital to business-type Government enterprises in return for both capital stock and debt. The debt is shown as "borrowing from Treasury" on the statements of financial condition for enterprises in the *Budget Appendix*. However, the equity and the debt instruments are the same in substance; and it would be double counting to add together the agency borrowing from the Treasury and the Treasury borrowing from the public that was necessary to provide the agencies with this capital. Therefore, agency borrowing from Treasury is excluded from the figures on agency borrowing and debt and from the discussion of this subject both in this special analysis and in all other parts of the budget documents.

Investment by Government Accounts in Federal Securities

Trust funds and some public enterprise funds (revolving funds) accumulate cash in excess of current requirements in order to meet future claims and demands. These cash surpluses are invested mostly in Treasury debt and, to a very small extent, in agency debt. Since this investment is a debt transaction, purchases are not counted as outlays for the account or for the budget, and redemptions are not counted as receipts.

Investment by trust funds and other Federal accounts declined from $17.9 billion in 1979 to a range of $8 to $10 billion per year during 1980–82, due to recessions and to structural problems in social security financing. In 1983, as the result of the Social Security Amendments of 1983, investment by Government accounts increased to $22.6 billion, the largest amount ever reached as of that time. Since then it has risen much further. It rose to $69.4 billion in 1986 and, as shown in table E–8, it is estimated to reach $106.3 billion in 1988.

This extraordinary rise of investment by Government accounts is concentrated among a few trust funds. The three trust funds financed by the social security payroll tax—old-age and survivors insurance (OASI), disability insurance (DI), and hospital insurance

Table E–8. **INVESTMENT BY GOVERNMENT ACCOUNTS IN FEDERAL SECURITIES**

(In millions of dollars)

Description	Investment or disinvestment (–) 1986 actual	1987 estimate	1988 estimate	Holdings end of 1988 estimate
Investment in Treasury debt:				
Overseas Private Investment Corporation	100	96	95	1,220
Defense—Civil: Military retirement trust fund	12,286	13,299	14,527	51,504
Energy: Nuclear waste fund	56	96	114	1,633
HHS: Federal old-age and survivors insurance trust fund [1]	5,980	20,017	38,411	95,375
Federal disability insurance trust fund [1]	2,632	–511	1,260	9,084
Federal hospital insurance trust fund	17,164	14,686	21,040	73,610
Federal supplementary medical insurance trust fund	–1,312	–2,091	742	8,075
Housing and Urban Development:				
Federal Housing Administration	1,742	2,323	3,022	10,870
Government National Mortgage Association	155	–80	–2,163	
Other	–63	–85	393	2,026
Interior: Outer Continental Shelf deposit funds	–3,415	–2,825	–1,167	14
Labor: Unemployment trust fund	4,231	5,060	1,656	27,956
State: Foreign Service retirement and disability trust fund	478	492	459	3,890
Transportation:				
Highway trust fund	–443	2,529	2,001	16,030
Airport and airway trust fund	1,186	1,372	–322	9,646
Treasury: Exchange stabilization fund	–1,592	32	31	544
Environmental Protection Agency	–408	1,049	350	1,675
OPM: Civil Service retirement and disability trust fund	26,767	22,068	19,662	195,775
Other trust funds	1,004	340	910	10,072
Veterans Administration:				
National service life insurance trust fund	337	375	374	10,383
Other trust funds	51	38	37	1,353
Federal funds	–27	17	15	640
Federal Deposit Insurance Corp.: Trust fund	–274	–120	1,343	17,079
Federal Home Loan Bank Board: FSLIC	–1,040	–3,777	766	1,706
Federal Retirement Thrift Investment: Trust fund		1,207	3,257	4,464
National Credit Union Adm.: Share insurance fund	250	223	350	1,950
Postal Service fund	1,441	217	–1,370	2,650
Railroad Retirement Board trust funds	1,766	753	948	7,699
Other Federal funds	–80	83	130	1,130
Other trust funds	421	452	358	2,185
Other deposit funds [2]	7			35
Total, investment in Treasury debt	**69,402**	**77,334**	**107,229**	**570,274**
Investment in agency debt:				
HHS: Federal hospital insurance trust fund			–455	
Housing and Urban Development:				
Federal Housing Administration	–1	–15	–119	
Government National Mortgage Association	–5	–1	–13	82
OPM: Civil Service retirement and disability trust fund			–175	
Veterans Adm.: National service life insurance trust fund		–50	–85	
Federal Home Loan Bank Board: FSLIC		–*	–67	
Total, investment in agency debt	**–6**	**–66**	**–913**	**82**
Total, investment in Federal debt	**69,396**	**77,268**	**106,316**	**570,356**
MEMORANDUM				
Investment by Federal funds	937	–872	1,186	24,452
Investment by trust funds (on-budget)	63,255	61,459	66,627	441,396
Investment by off-budget Federal entities (trust funds)	8,612	19,505	39,671	104,459
Investment by deposit funds [2]	–3,408	–2,825	–1,167	49

* $500 thousand or less. [1] Off-budget Federal entity. [2] Only those deposit funds classified as Government accounts.

(HI)—had positive net investment as a whole in 1983 for the first time since 1975. This was due to the cash resources provided by the

Social Security Amendments of 1983. As a result of this act and the improving economy, these trust funds as a whole now have large surpluses and invest increasing amounts each year—a cumulative total of $120.7 billion during 1986–88, which constitutes 48% of the total estimated investment by Government accounts. During 1986 OASI repaid the final $13.2 billion that it had borrowed from HI and DI in 1983, so the amounts of investment displayed in table E-8 for these individual funds in 1986 do not reflect their respective underlying financial conditions.

In addition to these three funds, the largest investors in Federal securities are the civil service retirement and disability trust fund and the military retirement trust fund. The former accounts for 27% of the total investment by Government accounts during 1986–88, and the latter accounts for 16%. Altogether, these two retirement funds and the three funds financed by the social security payroll tax account for 91% of the estimated investment by Government accounts during 1986–88.

As a result of the large investment by these trust funds and the net investment of other funds as well, the total holdings of Federal securities by Government accounts will reach an estimated $570.4 billion at the end of 1988. This will comprise 22% of the gross Federal debt. One major trust fund—the civil service retirement and disability trust fund—will account for one-third of total holdings, and the three trust funds financed by the social security tax will account for nearly as much. All the trust funds together will account for 96% of the holdings. Nearly all of the holdings in Government accounts are Treasury debt, and the present holdings of agency debt will mostly be redeemed when the remaining participation certificates mature in 1988.

A comparatively small amount of Federal debt is held by deposit funds. Deposit funds are amounts held by the Federal Government as an agent for others (such as State income taxes withheld from Federal employees' salaries and not yet paid to the States); cash collections awaiting determination as to their final disposition; and other sums held temporarily before being refunded or paid into some other fund. Deposit fund balances are thus not the property of the Federal Government. Therefore, changes in deposit fund balances are not included in the budget totals and do not affect the Federal deficit.

Most deposit funds consist of uninvested balances, but a few funds are invested in Treasury debt and collect interest on their investments. Since a deposit fund is not Federal property, its holding of Federal debt is normally treated as debt held by the public rather than as debt held by a Government account.

However, the investments of three deposit funds are treated as debt held by Government accounts rather than as debt held by the public. One of these is a relatively small account. The other two deposit funds contain receipts from rents and royalties on the Outer Continental Shelf, the title to which has been in dispute between the Federal Government and the States. Until title is settled and the funds distributed, the amounts are held in deposit funds. The balances of these funds were first invested in Federal debt in 1980 and rose to $7.4 billion by the end of 1985. The Treasury concluded that the Federal claim on these receipts was sufficiently strong that it would be more accurate to classify the balances as Government holdings of Federal debt rather than as debt held by the public. Under legislation enacted in 1986 one major dispute was settled, with the respective amounts distributed to the Federal Government and the States in 1986 and 1987. It is assumed that the remaining disputes will be settled and the amounts distributed by the end of 1988.

Since increases in deposit funds raise Treasury cash balances, they are a means of financing the Government deficit. When the deposit funds are not invested in Federal debt, an increase in deposit fund balances appears as one of the "means of financing other than borrowing from the public" in table E–3. The increase in deposit fund balances thus enables Treasury to reduce its borrowing from the public.

When the deposit funds are invested in Federal debt, their treatment depends on whether they are classified as part of the public or as Government accounts. Under the normal rule, according to which they are treated as part of the public, deposit fund investment in Federal debt is defined to be borrowing from the public. The counterpart to the increase in Federal debt held by the public is a decrease in the deposit fund balances available to finance the deficit by means other than borrowing from the public. This is shown as a decrease in the liabilities of the Government for deposit fund balances in table E–3. The ultimate effect of the increase in the deposit funds is thus for the Treasury borrowing from the public to come from the deposit funds rather than from some other sector of the public, with no net change in the means of financing other than borrowing from the public.

On the other hand, when deposit funds are classified as Government accounts, the investment of deposit fund balances in Federal debt is defined to be an increase in debt held by Government accounts rather than an increase in debt held by the public. Since the debt held by the public does not increase, this investment does not reduce the amount of deposit fund balances (as shown in table E–3) that are available to finance the deficit by means other than borrowing from the public. This investment does, however, increase the gross Federal debt and the debt subject to statutory limit (as shown in table E–11).

MEASUREMENT OF BORROWING AND DEBT

As stated previously in this special analysis, the actual data for gross Federal debt and debt held by Government accounts at the end of 1985 have been revised from the figures previously published in the budget documents and by Treasury. Likewise, the actual data for these debt concepts and for debt held by the public at the end of 1986 have been revised from the figures published by Treasury. Table E–9 shows the differences, which raise gross Federal debt by $3.4 billion at the end of 1986 and raise debt held by the public by $0.5 billion.

These differences are of three kinds: measurement of the debt held by two Government accounts in the Department of Defense, notes issued by the Federal Deposit Insurance Corporation (FDIC), and participation certificates issued by the Small Business Administration (SBA). This section explains these differences. It also explains a fourth matter, the classification of loan asset sales with recourse as borrowing, which affects the definition of debt beginning in 1987. The discussion in this section is more technical than in most of this special analysis.

Measurement of Debt Held by Government Accounts.—Investment by trust funds and other Government accounts in Federal securities is an exchange of assets, where the Government account exchanges cash for Federal securities in order to earn interest income. If a trust fund buys $1 billion of Federal debt securities, for example, the composition of the trust fund balances changes but the size of the balances should be the same. Cash holdings should decrease by $1 billion, and debt holdings should increase by $1 billion.

A complication occurs if the trust fund buys securities at a price other than the par (or face) value. Under normal business accounting practices, the buyer records an investment at its purchase price. Cash holdings are reduced by $1 billion, in the previous example, and debt holdings are increased by $1 billion, regardless of whether the debt is purchased at par, at a premium, or at a discount. The difference between the purchase price and par value is thus included as part of the investor's initial holding of debt. The difference is then amortized over the life of the security, with the periodic amortization treated as an adjustment to the value of the security (and as a simultaneous adjustment to interest earnings). In the case of a security bought at a premium, the amortization of the premium periodically reduces the book value of the security (and simultaneously reduces the amount of recorded interest received). That is, part of the nominal interest received is really a repayment of the principal. In the case of a security bought at a discount, the amortization of the discount periodically increases the book value of the security (and simultaneously increases the amount of record-

Table E-9.—**BRIDGE FROM PREVIOUSLY REPORTED DEBT TO DEBT ON A BUDGET ACCOUNTING BASIS** [1]

(In millions of dollars)

	Outstanding, end of 1985	Change in 1986	Outstanding, end of 1986
Gross Federal debt:			
Amounts previously reported	1,827,470	302,052	2,129,522
Requantification of investments by the Defense military retirement and education benefits trust funds:			
Interest purchased	6	39	46
Unamortized premiums or discounts, net	−242	3,049	2,807
Agency debt issued in 1986 but not reported to Treasury as debt:			
FDIC notes		472	472
SBA participation certificates		67	67
Total, increase in amount	**−236**	**3,628**	**3,392**
Amounts reported on a budget accounting basis	1,827,234	305,680	2,132,913
Debt held by Government accounts:			
Amounts previously reported	317,612	66,307	383,919
Requantification of investments by the Defense military retirement and education benefits trust funds:			
Interest purchased	6	39	46
Unamortized premiums or discounts, net	−242	3,049	2,807
Total, increase in amount	**−236**	**3,088**	**2,853**
Amounts reported on a budget accounting basis	317,377	69,396	386,772
Debt held by the public:			
Amounts previously reported	1,509,857	235,745	1,745,602
Agency debt issued in 1986 but not reported to Treasury as debt:			
FDIC notes		472	472
SBA participation certificates		67	67
Total, increase in amount		**539**	**539**
Amounts reported on a budget accounting basis	1,509,857	236,284	1,746,141

[1] These differences do not affect the amount of debt recorded under the statutory debt limitation.

ed interest received). As a result of this type of treatment, the purchase of the security does not change the size of the investor's balances; and the investor's subsequent interest income reflects the actual rate of return that the investor receives on the amount of cash that it had actually invested.

However, Federal debt securities (except savings bonds) are conventionally recorded at par even when their sales price is higher or lower. The Treasury data have consistently followed this convention in recording debt held by Government accounts, and previous budget documents have followed Treasury's practice for past periods. Under this convention, if a Government account pays more than the par value for a security, only the par value is recorded as an investment by the account. The premium paid by the Government account—i.e., the purchase price less the par value—is not counted as part of the debt held by Government accounts or as part of gross Federal debt. The premium is counted as a reduction to the interest received by the Government account (and as a simultaneous reduction to the interest paid on the public debt) at the time when the investment occurs rather than as a reduction to interest that is spread over the full life of the security. If a Government account pays less than the par value for a security, the entire par value is nonetheless recorded as an investment by the account and as an addition to gross Federal debt. The discount is recorded as interest income to the Government account when the security matures.

The difference in treatment between normal business accounting practice and the Treasury convention nets to zero for any particular security by the end of the security's full life. However, an effect on the recorded size of the Government account's balances and debt holdings (and on gross Federal debt) persists throughout the life of the security, though the size of the effect diminishes over time; and in a Government account with continuing investment, which is common, overall effects on the balances and the debt of the account as a whole persist indefinitely (as do effects on gross Federal debt). Effects persist in a similar way on the recorded interest received by the Government account and the recorded interest paid on the public debt.

The purchase price and par value of securities bought by Government accounts are usually very close, so the purchase of securities at a premium or discount has normally had only a small effect on the recorded size of an account's balances, on its interest, and on the level of debt. Moreover, the convention of recording debt at par value was simple and, for the purpose of the statutory debt limitation, was required by law.

However, during 1985 two newly established accounts in the Department of Defense—the military retirement trust fund and the education benefits trust fund—began to buy significant amounts of market-based Treasury securities at relatively large premiums or discounts. Most of these purchases were made by the military retirement trust fund, and most of these purchases were at a premium. When Treasury securities were bought at a large premium, the convention of recording these investments at par caused the amount of recorded investment to be significantly less than the amount of cash paid for the debt securities. Therefore, this convention significantly understated the amount of debt held by these trust funds in particular, the debt held by Government accounts as a whole, and gross Federal debt. The understatement at the end of 1986 was $2.9 billion. This convention likewise understated the interest received by trust funds and the interest on the public debt, because the entire premium was deducted from interest at the time of purchase. Since this understatement is connected to trust fund investment and interest, it has no net long-term effect on transactions with the public, the debt held by the public, net interest outlays, or the deficit.[7]

When the 1987 budget was transmitted in February 1986, the data for debt at the end of 1985 were based on the convention of recording debt at par. However, the estimates assumed that a change in accounting practice would be made to record investment at purchase price for the two Defense Department trust funds where the difference in treatment had a relatively large effect. It was also assumed that this change would be retroactive for all of fiscal year 1986. Treasury did not make the change, however, and the Treasury data reported for 1986 are based on the convention of recording all investment by Government accounts at par.

The 1988 budget records estimated investment at purchase price for the military retirement and education benefits trust funds. Consistent with this treatment, it records interest paid by Treasury and received by these funds on the basis of amortizing the difference between the purchase price and par value over the life of the securities. The 1985 and 1986 data for actual Federal borrowing, debt, and investment have been revised from the amounts previously published in budget documents and Treasury statements in order to reflect the change in accounting treatment consistently over time. The amounts of these revisions are shown in Table E–9 for debt held by Government accounts and gross Federal debt. No attempt has been made to differ from the Treasury convention for other accounts, because the differences between purchase price and par value are small.

FDIC Notes.—The Government usually liquidates its obligations (i.e., pays its bills) by disbursing cash or issuing checks. Cash or checks are used, for example, when the Government pays wages and salaries to its employees, buys equipment from a manufacturer, or pays social security benefits. On occasion, however, Government agencies pay specified bills by issuing bonds, notes, debentures, monetary credits, or other special instruments. This practice combines two transactions into one. Instead of separately borrowing from the public and then paying its bills by disbursing cash or issuing checks, the Government pays its bills by issuing the special instruments directly. Combining these two transactions into one does not change the nature of the transactions. Because these two methods of payment are equivalent, the issuance of such special instruments is recorded under standard budget concepts as being

[7] The difference between purchase price and par value has two components: the unamortized premium or discount, and the interest purchased (i.e., the amount of interest that would have been accrued up to the date of issue, if the security had been outstanding, and for which Treasury will make payment at the next payment date). Trust fund interest received is adjusted for the interest purchased at the time of the investment, but the interest paid on that investment is not adjusted until the next payment date. Thus, a limited impact on outlays and the deficit may occur, but only during the time between the investment and the next interest payment (which is always a period of less than six months).

simultaneously outlays and borrowing. The debentures or other special instruments are accordingly classified as debt.[8]

The Federal Housing Administration (FHA) has for many years issued both checks and debentures in paying claims to the public that arise from defaults on FHA-insured mortgages. The Department of the Interior has more recently acquired certain lands and mineral rights from the public in exchange for a type of special instrument generically termed "monetary credits." The issuances of both FHA debentures and Interior Department monetary credits serve to pay the Government's bills and are thus equivalent to cash transactions. These transactions are therefore classified as outlays and borrowing, and the instruments are classified as agency debt.

The Federal Deposit Insurance Corporation (FDIC) began to issue notes in June 1986 as part of some agreements with prospective purchasers to buy failing banks. The FDIC ordinarily tries to arrange for the private purchase and assumption of failing banks rather than liquidate them and pay off the depositors, in part because purchase and assumption agreements are usually less expensive to the Government. Under purchase and assumption agreements, the FDIC normally pays cash to the buyer in order to bring the value of the assets of the failing bank up to the value of the liabilities assumed by the buyer. The FDIC has, however, in some cases issued notes in place of cash to the buyer of a failing bank. These are one-year, interest-bearing notes, redeemable for cash upon demand.

The issuance of these notes is thus a method of paying the Government's bills, just as is the disbursement of cash. Accordingly, under standard budget concepts, the issuance of these notes should be treated as outlays and borrowing. The FDIC transactions were not, however, reported in this manner to Treasury and consequently were not recorded in Treasury's published reports as outlays or borrowing. The budget has adjusted the data to record outlays and borrowing at the time when the notes are issued.[9] As shown in table E-9, this increases the debt held by the public and gross Federal debt by $472 million at the end of 1986. As shown previously in table E-7, estimated FDIC borrowing by means of these notes is substantially higher in 1987.

SBA Participation Certificates.—Agencies have at times financed outlays by selling certificates of participation that represent pools of loans that the agency has made and continues to service. The budgetary treatment of these sales was studied in 1967 by the

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[8] The definition of outlays and the relationship of outlays to obligations, budget authority, and borrowing are discussed in Part 6b of the *Budget—Supplement.*

[9] Due to a technical error, the outlays for 1986 that were published in the 1988 *Budget* were not corrected to reflect this treatment. The outlays for all other years and the borrowing and debt for all years are recorded consistently with standard budget concepts. The correct data are published in the 1988 *Budget Appendix.* The budget historical data will show the correct data in the future.

President's Commission on Budget Concepts, whose report led to the adoption of the unified budget and forms the foundation for the Government's present concepts of budgetary analysis and presentation. The Commission concluded that, as a means of financing outlays, there was no difference between an agency selling securities labeled "certificates of participation," the same agency selling securities labeled "debt," and the Treasury selling securities labeled "debt." The Commission therefore recommended that the sale of participation certificates be classified as borrowing by the agency that issues them instead of classified as an offset to the outlays of the agency.[10] Following this recommendation, the existing participation certificates were reclassified as debt. This classification has been applied to subsequent participation certificates as well, except where prohibited by law.

In September 1986, the Small Business Administration (SBA) issued $67 million of participation certificates representing a pool of SBA-guaranteed Small Business Investment Company (SBIC) debentures. This sale was not reported to Treasury as an outlay and borrowing, however, and consequently Treasury's published reports do not record the outlay and borrowing that took place. In November 1986 the SBA issued $7 million of participation certificates representing a pool of SBA-guaranteed section 505 Certified Development Company debentures. This sale was also not reported to Treasury as outlays and borrowing. Consistent with standard budget concepts, the 1986 data in the budget for outlays, borrowing, and debt have been revised to show the September 1986 transaction as outlays and borrowing. The same principle was applied to the November 1986 transaction in deriving the 1987 estimates for the budget. SBA has restructured these transactions so they will not give rise to further Federal outlays and borrowing.

Sales of Loan Assets with Recourse.—Loan assets are loans that an agency has made to the public and for which repayments are still owed. In contrast to participation certificates, the sale of individual loans has traditionally been treated as an offset to the outlays of the agency that makes them. This is analogous to the way in which loan repayments are treated as an offset to the outlays of the agency that makes them. Sales of loan assets thus reduce the size of the Government's outlays immediately rather than over the normal course of time during which the loans that are sold would be repaid.

The sale of individual loans with recourse—i.e., with a Government guarantee attached—is functionally equivalent to borrow-

[10] *Report of the President's Commission on Budget Concepts* (Washington: U.S. Government Printing Office, 1967), pp. 8, 47–48, and 54–55.

ing.[11] It is a method whereby the Government finances current outlays while bearing the same risk of loss from borrower default as it would have borne if it had not sold the loan but instead had financed the outlays by Treasury borrowing. Thus, by guaranteeing the loan, the Government retains a crucial incident of its ownership, and as a result the loan is not truly sold. The guarantee turns the loan asset sale into a form of borrowing. In contrast, the sale of a loan without any recourse or any Government servicing divests the Government of any future responsibility for the loan and therefore of any material incidents of its ownership.

Based on this reasoning, the classification of loan asset sales with recourse as Federal borrowing is a logical extension of the longstanding budget concepts regarding participation certificates. Beginning in 1987, all new loan asset sales with recourse are classified as agency borrowing with the exception of sales made by two programs already in existence—the Veterans Administration vendee loans and the sales made under the Government National Mortgage Association (GNMA) tandem plan. These two programs were exempted for 1987 in order to give them time to adjust to the new budget accounting rules, but they are not exempted for 1988 or later years. The accounting treatment of sales made in previous years has not been revised retroactively.

The budget does not include any loan asset sales with recourse in 1987 except for these two programs, and it does not include any loan asset sales with recourse in 1988 except under the GNMA tandem plan. Under the tandem plan, GNMA bought FHA-insured mortgages from private lenders that they had made at below-market interest rates, and then GNMA sold the loans to the public. Congress repealed the authorization for further purchases in 1983, and GNMA's final sales are scheduled for 1987 and 1988. The estimated $301 million of sales in 1988 are thus classified as agency borrowing, as shown previously in table E–7. No loan asset sales with recourse are planned after 1988.

Limitations on Federal Debt

Statutory limitations have normally been placed on Federal debt. Until World War I, the Congress ordinarily authorized a specific amount of debt for each separate issue. Beginning with the Second Liberty Bond Act of 1917, however, the nature of the limitation was modified in several steps until it developed into a ceiling on the total amount of most Federal debt outstanding. The latter type

[11] Technically, the functional equivalent of borrowing is the difference between the amount received from a sale of loans with recourse and the amount received from a sale of loans without recourse. However, because this difference cannot be known with any accuracy, the rule has been adopted that the entire amount received from a sale with recourse will be treated as borrowing.

of limitation has been in effect since 1941.[12] The limit currently applies to the total of:

- most public debt issued by the Treasury since September 1917, whether held by the public or by the Government;
- agency debt in the form of participation certificates issued during fiscal year 1968 under the Participation Sales Act of 1966; and
- other debt issued by Federal agencies that, according to explicit statute, is guaranteed as to principal and interest by the United States.

The debt subject to statutory limit [13] includes most Treasury debt but not all, as shown in table E–10. The largest part of the Treasury debt not subject to the statutory limit is debt issued by the Federal Financing Bank (FFB), which is established within the Treasury Department. The FFB is authorized to have outstanding up to $15 billion of publicly issued debt, and this debt is not subject to the general statutory limitation under the Second Liberty Bond Act. The FFB borrowed $1.5 billion in 8-month bills from the public in July 1974, but all of its subsequent borrowing until 1985 was from the Treasury because Treasury can borrow from the public at slightly lower interest rates than the FFB would have to pay. As explained previously, such "borrowing from Treasury" is not part of the Federal debt. In October and November 1985, however, as discussed below, the debt limit problem led Treasury to issue FFB securities to the civil service retirement and disability trust fund (in place of regular Treasury securities that were subject to the debt limit). These securities matured on June 30, 1986. In August and September 1986, because of a new debt limit problem, the Treasury issued $15.0 billion of FFB securities to the civil service retirement and disability trust fund. Of the new FFB debt securities, $5.0 billion mature on June 30th of each year, 1987, 1988, and 1989.

The next largest part of Treasury debt not subject to the statutory limit is the unamortized difference between the purchase price and par value of certain securities issued to the Defense Department military retirement and education benefits trust funds. As explained in the previous section, this is recorded as Treasury debt under budget accounting rules but has not been so recorded in Treasury reports and past budget documents. Most Treasury debt, including these securities, is recorded at par for the purpose of the statutory debt limitation. The final portion of Treasury debt not

[12] The legislation on the level of the statutory limit since 1940 and the amount of debt subject to statutory limitation are shown in *Historical Tables, Budget of the United States Government, Fiscal Year 1988,* section 7. The legislation beginning in 1917 is shown in *Statistical Appendix to Annual Report of the Secretary of the Treasury on the State of the Finances, Fiscal Year 1980,* table 32.

[13] The statutory debt limit is sometimes called the public debt limit. However, as explained in the text, the limit does not apply to all public debt and does apply to some debt other than public debt.

subject to limit is a grouping that consists almost entirely of currencies no longer being issued, such as silver certificates and national bank notes, which were generally reclassified as Federal debt some time after being discontinued.

Table E-10. **DEBT SUBJECT TO STATUTORY LIMIT**

(In millions of dollars)

Descriptions	End of year			
	1985 actual	1986 actual	1987 estimate	1988 estimate
Federal debt held by the public	1,509,857	1,746,141	1,908,389	2,015,110
Federal debt held by Government accounts	317,377	386,772	464,040	570,356
Total, gross Federal debt	**1,827,234**	**2,132,913**	**2,372,429**	**2,585,466**
Deduct:				
Treasury debt not subject to limit:				
Federal Financing Bank		15,000	10,000	5,000
Unamortized difference between purchase price and par value of certain securities held by trust funds	−236	2,853	2,083	2,000
Other	602	601	600	600
Agency debt not subject to limit:				
Department of Defense	83	40	8	3
Department of Interior	17	15	13	10
Export-Import Bank	9	6		
Small Business Administration		67	74	74
Postal Service	250	250	250	250
Federal Deposit Insurance Corp.		472	3,954	2,903
Government National Mortgage Assoc.				301
Tennessee Valley Authority	1,725	1,625	1,380	1,380
Participation certificates [1]	1,030	1,030	830	
Coast Guard	*			
Total, Federal debt not subject to limit	**3,480**	**21,958**	**19,192**	**12,521**
Gross Federal debt subject to statutory limit	1,823,754	2,110,954	2,353,237	2,572,945
Other debt subject to limit, and adjustments	22	22	22	22
Total, debt subject to statutory limit	**1,823,775**	**2,110,975**	**2,353,258**	**2,572,967**

* $500 thousand or less.

[1] Certificates of participation in loans issued by the Government National Mortgage Association on behalf of several agencies (these amounts exclude the certificates issued during 1968, which are subject to the debt limitation).

The major part of agency debt is not subject to the general statutory limit under the Second Liberty Bond Act. The only categories now included are the debentures issued by the Federal Housing Administration and the participation certificates sold in 1968. These securities comprised one-quarter of all agency debt at the end of 1986. However, because these participation certificates will mature during 1988 and because the Federal Deposit Insurance Corporation has begun to issue notes, the agency securities subject to statutory limit are estimated to comprise only 4% of total agency debt at the end of 1988.

Most of the agency debt not subject to the general statutory limit is, however, subject to separate statutory limits. For example, the

Tennessee Valley Authority was first authorized to issue revenue bonds to finance power facilities in 1959. The limit was $750 million. Subsequently, in order to enable TVA to finance additional facilities, Congress raised the limit several times. It is now $30 billion. The Postal Service is limited to $10 billion of securities outstanding and $2 billion of annual borrowing.

The only other debt subject to the general statutory limit is a very small amount of matured principal and interest. This is not classified as part of gross Federal debt. To derive the debt subject to limit from the gross Federal debt also requires a very small accounting adjustment.

The amount of debt subject to limit is compared in table E–10 with the gross Federal debt and the Federal debt held by the public. The debt subject to limit was $2,111.0 billion at the end of 1986 and is estimated to rise to $2,573.0 billion by the end of 1988. As shown in table E–10, the debt subject to limit is much larger than the debt held by the public and is almost as large as the gross Federal debt. The debt subject to limit is so much larger than the debt held by the public because it includes Federal debt held by Government accounts. The small difference between debt subject to limit and gross Federal debt is mostly accounted for by the Treasury debt not subject to the general limitation.

The level of the statutory limit on the Federal debt has frequently been changed by Congress. During the 1960's Congress passed 13 separate acts to raise the limit or to extend the duration of a temporary increase in the limit, and during the 1970's Congress passed 18 such acts. During 1980–86 Congress passed two to four such acts each year.

These frequent changes have come about both because the Federal debt has grown steadily and substantially and because of the nature of the debt limit legislation. From 1971 to 1983, the statutory debt limit consisted of a permanent limit of $400 billion plus a temporary increment that was usually scheduled to expire in a year or less. Because the debt subject to limit was more than $400 billion, new legislation was required no later than the date when each temporary increment expired. Several times the temporary increment expired without having been extended, so for a few days on each occasion the Federal debt exceeded the statutory limit. The validity of debt issued prior to the expiration of the temporary ceiling was not affected, but the Treasury Department had to suspend all auctions of new securities and all sales of savings bonds. Such a situation created uncertainty in the securities market and forced the Treasury to take costly administrative actions.

In May 1983, Congress changed the nature of the debt limitation. The permanent limit of $400 billion and the temporary increment to that limit were combined into a single, higher limit without an expiration date. This prevents the Federal debt from exceeding the statutory limit, since Treasury would stop issuing new securities before that event would occur. The new type of limitation does not, however, avoid the costs of market uncertainty and administrative actions that formerly arose whenever the debt limit fell below the actual level of debt. The same costs arise when the amount of debt approaches close to the limit and the timing of congressional action to raise the limit is uncertain. Treasury then has to take steps to avoid exceeding the limit, and the market is uncertain what will happen. The principal difference arises from the fact that under the new type of limitation Treasury can ordinarily refund maturing securities from the proceeds of selling new securities, because this does not increase the amount of debt outstanding. In contrast, under the former type of limitation Treasury had to use up its existing cash balances to pay off maturing securities once the temporary increment to the debt limit had expired, because it could not sell new securities at all. In the short time that the new procedure has operated the debt limit has usually been set at amounts expected to be reached within a few months, so frequent increases in the limit still have been needed. Moreover, on two occasions temporary increments have been enacted.

The statutory debt limit at one time was raised only by normal legislative procedures. In September 1979, however, an alternative method of changing the debt limit was established by statute. The purpose of the new method was for the House of Representatives to vote on the debt limit as a part of the congressional budget process. The congressional budget resolutions establish targets for outlays, receipts, and the deficit and also recommend an appropriate level for the debt subject to limit. The recommendation as to the appropriate level of debt had not previously had the effect of law, nor had it been part of the direct process whereby the debt limit was established.

However, beginning with the resolutions adopted in calendar year 1980, the budget resolution that is adopted by the Congress may be part of the process that establishes a debt limit. The vote in the House of Representatives is deemed to have been a vote in favor of a joint resolution setting the statutory limit. The joint resolution, having been deemed to have passed the House, is transmitted to the Senate for further legislative action.[14] Upon final passage, it is sent to the President for his signature. This new procedure relates the decision on the debt limit to the congressional decision on the Federal deficit and the other factors, explained in the following section, that determine the change in the debt subject to limit. The debt limit may still be changed by ordinary

[14] The Senate has not adopted the same procedure as the House, so the Senate must approve changes in the debt limit separately from its approval of the congressional budget resolution.

legislation, with one exception recently imposed by the Balanced Budget and Emergency Deficit Control Act of 1985 (the Gramm-Rudman-Hollings Act). It is not in order for either House to consider a change in the debt limit for a fiscal year until after the congressional budget resolution for that year has been adopted. Both methods of changing the debt limit have been used about half the time since the new procedure went into effect.

The statutory debt limit was $1,823.8 billion through most of fiscal year 1985. Near the end of that year, on August 1, 1985, the Congress adopted a congressional budget resolution for fiscal year 1986 containing a provision that declared the appropriate level of debt to be $1,847.8 billion or, as of October 1, $2,078.7 billion. This provision was deemed to have passed the House, but no further action was immediately taken.

At the beginning of September 1985, Treasury could not fully invest the receipts of the social security trust funds that are normally transferred at the beginning of the month, because that would have raised the amount of debt over the limit. By the end of the month the debt was still at the limit, social security was still only partially invested, Treasury had postponed or limited the normal auctions for some of its securities, and Treasury had not been able to keep the Exchange Stabilization Fund fully invested. On the last day of September, $17.4 billion was supposed to have been invested for the civil service retirement and disability trust fund; during the first days of October investment was supposed to have been made for the social security trust funds, the military retirement trust fund, and the supplementary medical insurance trust fund. The total of these amounts was $42.5 billion, but because of the debt limit most of the investment had to be delayed, as it had been the year before.

By this time the debt limit bill had become the vehicle for the Gramm-Rudman-Hollings proposal to eliminate the deficit in a series of steps over several years. This proposal, which set deficit targets and created a mechanism to enforce them, was offered as an amendment to the debt limit bill. This amendment became the principal issue before the Congress until December 12, 1985, when the debt limit bill was enacted incorporating a revised version of the amendment designated the Balanced Budget and Emergency Deficit Control Act of 1985.

As a result of this delay, the amount of debt remained at the limit, and several extraordinary steps were taken to prevent a default on the Government's various obligations. The first such step was taken on October 9, the day after Treasury's cash balance became virtually exhausted, when use was made of the Federal Financing Bank (FFB). As explained above, FFB debt is not subject to the general statutory debt limit, so Treasury reduced the amount of debt subject to limit by issuing $5 billion of FFB securities to the civil service retirement and disability trust fund in place of regular Treasury securities. This enabled Treasury to raise $5 billion of cash by selling securities to the public that were subject to the debt limit. A total of $14.2 billion of FFB securities was eventually issued to the civil service retirement and disability trust fund, nearly reaching the FFB's own $15 billion special limit. The FFB securities had the same interest rates and date of maturity (June 30, 1986) as the regular Treasury securities that they replaced.

By the beginning of November, further steps were needed in order for Treasury to finance the outlays for social security and other purposes that are always very large at the start of the month. Treasury temporarily reduced the debt held in Government accounts by disinvesting the social security trust funds, the civil service retirement and disability trust fund, and the railroad retirement account (i.e., by accelerating the redemption of certain securities they held by up to seven days earlier than normal). This decreased the debt subject to limit, which enabled Treasury to obtain cash by selling debt securities to the public that were subject to the limit.

The next critical problem was large payments due on November 15. Treasury was scheduled to pay $16 billion of cash interest on its debt but did not have enough cash to do this (on November 14 it had a cash balance of only $7.3 billion). Inability to meet its obligations would have caused an unprecedented default on the interest and principal of U.S. Government securities. To avoid this, on November 14 the Congress temporarily raised the debt limit to $1,903.8 billion for the period ending December 6. Treasury immediately sold sufficient securities to meet its obligations and fully invested all the trust funds.

By December 5 the debt was at the level of the temporary limit, so when the limit returned to $1,823.8 billion on December 7 the amount of debt exceeded the limit. For the next several days Treasury was forced to postpone its normal auction of bills, to suspend sales of savings bonds and State and local government special issues, and to cease investing trust funds. On December 12, 1985, however, the debt bill was enacted, raising the limit to $2,078.7 billion and including as a separate title the Balanced Budget and Emergency Deficit Control Act of 1985. Treasury immediately sold securities to the public and fully invested the trust funds.

The trust funds had lost interest during this period for several reasons stemming from Treasury's inability to keep them fully invested. As part of the Balanced Budget and Emergency Deficit Control Act, the Congress provided that the trust funds be made whole. The debt securities they held were changed so that they would be the same as if the new debt limit had been enacted before September, and funds were appropriated to pay the interest they had lost. The Act also made the social security trust funds whole for the losses they had incurred as a result of similar circumstances in September and October 1984. Other trust funds were not made whole for their losses in 1984, however, and no trust fund was made whole for losses in earlier years.

Treasury completed the required transactions as of December 31, 1985 (except for adjustments later in 1986 that depended on the course of interest rates in 1986). A total of $494 million was paid to the trust funds, of which $382 million was paid to social security (old-age and survivors insurance and disability insurance) and $78 million was paid to the civil service retirement and disability trust fund. The payment to the social security trust funds consisted of $373 million to make them whole for the disruption in calendar year 1984 and $9 million for calendar year 1985. Subsequently a further $7 million was paid to the social security trust funds, and Congress enacted legislation to make the civil service retirement and disability trust fund whole for the interest lost in 1984. This latter payment came to $82 million.

The limit of $2,078.7 billion was adequate through most of the rest of fiscal year 1986. Congress enacted a budget resolution for fiscal year 1987 on June 26, 1986. The resolution contained a provision stating that the appropriate level of debt was $2,322.8 billion. A joint resolution specifying this as the debt limit effective upon enactment was deemed to have passed the House, and it was considered by the Senate. The Senate added numerous amendments to the resolution, and although the amended resolution passed the Senate it was not adopted by the Congress.

Treasury had to take steps beginning on August 1 to maintain enough cash balances to meet the Government's obligations and also to keep the trust funds fully invested. Once again, FFB securities were issued to the civil service retirement and disability trust fund in place of regular Treasury securities, with the FFB securities having the same interest rates and dates of maturity as the securities they replaced; the Treasury bill auction for one week was reduced below the previously prevailing level; and the Exchange Stabilization Fund was not always kept fully invested. On August 16 the Congress passed a law raising the debt limit to $2,111 billion, and the President signed it on August 21. This was sufficient for the Treasury to keep the trust funds fully invested at the beginning of September.

At the end of September 1986, however, as at the same time in the previous two years, Treasury was not able to invest the trust funds fully. In anticipation of the problem, Treasury had postponed or reduced the auctions of some securities and had issued FFB debt up to the $15 billion statutory maximum. On the last day of September, $17.9 billion was available to be invested for the civil service retirement and disability trust fund; during the first three days of October additional funds were available to be invested for the social security trust funds, the military retirement trust fund, and the supplementary medical insurance trust fund. The total of all these amounts was $43.8 billion, but because of the debt limit only about a third could be immediately invested. The rest was either used for benefit payments within the following few days or temporarily left uninvested.

Later in October, just before adjournment, Congress passed the Omnibus Reconciliation Act of 1986, and the President signed it on October 21. This Act raised the debt limit to $2,300 billion through May 15, 1987. Treasury immediately invested the remaining trust fund balances it had not been able to invest, which were relatively small by that date. The Act also provided that the trust funds be made whole for the losses they had incurred because of Treasury's inability to keep them fully invested. As a result, Treasury paid the trust funds $41 million.

Because the new limit expires on May 15, 1987, and then reverts to $2,111 billion, further debt limit legislation will be needed at that time in order to permit the Federal Government to meet its obligations.

Federal Funds Financing and the Change in Debt Subject to Statutory Limit

The year-to-year change in debt subject to limit, unlike the change in debt held by the public, is not determined principally by the size of the total deficit of the Federal Government. This is because the trust fund surplus or deficit, which makes up part of the total surplus or deficit of the Federal Government, has no essential effect on the amount of debt that is subject to limit. The reason is explained below in a discussion that is more technical than in most of this special analysis.

The budget consists of two major groups of funds: Federal funds and trust funds.[15] The Federal funds are derived mainly from tax receipts and borrowing and are used for the general purposes of the Government. The trust funds, on the other hand, collect certain taxes and other receipts to be used for specified purposes, such as paying social security or unemployment insurance benefits. The social security trust funds (old-age and survivors insurance and disability insurance) are now excluded from the budget by law and consequently classified as off-budget Federal entities. However, the

[15] Data for Federal funds and trust funds are presented in Special Analysis C, "Funds in the Budget."

budgetary classification of these trust funds does not affect the following discussion.

When the Federal funds have a deficit, it must generally be financed by borrowing, regardless of whether the trust funds have a surplus. The trust fund surpluses are mostly invested in securities issued by Federal funds, and these securities are classified as Federal debt. For instance, if the trust funds receive $1 billion more of tax receipts, the Treasury needs to sell $1 billion less of debt to the public in order to obtain cash to finance the Government's outlays; but Treasury also needs to issue $1 billion more of debt to the trust funds in order to keep the trust funds fully invested. Therefore, total Federal debt is unchanged. The trust fund surplus thus does not reduce the need for the Federal funds to issue debt in order to finance the Federal funds deficit (even though it does reduce the need to borrow from the public).

Federal funds borrowing consists almost exclusively of the Treasury selling debt securities that are subject to the statutory limit. As a result, almost all of the debt that is used to finance the Federal funds deficit is subject to the statutory limit. While most of this debt is sold to the public or issued to trust funds, a comparatively small amount is issued to certain Federal revolving funds and deposit funds.

Table E–11 shows in detail the relationship of the change in debt subject to limit to the Federal funds deficit. This deficit is an amount that has to be financed. Some relatively small portion may be financed by means other than borrowing, such as seigniorage and a decrease in cash held by Federal funds (however, if the sum of these other means of financing is negative, then these other means are a further amount that has to be financed). [16] A small portion may be financed by certain Federal funds (or certain deposit funds [17]) selling their holdings of Federal debt. Another small portion may be financed by certain Federal funds issuing debt that is not subject to the statutory limit. The remainder of the amount to be financed can only be financed by selling debt subject to the statutory limit. This ordinarily comprises most of the total. Thus, the Federal funds deficit approximately determines the increase in debt subject to statutory limit.

In 1986, for example, the total Federal funds deficit to be financed was $283.0 billion. The "means of financing other than borrowing" required an additional $25.1 billion of financing, in large part, as noted earlier, because of the decrease in Treasury cash balances. Certain Federal funds and deposit funds decreased

[16] The amounts for means of financing other than borrowing exclude the amounts attributable to trust funds. It is not known how the trust fund open book balances (cash assets not currently invested) are divided between cash and the grouping labeled "checks outstanding, etc." In table E–11 they are all assumed to be in checks outstanding, etc.

[17] Only those deposit funds classified as Government accounts.

Table E–11. **FEDERAL FUNDS FINANCING AND CHANGE IN DEBT SUBJECT TO STATUTORY LIMIT** [1]

(In millions of dollars)

Description	1986 actual	1987 estimate	1988 estimate	1989 estimate	1990 estimate	1991 estimate	1992 estimate
Federal funds surplus or deficit (–)	**–283,001**	**–243,006**	**–211,430**	**–211,811**	**–194,858**	**–171,724**	**–147,703**
Means of financing other than borrowing:							
Decrease or increase (–) in Treasury operating cash balance	–14,324	11,384					
Increase or decrease (–) in:							
Checks outstanding, etc [2]	–7,736	–9,252	–855				
Deposit fund balances [3]	–3,481	–2,769	–1,167				
Seigniorage on coins	392	430	433	419	431	431	440
Total, means of financing other than borrowing	**–25,149**	**–207**	**–1,588**	**–419**	**431**	**431**	**440**
Decrease or increase (–) in Federal debt held by Federal funds and deposit funds [4]	2,471	3,697	–*				
Increase or decrease (–) in Federal funds debt not subject to limit	18,478	–2,766	–6,671	–6,453	–1,453	–1	–71
Total, requirements for borrowing subject to debt limit	**287,200**	**242,283**	**219,709**	**217,846**	**195,880**	**171,294**	**147,334**
Increase in debt subject to limit but not part of Federal debt, and in adjustment	*						
Increase in debt subject to limit	**287,200**	**242,283**	**219,709**	**217,846**	**195,880**	**171,294**	**147,334**
ADDENDUM							
Debt subject to statutory limit	2,110,975	2,353,258	2,572,967	2,790,813	2,986,693	3,157,987	3,305,321

* $50 million or less.

[1] Several amounts have been assumed to be zero during 1988–92 because they are usually small and cannot be estimated accurately.

[2] Besides checks outstanding, includes accrual of interest payable on Treasury debt, miscellaneous liability accounts, allocations of special drawing rights, and, as an offset, cash and monetary assets other than the Treasury operating cash balance, miscellaneous asset accounts, profit on sale of gold, and a technical error in recording FDIC outlays in 1986.

[3] Does not include investment in Federal debt securities by deposit funds classified as part of the public.

[4] Only those deposit funds classified as Government accounts.

their holdings of Federal debt by $2.5 billion, which reduced the need for still further borrowing; and certain Federal funds increased their debt outstanding that was not subject to limit by $18.5 billion, which replaced an equal amount of debt that was subject to limit. Therefore, a total of $287.2 billion had to be borrowed subject to the debt limit.

The increase in debt subject to limit in 1986 was thus approximately equal to the Federal funds deficit. However, unlike normal years, the closeness in size was partially the result of offsetting factors. On the one hand, the requirement for borrowing subject to the debt limit was reduced by $18.5 billion due to an extraordinary increase in Federal debt not subject to limit. Most of this, as explained in the previous section, was the $15.0 billion increase in FFB debt.

On the other hand, the requirement for borrowing subject to debt limit was increased $14.3 billion by the unusual increase in the Treasury operating cash balance. It was also increased $8.2 billion by Treasury's inability to fully invest the civil service retirement and disability trust fund surplus at the ends of 1985 and 1986.

The trust fund surplus, whether on-budget or off-budget, does not have an explicit effect in table E–11. If the trust fund surplus were always exactly invested in Federal debt securities subject to the statutory limit, it would have no effect at all on the amount of debt subject to limit. However, to the extent that trust fund surpluses are uninvested—i.e., used to increase the trust fund holdings of cash assets—the debt subject to limit is reduced. This is because an increase in uninvested balances provides cash that can be used to finance Federal funds outlays without recording an increase in Federal debt. The increase in uninvested cash assets of the trust funds is recorded in table E–11 as an increase in the liabilities of the Federal funds for checks outstanding, etc. (i.e., an increase in the liabilities of Federal funds to trust funds). This increases the "means of financing other than borrowing" for the Federal funds, which in turn reduces the requirement for borrowing subject to the statutory limit. The uninvested cash assets of the trust funds do not usually change a great deal from year to year, and by law the trust fund surpluses must generally be invested in Federal debt. Consequently, the effect of the trust fund surplus on debt subject to limit is normally minor.

As discussed previously, however, the investment of the civil service retirement and disability trust fund was not normal at the end of 1985. The statutory debt limit prevented Treasury from fully investing this trust fund on the last day of 1985 for the payment that it received that day from the general fund (part of the Federal funds). As a result, the trust fund's cash balance was abnormally high by about $13.4 billion at the end of 1985. Consequently, the debt subject to limit at the end of 1985 was $13.4 billion lower than it would have been under normal circumstances, and the Federal funds deficit was larger than the increase in debt subject to limit by an additional $13.4 billion. In terms of table E–11, the uninvested trust fund surplus raised checks outstanding, etc., by $13.4

billion, which provided $13.4 billion to finance the Federal deficit by means other than borrowing.

The full investment of the trust fund occurred by mid-November 1985 and required financing by the issuance of securities subject to the debt limit. This caused a decrease in checks outstanding, etc., by $13.4 billion during fiscal year 1986 compared to the amount it would have been under normal circumstances. However, Treasury was again unable to fully invest the trust fund on the last day of 1986. As a result, the trust fund's cash balance was abnormally high by about $5.2 billion. This provided $5.2 billion to finance the Federal funds deficit by an increase in checks outstanding, etc., instead of borrowing. Because of this offset, the net effect of these trust fund transactions was to reduce checks outstanding, etc. (and consequently the means of financing other than borrowing), by $8.2 billion in 1986 instead of a full $13.4 billion. This meant that an additional $8.2 billion had to be borrowed in 1986 subject to the debt limit. The inability to fully invest the trust fund at the end of 1986 also meant that the amount of debt subject to limit at the end of 1986 was $5.2 billion less than it would have been under normal circumstances.

The full investment of this $5.2 billion occurred in October 1986 and required financing by the issuance of securities subject to the debt limit. For fiscal year 1987 this causes a decrease in checks outstanding, etc., by $5.2 billion from the amount it would otherwise have been. The estimated amount of debt subject to limit at the end of 1987 is not affected by the delays in fully investing the civil service retirement trust fund at the ends of the two previous years.

Since the trust fund holdings of Federal debt are included almost entirely in debt subject to limit, but not in debt held by the public, the amount of debt held by the public is much less than the amount of debt subject to limit. Since the trust funds as a group almost always have a surplus, the change in debt held by the public from one year to the next is almost always less than the change in debt subject to limit. As can be calculated from table E-11, during 1987 and 1988 the debt subject to limit is estimated to increase by $462.0 billion, whereas the debt held by the public is estimated to increase by $269.0 billion.

The present analysis helps to demonstrate the difficulty in preventing a continual rise in the Federal debt subject to statutory limit. Table E-11 shows that the debt subject to statutory limit may continue to rise even if the total Federal Government deficit (including both on-budget and off-budget accounts) is exactly zero and, as a result, the debt held by the public remains constant (as an approximation, aside from the relatively small effect of the means of financing other than borrowing). In order for the debt subject to limit to be held constant, table E-11 shows that (as an approximation) the Federal funds portion of the budget must be in balance. If this condition is met, the amount to be financed in table E-11 is zero, and (as an approximation) the requirements for borrowing subject to the debt limit are zero.

However, the trust funds almost always have a surplus. Therefore, a zero Federal Government deficit would imply that there would still be a deficit in the Federal funds and, as a result, that the debt subject to statutory limit would still increase. As a result, it is more difficult to have a balance in the Federal funds alone than it is to have a balance for the Government as a whole; and, in consequence, it is more difficult to prevent a rise in the debt subject to statutory limit than in the debt held by the public.

This is demonstrated by comparing the estimated financing requirements for 1992 that are shown in tables E-3 and E-11. In 1992 the Federal Government as a whole is estimated to have a $12.3 billion surplus, which allows it to repay $12.7 billion of debt held by the public. Nevertheless, the debt subject to limit increases by $147.3 billion. The reason is that the Federal funds have a deficit of $147.7 billion. The Federal Government as a whole is able to have a small surplus despite the large Federal funds deficit, because the trust funds have a surplus of $160.0 billion, which is even larger.

The same conclusion can alternatively be illustrated by comparing the trends in borrowing from the public and borrowing subject to the debt limit. From 1986 to 1992, Table E-3 shows that annual borrowing from the public decreases by $249.0 billion, in line with the movement from a large total Government deficit to a small surplus. Table E-11 shows, however, that borrowing subject to the debt limit decreases only by $139.9 billion. This difference of $109.1 billion is mostly because of an $97.7 billion increase in the trust fund surplus. The rise in the trust fund surplus reduces borrowing from the public by an equal amount but does not reduce the need to issue debt subject to the statutory limit.

This analysis also applies to the difficulty in preventing a continual rise in the gross Federal debt. Gross Federal debt is nearly the same as debt subject to statutory limit, as explained in the previous section. Therefore, in order to prevent a continual rise in gross Federal debt, the Federal funds portion of the budget must be in balance (as an approximation).

Federally Assisted Borrowing

The effect of the Government on borrowing in the credit market arises not only from its own borrowing to finance Federal operations but also from its assistance to certain borrowing by the public. Federally assisted borrowing is of two principal types: Government-guaranteed borrowing, and borrowing by Government-sponsored enterprises.

Guaranteed borrowing is another term for guaranteed lending. It consists of loans for which the Federal Government guarantees (or insures) the payment of the principal and/or interest in whole or in part. Guaranteed loans have diverse characteristics. The loans may be made to individuals, businesses, State and local governments, or foreign governments. The guaranteed obligation may be a loan made by a bank or other institutional lender or it may be a security sold in the capital market.

Loan guarantees are designed to allocate economic resources toward particular uses by providing credit at more favorable terms than would otherwise be available in the private market. The major use of loan guarantees is to support housing, but they are also used for many other purposes. As shown subsequently in table E-13, primary guaranteed borrowing (which excludes double counting) was $34.6 billion in 1986 and is estimated to be $76.4 billion in 1987 and $54.1 billion in 1988. Special Analysis F, "Federal Credit Programs," presents detailed data on guaranteed loans and estimates the subsidies that are provided by loan guarantees. Part 3b of the *Budget—Supplement* also discusses Federal credit and outlines the Administration's forthcoming reform proposal for the control of Federal credit.

The other type of federally assisted borrowing is borrowing by Government-sponsored enterprises, which are discussed in more detail in Special Analysis F. These enterprises were established and chartered by the Federal Government to perform specific credit functions but are now entirely privately owned. The rule governing the budget treatment of these enterprises was established in 1967 in accordance with a recommendation by the President's Commission on Budget Concepts. The Commission, whose report led to the adoption of the unified budget, recommended that the budget exclude those Government-sponsored enterprises that are entirely privately owned.[18] Therefore the transactions of these enterprises are not included within the Federal budget, and their debt is not part of gross Federal debt.

The seven Government-sponsored credit enterprises are financial intermediaries. They borrow in the securities market and lend their borrowed funds for specifically authorized purposes either directly or by purchasing loans originated by the private groups that they were established to assist. The borrowing programs of these enterprises are subject to Federal supervision. In addition, they all consult the Treasury Department, either by law or by custom, in planning their market offerings. The Federal National

[18] *Report of the President's Commission on Budget Concepts* (Washington: U.S. Government Printing Office, 1967), pp. 29-30.

Mortgage Association, the Federal Home Loan Banks, and the Student Loan Marketing Association (SLMA) are required to obtain Treasury approval of the terms and timing of specific offerings. SLMA borrowed exclusively from the Federal Financing Bank from the time of FFB's establishment until May 1981.[19] SLMA now borrows new funds from the public, without any guarantee. The three enterprises regulated by the Farm Credit Administration—the Banks for Cooperatives, Federal Intermediate Credit Banks, and Federal Land Banks—borrow by issuing consolidated Farm Credit bonds and notes rather than securities under their separate names.

Government sponsorship of these enterprises has given them various direct benefits. These benefits differ from one enterprise to another and from one type of debt security to another. In most cases, but not all, they include such advantages as the following: their debt securities can be held by federally regulated financial institutions under a number of circumstances where other private securities or State and local securities are not eligible; they are exempt from Federal, State, and local income taxation; the interest on their debt securities is exempt from State and local income taxation; and they have lines of credit with the Federal Government that range up to $4 billion. Because of these specific advantages and the overall Federal sponsorship, the enterprises are perceived by the securities market to have a special relationship with the Federal Government. As a result, and despite the absence of Federal guarantees, the Government-sponsored enterprises borrow at lower interest rates than they would otherwise have to pay.

The operations of the Government-sponsored enterprises are not subject to the Federal budget review process; and the economic assumptions on which their borrowing estimates are based for 1987–88 are not necessarily the same as the Administration's economic forecast, which is used for the budget. In order to show the borrowing by this sector as a whole from the rest of the market, the total borrowing figures in table E–12 are calculated net of the borrowing by one Government-sponsored enterprise from another. Most of this adjustment is accounted for by the Federal Home Loan Mortgage Corporation repaying its debt to the Federal Home Loan Banks.

Borrowing by Government-sponsored enterprises has risen to much higher levels in the last few years than it was before. Until 1978 the largest amount of borrowing by this sector as a whole had been $14.9 billion in 1974. Borrowing increased sharply to a range of $24–$27 billion during 1978–80, however, and then expanded

[19] SLMA was the only Government-sponsored enterprise whose new securities could be guaranteed by the Government and therefore bought by the FFB. The Secretary of Education had authority to guarantee SLMA securities issued prior to October 1, 1984.

with only one interruption to $64.1 billion in 1985. Borrowing increased significantly again in 1986, reaching $107.3 billion. The Government-sponsored enterprises estimate that it will be almost as large in 1987 and 1988.

Table E-12. **BORROWING BY GOVERNMENT-SPONSORED ENTERPRISES**

(In millions of dollars)

Description	Borrowing or repayment (−) 1985 actual	1986 actual	1987 estimate	1988 estimate	Debt outstanding end 1988 estimate
Education: Student Loan Marketing Association	2,671	2,856	2,989	3,410	21,925
Housing and Urban Development: Federal National Mortgage Association	27,451	39,526	34,108	38,284	252,380
Farm Credit Administration: [1]					
Banks for cooperatives	−258	422	−858	−373	7,258
Federal intermediate credit banks	−2,745	−2,561	−3,315	−257	9,389
Federal land banks	−1,382	−3,595	−9,222	−1,204	32,228
Federal Home Loan Bank Board:					
Federal home loan banks	6,168	14,509	6,917	9,000	104,000
Federal Home Loan Mortgage Corporation	31,581	55,952	59,159	50,692	271,618
Total	**63,486**	**107,109**	**89,777**	**99,552**	**698,798**
Less increase in holdings of debt issued by Government-sponsored enterprises	−626	−203	−325	14	919
Total, borrowing by Government-sponsored enterprises	**64,112**	**107,312**	**90,102**	**99,538**	**697,879**

[1] The debt represented by consolidated notes and bonds is attributed to the respective Farm Credit banks.

The major Government-sponsored borrowers during 1985–88 are the two enterprises that borrow in order to support housing through the purchase of mortgages, the Federal Home Loan Mortgage Corporation (FHLMC) and the Federal National Mortgage Association (FNMA). In 1985 they borrowed $59.0 billion altogether; during 1986–88 they borrowed or are estimated to borrow $89–$95 billion each year, which is 93% of total Government-sponsored borrowing for these years. This high level of borrowing is almost entirely being carried out through FHLMC's and FNMA's programs of mortgage-backed securities. Under both of these programs the enterprises purchase conventional mortgages and finances the purchases by packaging the mortgages into pools and selling participation certificates in the pools to the public. By the end of 1988, FHLMC and FNMA are estimated to have raised their combined share of total Government-sponsored debt from 42% in 1980 to 75%.

Although the borrowing by FHLMC and FNMA currently dominates the Government-sponsored sector, the borrowing by the Federal Home Loan Banks is also large. They are estimated to continue increasing their debt in order to finance loans to savings and loan associations and other thrift institutions. Their operations also support the housing sector. In contrast, the three Government-sponsored enterprises that comprise the Farm Credit System—the Banks for Cooperatives, the Federal Intermediate Credit Banks, and the Federal Land Banks—contracted their net lending and borrowing in 1985 and 1986 and, as a group, are estimated to contract it further in 1987 and 1988. This reflects in part the current economic difficulties of the farm sector.

The Federal Government provides a different kind of assistance to State and local government borrowing than it does to other borrowing. It exempts the interest on State and local debt from Federal income tax. This reduces the interest rate these governments have to pay and thereby encourages them to borrow larger amounts.

Tax exemption has also been extended to certain bonds nominally issued by a State or local government to raise funds for private purposes. These private purpose bonds, such as industrial development bonds, now comprise over half of all new long-term, tax-exempt issues. In 1986 the total tax-exempt borrowing (net of repayments) estimated in the Federal Reserve flow-of-funds accounts was $143.5 billion. The Tax Reform Act of 1986 limited to some degree the issuance of private purpose tax-exempt bonds and reduced the ability of issuers to earn arbitrage by investing the proceeds of tax-exempt bonds in taxable instruments. Tax-exempt borrowing is discussed further in Special Analysis F, "Federal Credit Programs," and, from a different perspective, in Special Analysis G, "Tax Expenditures."

Total Federal and Federally Assisted Borrowing

Table E–13 summarizes Federal and federally assisted borrowing. Federal borrowing from the public is presented in total. Guaranteed borrowing and borrowing by Government-sponsored enterprises are presented both as total amounts for the sector as a whole and as net amounts. The net amounts contain adjustments that were made in order to remove double counting in the aggregation of total Federal and federally assisted borrowing. Double counting would otherwise occur when a Federal agency or a Government-sponsored enterprise bought (or sold) a Federal or federally assisted debt security. This is because borrowing would occur both when the security was initially sold and when the Federal agency or Government-sponsored enterprise borrowed in order to finance its purchase.

Federal borrowing from the public to finance the deficit is the largest part of Federal and federally assisted borrowing each year during 1986–88. However, while Federal borrowing comprised 63% of the total for 1986, it falls to an estimated 50% in 1987 and 42% in 1988. This decline is the result of two factors. Federal borrowing is estimated to decrease sharply, in line with the deficit target for

Table E–13. **NET BORROWING BY GOVERNMENT, GOVERNMENT-GUARANTEED BORROWERS, AND GOVERNMENT-SPONSORED ENTERPRISES**

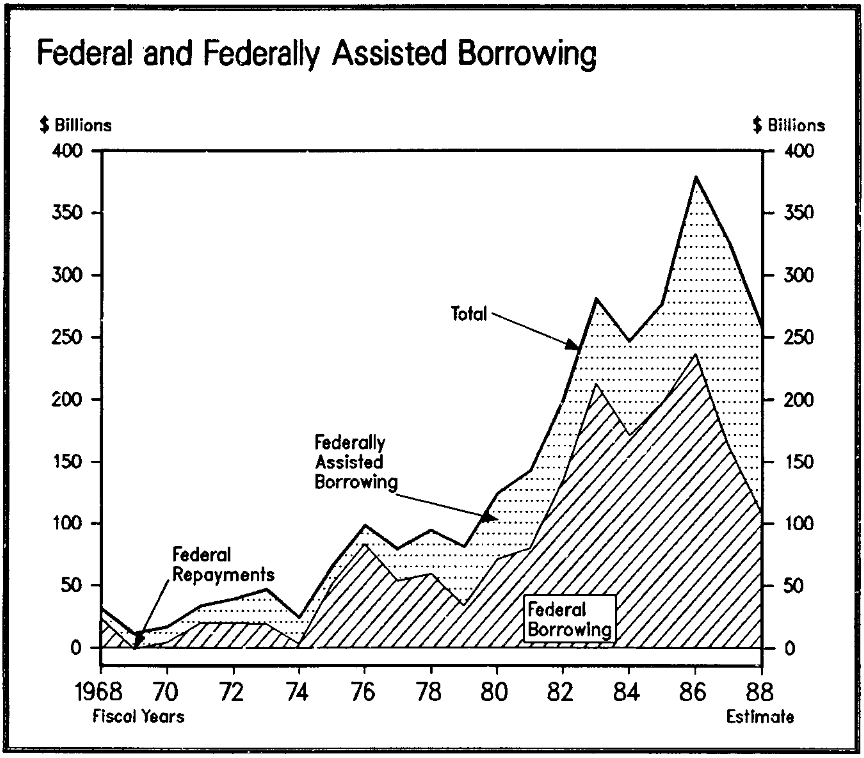
(In billions of dollars)

Description	Borrowing or repayment (–)			Debt outstanding end 1988 estimate
	1986 actual	1987 estimate	1988 estimate	
Federal borrowing from the public [1]	**236.3**	**162.2**	**106.7**	**2,015.1**
Guaranteed borrowing (net) [2] [3]	33.8	75.8	54.1	580.6
Less increase in guaranteed loans held by Federal agencies: [3]				
Government National Mortgage Association	–.8	–.5	–*	.3
Primary guaranteed borrowing [4]	**34.6**	**76.4**	**54.1**	**580.3**
Borrowing by Government-sponsored enterprises [5]	107.3	90.1	99.5	697.9
Less increase in holdings of Federal debt	–.8	–*	.2	2.2
Less increase in Government-sponsored debt held by Federal agencies:				
Federal Financing Bank	–*	–*	–*	4.9
Tennessee Valley Authority				.1
Less increase in holdings of guaranteed loans:				
Student Loan Marketing Association [6]	2.6	2.9	3.2	15.3
Federal National Mortgage Association	–3.4			27.7
Farm Credit Banks	–*	–*	*	*
Federal Home Loan Banks	.5	.1	.3	3.4
Federal Home Loan Mortgage Corporation	1.3			3.1
Net Government-sponsored borrowing	**107.1**	**87.2**	**95.8**	**641.2**
Total, Federal and federally assisted borrowing	**378.0**	**325.8**	**256.7**	**3,236.6**

* $50 million or less.
[1] See table E–1.
[2] "Guaranteed borrowing (net)" is the same as "guaranteed loans (net)" in table F–19 of Special Analysis F. To avoid double counting, it is calculated net of guarantees of loans previously guaranteed and guarantees of Federal agency debt.
[3] The increase in guaranteed loans held by the FFB is netted out in deriving guaranteed borrowing (net).
[4] "Primary guaranteed borrowing" in this table is the same as "primary guaranteed loans" in table F–19.
[5] From table E–12.
[6] The increase in holdings of guaranteed loans by the Student Loan Marketing Association is subtracted out on this line only to the extent that SLMA borrows from the public. To the extent that SLMA borrows from the FFB, the increase in holdings of guaranteed loans is ultimately financed by Federal borrowing and the loans are therefore classified as direct loans rather than guaranteed loans. This amount is subtracted out above as an increase in Government-sponsored debt held by Federal agencies.

1988; and federally assisted borrowing rises by a small amount, with the increase in primary guaranteed borrowing larger than the small decrease in net Government-sponsored borrowing. At the end of 1988 Federal debt held by the public is 62% of the total Federal and federally assisted debt outstanding.

The following chart depicts the trends in Federal and federally assisted borrowing from 1968 to 1988. The series are volatile, and the fluctuations are usually dominated by Federal borrowing, which is driven primarily by the Federal deficit. The fluctuations in the Federal deficit, in turn, are at most times strongly related to the pattern of recession and recovery. Total Federal and federally assisted borrowing increased steadily and substantially from $80.8 billion in 1979 to $280.5 billion in 1983. With a subsequent lower deficit and with federally assisted borrowing not rising very much, the total was lower in 1984 and 1985. However, in 1986 net Government-sponsored borrowing rose by $49.3 billion, Federal borrowing by $39.0 billion, and guaranteed borrowing by $13.0 billion, for a combined increase of $101.3 billion. This produced a record $378.0 billion of Federal and federally assisted borrowing in 1986. In 1987 and 1988, though, sharp decreases in Federal borrowing are estimated to reduce the total by $121.3 billion or 32%.



As the chart shows, Federal and federally assisted borrowing is now a great deal higher than a decade ago. Much of the increase parallels the growth in the economy and in the total funds borrowed by the non-financial sector in the credit market. However, total Federal and federally assisted borrowing has increased as a proportion of the total funds borrowed. This proportion increased from 17% during 1960–69 to 22% during the first half of the 1970's and 27% during the second half. During 1980–86 the proportion was higher still, averaging 41%. Thus, Government programs have recently been a larger proportion of funds borrowed in credit markets than they were in the preceding years. However, the proportions during 1984–86 were lower than during 1982–83, and the total of Federal and federally assisted borrowing is estimated to decline considerably in 1987 and 1988. This suggests that the upward trend of relative Federal participation in the credit market may no longer be continuing.

Table 6. **FEDERAL GOVERNMENT FINANCING AND DEBT**

(In billions of dollars)

FINANCING

	1986 actual	Estimate					
		1987	1988	1989	1990	1991	1992
Surplus or deficit (–)	–220.7	–173.2	–107.8	–92.8	–59.5	–21.3	12.3
On-budget	(–237.5)	(–192.7)	(–147.4)	(–144.5)	(–123.8)	(–95.7)	(–69.1)
Off-budget	(16.7)	(19.5)	(39.7)	(51.7)	(64.3)	(74.4)	(81.4)
Means of financing other than borrowing from the public:							
Decrease or increase (–) in Treasury operating cash balance	–14.3	11.4	......	......	......	......	......
Increase or decrease (–) in:							
Checks outstanding, etc.[1]	1.9	1.9	1.8	......	......	......	......
Deposit fund balances	–3.5	–2.8	–1.2	......	......	......	......
Seigniorage on coins	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Total, means of financing other than borrowing from the public	–15.6	10.9	1.0	0.4	0.4	0.4	0.4
Total, requirements for borrowing from the public	–236.3	–162.2	–106.7	–92.3	–59.1	–20.9	12.7
Change in debt held by the public	**236.3**	**162.2**	**106.7**	**92.3**	**59.1**	**20.9**	**–12.7**

DEBT, END OF YEAR

	1986 actual	1987	1988	1989	1990	1991	1992
Gross Federal debt:							
Debt issued by Treasury	2,128.2	2,364.7	2,580.3	2,793.2	2,989.1	3,160.3	3,307.7
Debt issued by other agencies	4.8	7.8	5.1	3.7	2.2	2.2	2.2
Total, gross Federal debt	2,132.9	2,372.4	2,585.5	2,796.9	2,991.3	3,162.6	3,309.8
Held by:							
Government accounts	386.8	464.0	570.4	689.4	824.8	975.2	1,135.2
The public	1,746.1	1,908.4	2,015.1	2,107.5	2,166.5	2,187.4	2,174.7
Federal Reserve Banks	190.9	......	......	......	......	......	......
Others	1,555.3	......	......	......	......	......	......

DEBT SUBJECT TO STATUTORY LIMITATION, END OF YEAR

	1986 actual	1987	1988	1989	1990	1991	1992
Debt issued by Treasury	2,128.2	2,364.7	2,580.3	2,793.2	2,989.1	3,160.3	3,307.7
Treasury debt not subject to limitation (–)[2]	–18.5	–12.7	–7.6	–2.6	–2.6	–2.6	–2.6
Agency debt subject to limitation	1.3	1.3	0.2	0.2	0.2	0.2	0.2
Total, debt subject to statutory limitation[3]	**2,111.0**	**2,353.3**	**2,573.0**	**2,790.8**	**2,986.7**	**3,158.0**	**3,305.3**

[1] Besides checks outstanding, includes accrued interest payable on Treasury debt, miscellaneous liability accounts, allocations of special drawing rights, and, as an offset, cash and monetary assets other than the Treasury operating cash balance, miscellaneous asset accounts, profit on sale of gold, and a technical error in recording FDIC outlays in 1986.

[2] Consists of Federal Financing Bank debt, the unamortized difference between the purchase price and par value of certain Treasury securities held by Government accounts, and other Treasury debt not subject to statutory limitation.

[3] The permanent statutory debt limit is $2,111 billion. Public Law 99–509 temporarily increased the limit to $2,300 billion through May 15, 1987.

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FEDERAL CREDIT PROGRAMS

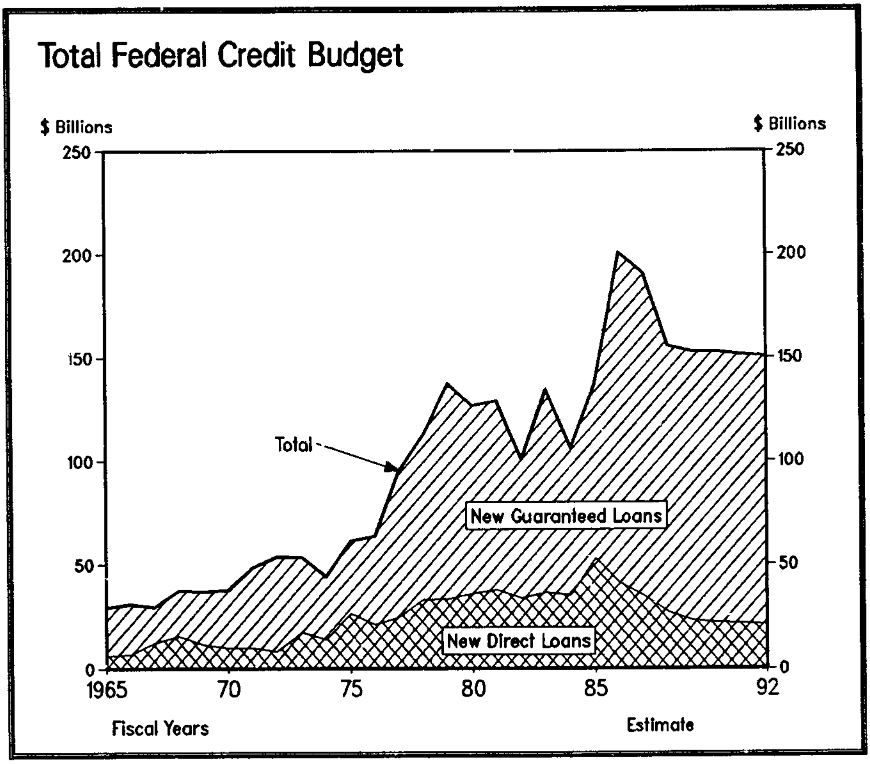
I. Introduction

The Federal Government is the Nation's largest financial intermediary. At the end of 1986, it held loans with a face value of $252 billion in its direct loan portfolio, which was 26 percent larger than the loan assets of the two largest U.S. commercial banks combined. The Federal Government also had guaranteed loans with an outstanding balance of $450 billion at the end of 1986. Through direct loans and loan guarantees, the Federal Government allocates or influences the allocation of credit and credit subsidies to farmers, homeowners, small businesses, exporters, utilities, shipbuilders, and State, local, and foreign governments. The following chart compares the pattern of growth over the last two decades with the most recent patterns and with estimates of future trends through 1992.

Federal credit is designed to meet various social or economic goals that, for whatever reason, the private sector does not meet. Meeting these goals may entail the provision of a subsidy to a favored borrower or the correction of a perceived capital market imperfection.

The problems in directing or controlling Federal credit are enormous and systemic. The discipline that the private market imposes on private financial intermediaries is absent. The discipline that the current budget process imposes is not fully effective in controlling Federal credit programs. The Federal credit budget, while an improvement over the previous control and display mechanisms of the unified budget, does not take into account explicitly the most important aspect of Federal credit—the economic subsidy offered to borrowers. The subsidy, as used here, measures the value to the borrower by comparing the terms and conditions associated with a Government loan to the alternative terms and conditions of financing for a similar loan from a private lender. This special analysis shows estimates of the subsidies provided by direct loan and loan guarantee programs in Tables F-11 and F-12.

In order to focus on that subsidy, the administration is proposing a reform of budgeting for credit programs that would remedy the shortcomings of existing practices by incorporating into the unified budget the subsidies provided by credit programs. The credit



reform proposal is outlined in Part 3, "Federal Credit," of the *Budget of the United States Government, FY 1988—Supplement.* Details of this proposal and specific legislative language will be transmitted to the Congress in March 1987.

This special analysis presents basic information on the broad spectrum of Government credit programs and policies from 1986 through 1992. It describes recent credit policy, summarizes the credit reform initiative, and explains the credit budget and its relationship to appropriations act limitations on direct loan obligations and guaranteed loan commitments. It outlines the credit activity of Government-sponsored enterprises (GSEs), and presents in detail the direct loans and guaranteed loans of the Federal Government. It also discusses trends in Federal credit, Federal credit subsidies, and other special topics. This special analysis supplements the credit data and discussions found elsewhere in the budget. See the Appendix of this special analysis for more details.

II. Controlling Federal Credit Programs

Comparisons with Private Financial Intermediaries.—The objectives of Federal credit programs are different from those of private financial institutions. While private financial institutions seek to make a profit on their lending, Federal credit programs normally exist to offer credit to selected borrowers on terms and conditions that are more favorable than those available from private lenders. In some cases, the Government offers credit to borrowers for whom no private source of credit is available. Compared to fully private loans, these terms and conditions may include lower interest rates or loan guarantee fees, less stringent credit risk thresholds in making credit available, or more generous grace periods or repayment schedules. Legislation frequently defines the eligible pool of applicants, specifies the lending terms that an agency or program may offer, and otherwise restricts the discretion of Federal program managers in a manner that never occurs for private lenders.

In addition to these differences in purpose, there are also differences in procedures between public and private financial intermediaries. Unlike a private financial intermediary, a Federal direct loan or loan guarantee program has no standard measure of performance, such as profit, for assessing its success. Federal credit programs were created to subsidize favored borrowers to varying degrees. Therefore, net income does not measure success. In many cases, income is not even measured correctly since there is no well-defined cost of capital for credit programs. The lack of a measurement tool creates difficulties in efficiently allocating resources to Federal credit (and noncredit) programs.

Moreover, the standards of the marketplace that restrict the growth and size of private lenders do not apply to Federal credit programs. Unlike commercial banks, Federal agencies need not worry about constraints on the volume or quality of new lending imposed by the inadequacy of primary capital. Federal agencies can continue to lend even if they have little or no equity. Federal lending agencies need not be concerned with the standards imposed on private banks by Federal regulatory agencies for assessing and reporting on the quality of loan portfolios. This makes alternative forms of discipline all the more important if Federal credit is to be directed in the most efficient manner.

The Unified Budget and the Appropriations Process.—The unified budget, with its focus on budget authority, outlays, and receipts, provides a comprehensive system for recording and controlling most receipts and outlays, but it is an incomplete mechanism for recording and controlling Federal credit programs. The unified budget measures net outlays, not the full volume of new credit extended for direct loans. The appropriations process also treats credit in a limited way. The largest direct loan programs are currently financed by revolving funds in which disbursements for new direct loans are offset by repayments on existing loans. Congressional appropriations of budget authority for these revolving funds are generally necessary only when new disbursements exceed available fund balances, which can be augmented by loan repayments and asset sales. Consequently, the appropriations process does not normally control directly the amount of new direct loans extended.

Second, guaranteed loan commitments, an important form of credit, do not constitute outlays and are not reflected in the unified budget. While, in principle, they could be included under budget authority, commitments were excluded from the definition of budget authority by the Congressional Budget Act of 1974. The reason for the exclusion was that the loan guarantee, by itself, does not affect budget outlays and the deficit. The loan guarantee is only a contingent liability of the Government. However, by assuming that contingent liability, the Government induces lenders to invest in particular loans by making them "riskless" from the lender's standpoint, and thereby allocates capital for federally determined purposes. In this manner, a guaranteed loan commitment may provide as large a subsidy and redirect capital as effectively as a direct loan obligation.

A third important shortcoming of the regular budget process for credit programs is that it neither measures nor controls the most salient aspect of Federal credit—the size of the subsidy offered the borrower. Since a primary purpose of Federal credit programs is to provide borrowers with a subsidy, this is a serious omission in effective budgetary control. Without some means of measuring and controlling this subsidy, neither the executive branch nor the Congress can make informed decisions about Federal credit programs, either in comparing one with another, or in comparing them with noncredit expenditure programs.

The Federal Credit Budget.—In January 1980, a significant step in redressing some of the inadequacies of the existing budget process was made with the introduction of the Federal credit budget. The Federal credit budget measures the direct loan obligations and guaranteed loan commitments, and, through the use of language in appropriation acts, limits these credit activities. Although it is a step forward, the credit budget has significant limitations—it does not measure subsidy costs, nor does it place any direct restriction on the level of subsidy that a program offers the borrower.

The Balanced Budget and Emergency Deficit Control Act of 1985, also known as Gramm-Rudman-Hollings, has led to a change in the way transactions of the Federal Financing Bank (FFB) are treated in the credit budget. As discussed further in the section below entitled "Federal Financing Bank," FFB transactions formerly presented as a separate line item in this special analysis and elsewhere in the budget have now been incorporated into the account of the agency originating the transaction.

OMB Circular No. A–70.—One means of controlling Federal credit more effectively is to control the price at which it is offered to the public. As a step toward this goal, the Office of Management and Budget (OMB) reissued Circular No. A–70, "Policies and Guidelines for Federal Credit Programs," on August 24, 1984. OMB circulars are directives that are binding upon the executive agencies as a matter of Presidential policy and are generally enforceable through administrative procedures. Circular A–70 was approved by the President prior to its release.

The A–70 guidelines apply to both existing and proposed Federal direct loan and loan guarantee programs. The guidelines place two sets of requirements on agencies. The first is to provide information on the costs and benefits of Federal credit programs. This includes estimates of the alternative credit available from relevant private financial institutions, Federal subsidies, and net default costs.

The second requirement is that new legislation or policies for credit programs be consistent with sound credit policies set out in the circular. If current legislation does not conform to those policies, agencies are generally required to prepare proposals to change that legislation so the programs will conform to A–70 guidelines.

A second OMB circular, No. A–129, "Managing Federal Credit Programs," expands on many of A–70's principles. It contains comprehensive guidance on servicing and collecting all Government receivables, including those arising from direct and guaranteed loans, grants and contracts. It requires agencies to develop annual credit management improvement plans describing their strategies for meeting performance goals and implementing the "nine-point program," which is discussed in the "Defaults" section of this special analysis.

Credit Reform Initiative.—Part 3 of the Budget Supplement contains an outline of an administration proposal to change the way Federal credit programs are treated in the budget. Under this reform, Federal agencies would obtain appropriations equal to the estimated subsidy component of the direct loans and loan guarantees they propose to make each year. A new Federal credit revolving fund (referred to as "the fund") would be established within the Department of the Treasury. As agencies make obligations for new direct loans, they would pay the estimated subsidy value of these loans into the fund, which would be recorded in the budget account of the originating agency. The fund would provide the balance, or financing portion, of the loan. As commitments for new loan guarantees are made, their estimated subsidy value would be paid into the fund and recorded in the budget account of the originating agency.

The fund would oversee the sale to the public of all new direct loans for which there are no policy or programmatic constraints to such asset sales, and it would oversee the purchase of private sector reinsurance for new guaranteed loans insofar as it is available. The subsidy cost of direct loans sold and loan guarantees reinsured would be determined by the actual price established by the market. Loan subsidies for direct loans not sold and guaranteed loans not reinsured would be calculated by the fund.

III. The Credit Budget

A. Credit Budget Principles

The credit budget measures direct loan obligations and guaranteed loan commitments. It is the sum of the credit authority offered by the Federal Government. The credit budget is based on three principles. First, it is intended to measure new credit at the point that the Government legally contracts to provide a loan or a loan guarantee. Usually, this is when a loan agreement or loan guarantee agreement is signed.

Second, the credit budget is based on credit authority—the authority to make new offers of credit. Credit authority is measured on a gross basis and does not reflect repayments of loans. This concept differs from the unified budget where budget authority is required only when collections are insufficient to finance new budgetary obligations. The concept of credit authority is necessary because subsidies are provided to all new recipients of direct loans and loan guarantees, regardless of the extent to which borrowers are repaying other loans previously made.

Third, guaranteed loan commitments are measured as the full principal of the loan, even if the Government's contingent liability is less than the full loan principal. The full principal is included in the commitment because the entire loan, even if only partially guaranteed, is assisted by the guarantee. Moreover, in some programs that offer partial guarantees, the private lender is at risk only when the value of the collateral and the guarantee combined are less than the full loan principal.

There are a number of programs in which less than the full principal of the loan is guaranteed. The major agency that nominally offers guarantees significantly below full loan principal is the Veterans Administration (VA).[1] In the aggregate, of the $450 billion of guaranteed loans outstanding in 1986, the Government's contingent liability was $363 billion or 81 percent. Excluding the

[1] The contingent liability for VA mortgage guarantees is up to 60 percent of the mortgage amount or a maximum of $27,500. The guarantee frequently acts as a 100 percent guarantee because, in 85 percent of the foreclosures involving VA guaranteed property, the VA acquires the property from the lender, who is made whole, rather than paying the guaranteed portion of the loan.

VA, the contingent liability was $300 billion for $307 billion of guaranteed loans outstanding, or 98 percent.

The contingent liability and full principal of all guaranteed loans outstanding are shown in Table F-1.

Table F-1. **CONTINGENT LIABILITY FOR GUARANTEED LOANS OUTSTANDING**

(In billions of dollars)

	1986 actual	1987 estimate	1988 estimate
Veterans Administration mortgage guarantees:			
Contingent liability	62.8	67.7	71.4
Full principal	142.6	153.8	162.2
All other loan guarantee programs:			
Contingent liability	300.2	364.4	407.9
Full principal	307.2	372.4	418.1
Total outstanding:			
Contingent liability	363.0	432.1	479.3
Full principal	449.8	526.2	580.3

Table F-2 provides the credit budget totals for 1984 through 1989. It also shows the major direct loan programs and loan guarantee programs.

Table F-2. **CREDIT BUDGET TOTALS**

(In billions of dollars)

	actual			estimate		
	1984	1985	1986	1987	1988	1989
Direct loan obligations:						
Farmers Home Administration	7.2	7.9	5.0	2.4	1.3	0.5
Foreign military sales	5.7	4.9	5.0	4.0	4.4	4.5
Commodity Credit Corporation	5.5	10.4	17.7	17.8	13.5	11.2
Rural Electrification Administration	2.1	4.0	3.1	1.5	0.4	0.2
Export-Import Bank	1.5	0.7	0.6	0.9	1.0	0.9
Low-rent public housing	1.4	14.1				
All other	15.7	10.8	9.9	8.3	6.5	5.8
Total obligations [1]	39.1	52.8	41.3	34.9	27.1	23.1
Guaranteed loan commitments:						
Federal Housing Administration	17.1	47.4	102.6	87.0	70.0	69.0
Veterans Administration housing	16.5	12.1	34.3	35.0	27.9	27.7
Low-rent public housing	13.7					
Guaranteed student loans	7.6	8.9	8.6	9.6	9.4	10.7
Export-Import Bank	7.1	7.8	5.5	11.4	10.0	10.0
Commodity Credit Corporation	4.2	2.7	2.5	5.5	3.5	3.5
All other	4.6	5.8	5.7	7.2	7.2	8.6
Total commitments [2]	70.8	84.7	159.2	155.7	128.4	129.5
Total credit budget	109.9	137.6	200.6	190.6	155.5	152.6
MEMORANDUM						
Secondary guaranteed loan commitments	39.7	54.6	138.0	132.5	100.0	100.0

[1] Includes loans with an agency guarantee disbursed by the Federal Financing Bank.

[2] Excludes commitments for guarantees of loans previously guaranteed (secondary guarantees) and commitments for guarantees by one Government account of direct loans made by another Government account. Totals for the former are shown in the memorandum. Totals for the latter are included as direct loans.

For 1988, the administration proposes that the credit budget decrease by $35 billion, or 18 percent below the 1987 totals. The programmatic reasons for the changes in the credit budget totals since 1986 are discussed below in the sections on direct loans and guaranteed loans.

B. Appropriations Acts Limitations

The credit budget is included in the budget resolution and limitations for many programs are subsequently enacted in annual appropriations acts. The administration proposes limitations annually on direct loan obligations and guaranteed loan commitments for most credit programs. The limitations serve as ceilings on the volume of new credit that may be offered by the account. The limitation is specified in the appropriation language for individual budget accounts that include credit activity.

The President's 1988 Budget proposes limitations for programs whose funding amounts to 61 percent of the credit budget totals. Approximately 32 percent of direct loan obligations (excluding obligations for defaulted loans) and 68 percent of guaranteed loans are proposed for limitation. The relatively low percentage for direct loans results because the largest direct loan program—CCC commodity loans—is exempt from limitation. Table F-3 indicates the breakdown of loans subject to, and exempt from, appropriations act limitation.

Table F-3. **CREDIT BUDGET PROGRAMS SUBJECT TO AND EXEMPT FROM APPROPRIATIONS ACTS LIMITATIONS**

(In millions of dollars)

	Direct loan obligations			Guaranteed loan commitments		
	1986	1987	1988	1986	1987	1988
Limitations enacted	15,664	10,259	8,055	193,915	114,535	87,234
Less: Unused balance of limitation, expiring	−2,200	−579	−529	−49,520	−13,025	....
Loan subject to limitation	13,464	9,680	7,526	144,395	101,510	87,234
Loans subject to limitation under P. L. 99-177 [1]	7,945	....	....	9,462	....	....
Loans exempt from limitation [2]	19,920	25,248	19,610	5,386	54,196	41,129
Total	41,329	34,927	27,136	159,243	155,705	128,362
ADDENDUM						
Secondary guarantees subject to limitation	....	....	....	137,962	132,500	100,000

[1] Balanced Budget and Emergency Deficit Control Act of 1985 (Gramm-Rudman-Hollings).
[2] Includes direct loan obligations for defaulted guaranteed loan claims, as follows: 1986, $5,927 million; 1987, $4,454 million; and, 1988, $3,960 million.

The first stage of congressional action on the credit budget is the budget resolution. The Congressional Budget Act, as amended by Gramm-Rudman-Hollings, requires functional allocations for direct loan obligations, primary loan guarantee commitments, and secondary loan guarantee commitments in the budget resolution. The functional targets are then allocated to the Appropriations Committee and other committees. In the event of a sequestration under Gramm-Rudman-Hollings, credit authority—direct loan obligations and guaranteed loan commitments—is reduced by the general nondefense sequestration percentage.

After the budget is submitted to the Congress, the House and Senate Appropriations Committees begin working on the 13 appropriation bills. Three bills contain 19 of the 27 requested limitations: Agriculture, Foreign Assistance, and Housing and Urban Development/Independent Agencies. Over the past several years, Congress has enacted limitations in most of the programs for which limitations were requested. The administration continues to urge the Congress to enact limitations on guaranteed loans on the basis of the full principal amount of the loan rather than the contingent liability.

In general, limitation language in appropriation acts:

- is a *one-year* limitation;
- sets a *ceiling* on direct loan obligations and/or guaranteed loan commitments; and
- applies to an individual account, although limitations on specific programs within an account may also be provided.

Table F-4 identifies the enacted limitations in 1986 and 1987 and proposed limitations in 1988 for credit programs.

While the appropriations act limitation is an effective control mechanism for new lending for some programs, there are many programs in which the actual demand for Federal credit assistance has been consistently less than the level enacted in annual appropriation bills. For example, the enacted limitations on direct and guaranteed loans for the Export-Import Bank (Eximbank) have consistently exceeded the actual demand for loans since 1982. The accompanying chart illustrates the used and unused portions of the enacted limitations for 1982–1986.

There are a variety of programs, in addition to Eximbank, for which demand is often below the enacted limitation. Table F-5 compares the proposed and enacted limitations to the actual level of direct loan obligations and guaranteed loan commitments in 1986 for several credit programs with shortfalls from limitations.

After enactment of appropriations bills, direct and guaranteed loan activity subject to limitation is controlled through the apportionment process. This is the mechanism by which the executive branch controls the rate at which new loans are obligated or guaranteed. While limitations are generally apportioned quarterly, a few are apportioned on an annual or project basis.

Table F-4. **CREDIT APPROPRIATIONS ACTS LIMITATIONS**

(In millions of dollars)

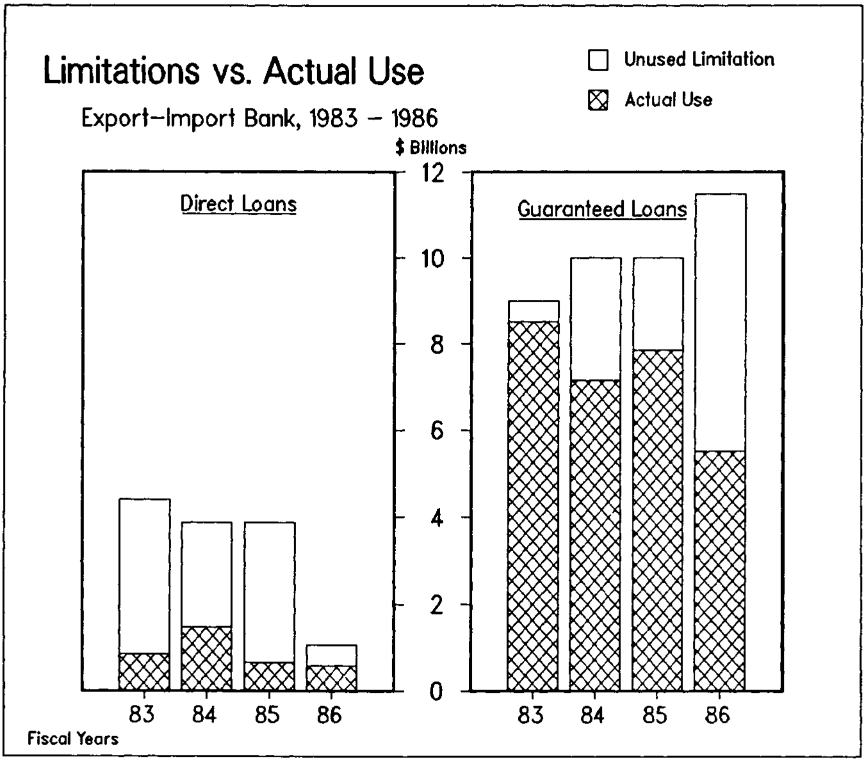
	1986 actual	1987 estimate [1]	1988 estimate
Limitations on direct loan obligations:			
Foreign military sales credit	4,967	4,040	4,421
AID, Private sector revolving fund	15	16	16
Overseas Private Investment Corporation	14	23	15
Agricultural credit insurance fund	3,176	1,817	1,295
Rural housing insurance fund	2,033	508	....
Rural development insurance fund	421	107	....
Rural electrification and telephone revolving fund [2]	2,129	1,305	290
Rural telephone bank	177	149	93
Self-help housing land development fund	1	*	....
International Trade Administration, Operations and administration	8	....	....
College housing loans	57	....	....
Bonneville Power Administration fund	20	10	....
Health resources and services	1	1	1
Nonprofit sponsor assistance	1	1	*
Federal Housing Administration fund	84	74	83
Housing for the elderly or handicapped	604	502	131
Community development grants [2]	50	....	....
Bureau of Reclamation, Loan program	48	44	27
National Park Service, Construction	1	....	....
Bureau of Indian Affairs, Revolving fund for loans	16	16	13
Federal Highway Administration, Right-of-way revolving fund	48	48	48
Railroad rehabilitation fund [2]	4	....	....
VA, Direct loan revolving fund	1	1	1
Export-Import Bank	1,059	900	1,000
SBA, Business loan and investment fund	160	97	20
National Credit Union Administration, Central liquidity fund	568	600	600
Total, limitations on direct loan obligations	15,664	10,259	8,055
Limitations on guaranteed loan commitments:			
AID, Housing and other credit guaranty programs	145	145	100
Overseas Private Investment Corporation	136	200	150
Agricultural credit insurance fund	1,916	2,498	2,500
Rural development insurance fund	96	115	....
Rural electrification and telephone revolving fund	....	....	840
Economic development assistance [3]	188	22	....
International Trade Administration, Operations & administration [3]	7	....	....
NOAA, Federal ship financing	....	50	....
Health professions graduate student loan insurance fund	....	....	100
Federal Housing Administration fund	141,500	100,000	70,000
Community development grants	163	150	....
Bureau of Indian Affairs, Indian loan guaranty and insurance fund	....	....	34
VA, loan guaranty revolving fund	38,280	....	....
Export-Import Bank	11,484	11,355	10,000
SBA, Business loan and investment fund	....	....	3,510
Total, limitations on guaranteed loan commitments	193,915	114,535	87,234
ADDENDUM			
Secondary guaranteed loan commitments:			
GNMA, Guarantees of mortgage-backed securities	175,000	150,000	100,000

* $500,000 or less

[1] Includes President's budget proposals for changes in enacted limitations.

[2] Includes limitations on agency guarantees of direct loans disbursed by the Federal Financing Bank.

[3] Enacted on the basis of contingent liability; the full principal amount is reflected here.



For some programs, an appropriations act limitation on annual activity is deemed unsuitable for any of several reasons, and control is provided through other mechanisms. First, limitations are not proposed for programs in which the authorizing legislation provides a clear entitlement to qualified applicants, such as farm price support loans, credit assistance to veterans, and guaranteed student loans. These programs are similar to those expenditure programs considered relatively uncontrollable, and the levels of new credit are restricted solely by substantive law.

Second, direct loans that arise from payment of claims on defaulted guaranteed loans are exempt from appropriations act limitation. Payment of these default claims is mandatory, as in the FHA mortgage insurance and the guaranteed student loan program. Therefore, the effective point of control is earlier, at the time of the original guaranteed loan commitment.

Third, some programs are exempt from appropriations act limitation when additional control through such limitations is unnecessary or counterproductive. For example, in several foreign assistance programs, such as the economic support fund, AID development assistance, and P.L. 480 food assistance, appropriated budget authority governs both the loan and the grant activity. The alter-

Table F–5. **COMPARISON OF ENACTED LIMITATIONS WITH ACTUAL LOAN LEVELS FOR SELECTED PROGRAMS IN 1986**

(In millions of dollars)

	Enacted limitation	Acutal loan level	Unused balance of limitation
Direct loan obligations:			
Agricultural credit insurance fund	3,176	2,799	378
Rural housing insurance fund	2,033	1,825	208
Bonneville power administration fund	20	....	20
Housing for the elderly or handicapped fund	604	556	48
Export-Import Bank	1,059	578	480
National Credit Union Administration, Central liquidity fund	568	31	537
Guaranteed loan commitments:			
Agricultural credit insurance fund	1,916	1,560	356
Rural development insurance fund	96	55	41
Federal Housing Administration fund	141,500	102,592	38,908
GNMA, Guarantees of mortgage-backed securities	175,000	137,962	37,038
VA loan guaranty revolving fund	38,280	34,297	3,983
Export-Import Bank	11,484	5,508	5,976

native to a direct loan in those programs is a grant, or 100 percent subsidy. A specific direct loan limitation might lead to a greater use of grants—an increase in effective subsidies.

C. Direct Loans

Direct loans are financed from a variety of sources, including appropriations, borrowing, and repayments of previous loans. Direct loan programs are designed to redirect economic resources to particular uses by providing credit on more favorable terms than would otherwise be available from private sources. A direct loan is best justified when the Federal objective could not be met with financing from private sources, even with a Government guarantee. The objectives of a direct loan program, for example, may require financing at interest rates that are lower than those available from private lenders, or loan maturities that are longer than otherwise available. Direct loans are made to individuals, businesses, and State, local, and foreign governments.

As discussed below in the section entitled "Federal Financing Bank," FFB transactions formerly presented as a separate line item in Table F–6 of this special analysis and elsewhere in the budget have now been incorporated into the account of the agency originating the transaction.

Direct loan obligations in a given year do not result in an equal volume of new direct loan disbursements in the same year for several reasons. First, there is often a lag between the time of obligation and the actual disbursement of the loan. For example, prospective borrowers may seek financing for a project when it is production levels and the demand for the nonrecourse loans that finance production.

The Food Security Act of 1985 gave the Secretary of Agriculture the discretion to set commodity prices implicit in CCC loans more closely to market prices. This provision was intended to reduce eventually the need for Government price supports; however, overall spending on farm programs has continued to grow. Moreover, despite the enormous commitment of resources, economic conditions in agriculture are depressed. Accordingly, the administration will be proposing legislation to modify farm commodity price support programs. The proposed legislation is discussed in more detail in Part 5 of the Budget.

The Farmers Home Administration (FmHA) makes loans for purchasing and operating farms, improving rural housing, and developing rural community facilities. In 1988, FmHA direct loan obligations are proposed to total \$1.3 billion, which is significantly below the 1986 total of \$5.0 billion. This reduction reflects a shift in Federal loan activity from heavily subsidized direct loans to guarantees of private market rate loans in the agricultural credit insurance fund. The administration proposes to terminate both FmHA housing and rural development programs. Housing assistance would be provided through a voucher program similar to the program now administered by the Department of Housing and Urban Development.

Rural Electrification Administration (REA) direct loan activity is proposed to decline from \$1.5 billion in 1987 to \$383 million in 1988, to \$191 million in 1989, and to be terminated in 1990. To ensure continued credit availablity, most borrowers will be eligible for a new program of privately originated loans with an REA guarantee of 70 percent of the loan principal. The decrease is proposed because REA's mission is complete—current programs have gone far beyond their original goal of providing electricity and telephone service to rural areas. When the REA was established in 1935, only 12 percent of the farms in the country received electricity; today over 99 percent of farms have electric service. In 1949 the REA act was amended to bring telephone service to rural areas; today over 95 percent of farms have telephones. Current REA programs have expanded to include subsidized lending to electric cooperatives serving prosperous urban or suburban areas of cities such as Washington, Atlanta, Dallas, Minneapolis, and Denver. Loans are also used to provide electric service to exclusive recreation communities, such as ski resorts in Vail, Aspen, and Steamboat Springs, Colorado, as well as other resorts in Myrtle Beach, Kiawah Island, and Hilton Head Island in South Carolina. In addition, REA has provided loans to telephone companies that in the design stage, but the financing will not be needed until the next year or even the next several years. As a result, some agencies, such as the Export-Import Bank and the Rural Electrification Administration, disburse loans 4–7 years after the time of the direct loan obligation. Second, some prospective borrowers will never convert the direct loan obligations into borrowing because the projects for which financing had been sought are subsequently cancelled.

As shown in Table F–6, direct loan obligations are proposed to decline between 1986 and 1988 from $41.3 billion to $27.1 billion. Overall, the agricultural and business sectors will receive 57 percent and 31 percent, respectively, of the 1988 credit budget.

Table F–18 presents data for Federal direct loan programs from 1986 through 1992. The major credit programs and program changes in direct loan obligations are discussed below.

Table F–6. **SUMMARY OF DIRECT LOAN TRANSACTIONS**

(In billions of dollars)

	Actual		Estimated					
	1985	1986	1987	1988	1989	1990	1991	1992
Obligations	52.8	41.3	34.9	27.1	23.1	22.1	21.9	21.0
Loan disbursements	64.4	42.2	39.5	32.1	27.8	25.3	24.0	22.5
Change in outstandings	28.0	11.2	−15.2	−15.3	−9.1	−8.2	−7.4	−8.9
Outstandings	257.4	251.6	236.4	221.0	212.0	203.8	196.3	187.5

The Commodity Credit Corporation (CCC) provides short-term nonrecourse loans to producers of agricultural commodities. The loans provide subsidized financing for production costs and set a minimum price for individual commodities at which the farmer may turn his crop over to the Government rather than repay the loan. The demand for CCC price support loans, therefore, depends on the market price of the crop compared to the price in the loan rate. When market prices are below the threshold price in the loan rate, farmers borrow large amounts from the CCC, forfeiting the crop as repayment to the Government if market prices have not risen above the price support loan rate by the time the loan comes due.

Although demand for CCC price support loans decreased slightly from $17.4 billion in 1986 to an estimated $17.1 billion in 1987, loan obligations remain at high levels following sustained increases in agricultural production that resulted in lower crop prices and higher Federal outlays. Between 1987 and 1988, commodity loan obligations are estimated to decrease from $17.1 billion to $12.8 billion. The decrease is projected to result from the administration's plan to set support prices closer to market clearing levels. The elimination of artificially high price supports should reduce are subsidiaries of large multimillion dollar holding companies with excellent credit ratings.

Foreign military sales (FMS) credit provides financing to foreign governments and international organizations so that they can procure U.S. military equipment and services. The proposed increase from $4.0 billion in 1987 to $4.4 billion in 1988 reflects a slight increase in U.S. exports. The increase will permit the Government to finance the procurement of additional military equipment and services by countries whose security is threatened by military forces hostile to U.S. interests. The bulk of the funds will be provided to Egypt, Israel, Turkey, Greece, and Spain.

Proposed direct loan obligations for elderly or handicapped housing decrease from $0.5 billion in 1987 to $0.1 billion in 1988. This decrease reflects the administration's commitment to substitute housing vouchers for direct loans. Housing vouchers benefit tenants by giving them more freedom of choice in where to live and are projected to be less expensive than new construction subsidies.

The Small Business Administration (SBA) provides direct loans to small businesses and to businesses and homeowners that suffer uninsured losses as a result of physical disasters. The 1988 budget proposes to rely on SBA's guaranteed loan programs to assist small businesses for business credit needs. Therefore, except for $20 million for the purchase of debentures from Minority Enterprise Small Business Investment Companies (MESBICs), the budget proposes to terminate new direct business lending in 1988. The balance of the direct loan obligations made by SBA are to honor defaulted guaranteed loan claims.

Consistent with the General Accounting Office's finding that insurance is a better form of disaster assistance than loans, the budget proposes to restrict eligibility for direct loans to those least likely to be able to afford increased insurance coverage and who cannot qualify for commerical credit. In order to provide businesses and homeowners who are more likely to be able to afford additional insurance coverage time to obtain such coverage (or make other arrangements to protect themselves against possible losses), the change in eligibility would not be effective until 1989. As a result of this change, the level of direct disaster loans is expected to decrease from $350 million in 1988 to $310 million in 1989.

Low rent public housing and Veterans Administration life insurance policy credit programs were deleted from this year's credit budget. Low rent public housing loans are not true loans since they are forgiven during the fiscal year in which they are made and therefore are, in fact, grants to the recipient. Similarly, VA life insurance policy loans are not loans of the Government, but advances against the cash value of the insured veteran's deposits. Furthermore, the veteran is not under a contractual obligation to repay the loan; the cash value of the deposits can be used to offset the loan.

D. Loan Guarantees

A guaranteed loan is an agreement by the Government to pay the principal and, in some cases, interest on a loan should the borrower default. The guarantee can cover all or part of the loan, and therefore transfers all or some of the risk of default from the lender to the Government. Guaranteed loans include insured loans, where the Government collects insurance premiums from lenders, and then pledges the use of the accumulated premiums to cover defaults.

When the Government guarantees 100 percent of the loan, the private loan is transformed into a near-Government direct loan financed by a Government security. Although the economic effects of such a loan are essentially the same as a direct Government loan, the guaranteed loan may not have all the attributes of a direct loan. This is because a private lender may negotiate different terms and conditions for the loan than would a Government agency.

The guaranteed loan will also not have all of the attributes of a U.S. Treasury security, since it will be less liquid and will involve higher transaction costs. The great volume of Treasury securities, their regular issuance in a range of maturities, and the specialized institutions and trading facilities that deal in those securities, all produce an efficient market that cannot be matched by the market for guaranteed loans. The Government guarantee, for example, may not be transferred from one lender to another as readily as a U.S. Treasury security may be traded. In addition, legal counsel may be required to determine the extent to which a lender is assured of repayment and under what circumstances. This requirement is a transaction cost not associated with a U.S. Treasury security. For these and other reasons, guaranteed loans bear interest rates above the yields on otherwise comparable U.S. Treasury securities.

Loan guarantees, like direct loans, redirect economic resources by providing credit to borrowers at more favorable terms than would otherwise be available in the private market, and therefore contain a subsidy. The degree to which the guarantee reallocates credit will depend on the degree of the subsidy.[2] At one extreme, the potential transaction being financed may be considered so risky that no financing would be available without the guarantee. For example, it is unlikely that private lenders would make student

[2] The degree of credit reallocation will also depend on the price elasticity of demand of the good being financed. A small change in the price (i.e., the subsidy) of the good being financed may result in a considerable change in the amount of good actually bought and sold. This special analysis does not consider demand and supply elasticity effects.

loans generally available without guarantees because of the inherent, and significant, uncertainty about any particular borrower's future income stream. In this case, the subsidy will be quite large and will have a dramatic effect on the reallocation of credit.

At the other extreme, the guarantee may result in only a small subsidy and, other conditions being equal, may not significantly change the allocation of credit. Some beneficiaries of loan guarantee programs would have been able to secure the funds privately—without Government support—albeit at a higher cost. For example, guaranteed mortgage credit might be used to finance, at a lower cost, a house that would have been purchased even in the absence of a Federal guarantee. In such a case, the borrower benefits from a small subsidy and the guarantee does not significantly alter the allocation of credit resources.

In both cases, although to different degrees, the guarantee reallocates credit toward federally selected uses, increasing the total volume of credit channeled into these uses. This leaves a smaller supply of credit available to those potential borrowers who do not receive assistance, and increases the interest rates on financing available to these borrowers.

Loan guarantees are used in a wide variety of programs. Guaranteed loans may be made to individuals, to businesses, and to State, local, and foreign governments. The guaranteed loan commitment may be used for a loan made by a bank or other institutional lender or an investment security sold in the capital market. Guaranteed loans, for the purposes of the credit budget, do not include other contractual agreements, such as guarantees of private leases, contracts to make subsidy payments over extended periods, or debt service grants that the recipients may use as collateral for borrowing.

Data for guaranteed loans for 1986 through 1992 are summarized in Table F-7. As with direct loans, guaranteed loan commitments in a given year do not always result in new guaranteed loans in that year due to lags between the time of commitment and the actual disbursement of the loan, and because some prospective borrowers will never convert the loan commitment into actual borrowing. Table F-19 provides data for guaranteed loan programs for 1986 through 1992.

As noted in the previous section, direct loans guaranteed by a Federal agency, but which are disbursed by the Federal Financing Bank (FFB), are recorded as direct loans of the originating agency in Table F-6.

The composition of the guaranteed loan portion of the credit budget is proposed to change. Housing programs accounted for 86 percent of guaranteed loan commitments in 1986, and are expected

Table F–7. **SUMMARY OF PRIMARY GUARANTEED LOAN TRANSACTIONS**

(In billions of dollars)

	Actual		Estimated					
	1985	1986	1987	1988	1989	1990	1991	1992
Commitments	84.7	159.2	155.7	128.4	129.5	130.5	129.6	129.5
New guaranteed loans	55.5	89.6	124.8	109.4	102.1	103.2	103.1	103.1
Change in outstandings	21.6	34.6	76.4	54.1	43.5	40.0	36.8	34.2
Outstandings	410.4	449.8	526.2	580.3	623.8	663.8	700.6	734.8

to drop to 76 percent by 1988. The major programmatic changes are discussed below.

Guaranteed loan commitments in 1986 for the Federal Housing Administration (FHA) increased by nearly 120 percent over 1985 as a result of falling interest rates and a healthy housing environment. Commitments, which were $103 billion in 1986 compared to $47 billion in 1985, are expected to decline in 1987 and 1988. A large share of the increase in commitments in 1986 was due to the refinancing of existing loans, rather than to the financing of newly purchased homes.

The Veterans Administration (VA) offers a mortgage guarantee that is similar in effect to the FHA mortgage insurance program, but does not require veterans to make downpayments on their housing purchases. Guaranteed loan commitments by VA in 1985 were $12 billion; in 1986 they increased to $34 billion and are expected to be $35 billion in 1987. As with the FHA loans, most of the increase in VA loan activity is due to the refinancing of outstanding loans rather than the financing of new home purchases. In 1988, new commitments are estimated to fall to about $28 billion.

The Commodity Credit Corporation (CCC) provides loan guarantees for export sales that would not otherwise occur without Federal credit assistance. CCC guaranteed loan commitments for U.S. exports are estimated to rise from $2.5 billion in 1986 to $5.5 billion in 1987. The increase is a result of the Food Security Act of 1985 which established the CCC loan program level at $5.5 billion in 1987 and beyond. For 1988, the amount requested has been lowered to $3.5 billion reflecting a general weakness in demand for those loans.

The guaranteed student loan program (GSL) provides guarantees of education loans to graduate and undergraduate students, and to parents of dependent undergraduates. Commitments for the program fell by $313 million from 1985 to 1986 due to unanticipated administrative problems involving validation of student aid applications. A significant amount of commitments that would otherwise have occurred in 1986 is expected to shift to 1987. The level of GSL commitments is estimated at $9.6 billion in 1987, an increase of $1 billion from 1986. In addition to the one-time shift of commitments, the increase reflects the administration's proposals for increased reliance on student aid in the form of loans.

Commitments for GSL in 1988 are somewhat lower than in 1987, partly because the shifting of 1986 commitments discussed above made the 1987 level higher than it would have been otherwise. In addition, the demand for these loans is expected to decline due to the elimination of Federal payment of borrower interest during in-school, grace, and deferment periods.

Even though the cost of a student's education should ultimately be borne primarily by the student, the Government has always paid virtually all the costs of borrower defaults on GSLs, which now exceed $1 billion per year. The administration is proposing to charge borrowers new insurance fees on regular and supplemental GSLs of 9 percent and 2 percent, respectively. These upfront fees are intended to generate revenues equal to the estimated present value of the costs of defaults arising from new loans.

The Export-Import Bank (Eximbank) provides guarantees to facilitate U.S. exports. Guaranteed loan commitments fell from $7.8 billion to $5.5 billion between 1985 and 1986. In 1987, Eximbank estimates that commitments will be $11.4 billion, as risk protection continues to be important to U.S. exporters. The proposed level in 1988 and beyond is $10.0 billion.

Prior to 1987, the Maritime Administration provided guarantees for construction mortgage loans to build U.S.-flag vessels in the United States. However, no new loan guarantee commitments have been made since 1986. The termination of this loan guarantee program reflects the administration's position that the maritime industry should be encouraged to rely on the private credit market, without Federal intervention, as the source for capital.

The Small Business Administration (SBA) provides credit assistance to small businesses through a variety of guaranteed loan programs. Beginning in 1988, the budget proposes to gradually reduce the amount of subsidy provided to borrowers by increasing guarantee fees and lowering levels of Federal contingent liability. The budget proposes a total of $3.5 billion in SBA guaranteed loans in 1988, including $2.9 billion in guaranteed general business loans, $373 million for development company loans, and $247 million for Small Business Investment Companies (SBIC) obligations. Except for $17 million in new authority for MESBICs, these levels are consistent with expected 1987 activity.

About 90 percent of all single-family mortgages insured by FHA or VA are sold subsequently in the secondary mortgage market using the Government National Mortgage Association (GNMA) mortgage-backed securities program. This program provides guarantees for securities issued by private mortgage originators and backed by pools of FHA-insured and VA-guaranteed mortgages. The GNMA guarantees enhance the liquidity of trading these securities. GNMA's issuance of new securities is closely tied to the amount of FHA insurance and VA mortgage guarantees. Commitments for GNMA mortgage-backed securities therefore rose from $54.6 billion in 1985 to $138.0 billion in 1986. A slight decrease to $132.5 billion is estimated in 1987. In 1988 and thereafter, the program level is set at $100 billion.

The administration is adopting a Grace Commission recommendation to increase from 6 to 10 basis points the guarantee fee that GNMA currently charges issuers of mortgage-backed securities. This fee is closer to that charged by other issuers of mortgage-backed securities and is a part of a comprehensive effort to increase opportunities for private sector activity in the secondary market for home mortgages.

IV. Government-Sponsored Enterprises

Over the last 70 years, the Federal Government established five financial intermediaries, whose purpose is to direct funds to particular sectors of the economy. These entities, known as Government-sponsored enterprises (GSEs), are:

- Federal Home Loan Banks;
- Federal Home Loan Mortgage Association;
- Federal National Mortgage Association;
- Student Loan Marketing Association;
- Farm Credit System, composed of Banks for Cooperatives, Federal Intermediate Credit Banks, and Federal Land Banks.

While most of the GSEs were created as Government institutions, all have been privately owned since 1969 and are not included in either the unified budget or the credit budget. However, since they were designed to further Government objectives and since they continue to enjoy special benefits not received by other private financial intermediaries, their financial statements are shown in the Budget Appendix (Part IV). Table F–8 summarizes the lending and borrowing of the GSEs for 1986-1988; Table F–20 in the back of this special analysis presents details of their activity.

GSEs make capital available for housing, agriculture, and education. They seek to direct credit to these favored sectors of the economy by acting as financial intermediaries that stimulate greater amounts of lending to these sectors. Their goals are accomplished by creating a secondary market that increases the liquidity of direct lenders in housing and education, and by direct lending in agriculture. Over the last 5 years, outstanding GSE lending grew by 143 percent, from $187 billion in 1981 to $453 billion in 1986. In general, sectors that do not benefit from the presence of a GSE will

Table F-8. **SUMMARY OF LENDING AND BORROWING BY GOVERNMENT-SPONSORED ENTERPRISES**

(In billions of dollars)

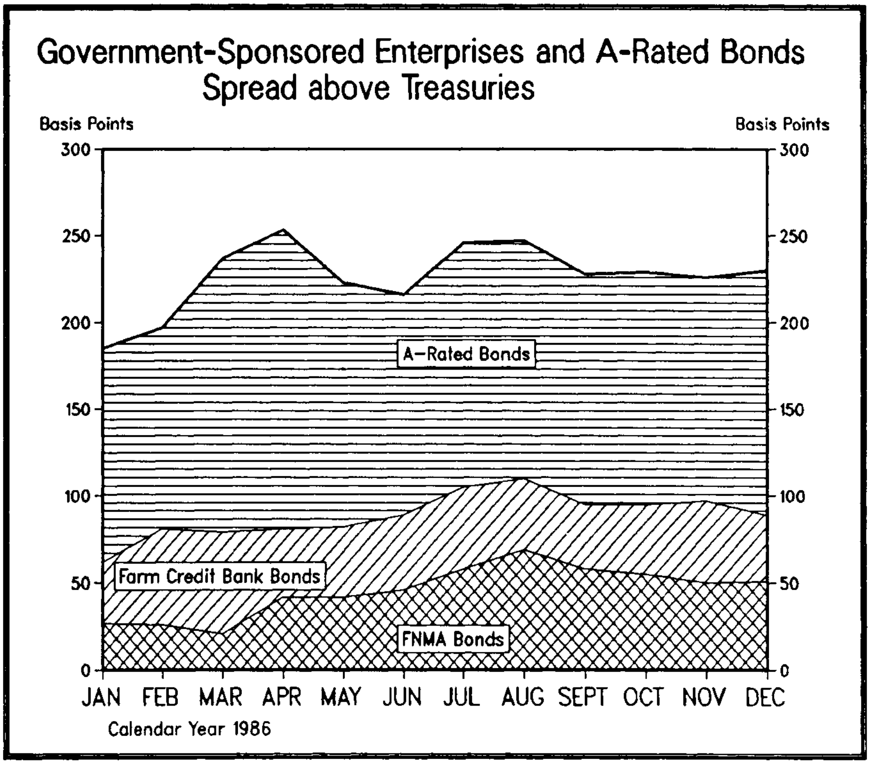
	Actual	Estimate	
	1986	1987	1988
Total net lending:			
Obligations	391.0	386.9	384.9
New transactions	375.9	380.1	372.9
Net change	83.3	95.2	95.6
Outstandings	453.3	548.5	644.1
Total borrowing:			
Net change	107.1	87.2	95.9
Outstandings	458.1	545.3	641.2

have less financing allocated to them, and the financing that is available will be more expensive because there is less of it.

Securities offered by GSEs in the financial market are not guaranteed by the U.S. Government. Nonetheless, these securities usually have yields of 50 to 300 basis points below medium-rated corporate debt. In fact, GSE instruments historically carried only slight premiums above the yields of Treasury securities of comparable maturity. As shown in the accompanying chart, the premium for the Federal National Mortgage Association (FNMA) bonds ranged from 21 to 69 basis points during 1986, while the premium for Farm Credit Bank (FCB) bonds ranged from 62 to 110 basis points.

The relatively small premiums above Treasuries are explained by the perception of a "special relationship" between the GSEs and the Federal Government. While the special relationship arises in part from the intangible nature of Government sponsorship, it also reflects real benefits enjoyed by these enterprises. Table F-9 lists some of the benefits available to GSEs.

In the past, the administration has proposed annual user fees on new borrowings by GSEs. One purpose of the proposed fees was to reimburse the Federal Government for some of the benefits of Government sponsorship that GSEs enjoy. However, perhaps a more important goal of the proposed user fees was to put GSEs on a more equal plane with private financial intermediaries. Along those lines, the administration is studying ways of privatizing the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Association (Freddie Mac)—the major Government-sponsored enterprises involved in the secondary mortgage market. While moving toward the goal of privatization, the administration plans to propose legislation that will limit permanently the maximum amount of a mortgage these Government-sponsored enterprises can purchase. This will limit their continued encroachment on the market served by private firms for as long as



these entities enjoy the advantages conferred by their association with the Federal Government. The administration will also resubmit last year's proposal to charge a fee to the Student Loan Marketing Association (Sallie Mae) for the new debt it issues in the marketplace. The fee would partly eliminate the borrowing advantage enjoyed by Sallie Mae as a Government-sponsored enterprise.

Table F–9. **SOME BENEFITS ENJOYED BY GOVERNMENT-SPONSORED ENTERPRISES**

Type of Benefit	FHLB	FHLMC	FNMA	FCS	SLMA
Line of credit at Treasury	Yes	Yes [1]	Yes	Yes	Yes
Exemption of corporate earnings from Federal income	Yes	No	No	Yes [2]	No
Exemption of interest income of investors from State and local income taxes.	Yes	No	No	Yes	Yes
Eligibility for Federal Reserve open market purchases	Yes	Yes	Yes	Yes	Yes
Equal standing with Treasury debt as investments for most banks	Yes	Yes	Yes	Yes	Yes
Exemption from SEC registration and various State banking laws	Yes	Yes	Yes	Yes	Yes
Eligibility as collateral for public deposits	Yes	Yes	Yes	Yes	Yes

[1] Indirect line of credit through the FHLBs.
[2] Federal Land Banks, Federal Intermediate Credit Banks, and Federal Land Bank Associations.

The operations of the five GSEs are discussed individually below.[3]

Federal Home Loan Bank System.—The Federal Home Loan Bank System was established in 1932 as the first permanent Government-sponsored intermediary for housing. Its original charter was to supervise federally chartered savings and loan associations and to promote home ownership through the extension of credit to savings and other home financing institutions. The Federal Home Loan Bank Board (FHLBB), which serves primarily as a regulatory agency, and 12 regional Federal Home Loan Banks (FHLBs) comprised the original system. Subsequently, the Federal Savings and Loan Insurance Corporation (FSLIC) and the Federal Home Loan Mortgage Corporation (Freddie Mac) were added to the system in 1934 and 1970, respectively.

The Federal Home Loan Banks support the residential mortgage market by providing a central source of housing credit to thrift institutions through loans or "advances" to members. The FHL banks provide member thrifts with access to national capital markets and eliminate regional barriers to the flow of mortgage funds. Advances are an attractive source of funds for members largely because they are the cheapest funds available after savings deposits. Each of the 12 FHL banks is regulated by the FHLBB but establishes its own policies within FHLBB guidelines. FHL banks finance their advances primarily by selling debt securities in the money and capital markets and, to a lesser extent, by accepting both demand and time deposits from member institutions.

Federal Home Loan Mortgage Corporation.—FHLMC (Freddie Mac) is owned by savings institutions. It was created in 1970 to increase the availability of mortgage credit and liquidity in the residential mortgage market. Freddie Mac provides a secondary market for conventional mortgage loans, which are not insured by the Federal Housing Administration or guaranteed by the Veterans Administration. Typically, Freddie Mac purchases mortgages originating from mortgage bankers, savings institutions, commercial banks, and other primary lenders. These institutions sell mortgages to enhance the liquidity of their assets.

Freddie Mac finances its purchases of mortgage loans by issuing debt or by pooling the mortgages together and issuing pass-through certificates backed by these loans. By issuing pass-through certificates, the ownership of the underlying mortgage pool is transferred to a trustee, thereby removing the loans from Freddie Mac's balance sheet. Thus, generally accepted accounting principles for pri-

[3] For additional information on GSEs, see also: Michael J. Moran, "The Federally Sponsored Credit Agencies: An Overview," Federal Reserve Bulletin, June 1985; and the Congressional Budget Office, "Government-Sponsored Enterprises and Their Implicit Federal Subsidy: The Case of Sallie Mae," December 1985.

vate businesses greatly understate Freddie Mac's participation in the secondary market.

As a financial intermediary, Freddie Mac is vulnerable to interest rate fluctuations but has developed innovative financing transactions in an effort to guard against unforeseen interest rate swings. The company's most recent financing innovation is the collateralized mortgage obligation (CMO). This debt instrument is backed by mortgages or mortgage-backed securities, and is designed to reduce the major disadvantage of uncertainty about maturity that is associated with mortgage pass-through certificates.

Federal National Mortgage Association.—FNMA (Fannie Mae) was established by Congress in 1938 to provide a secondary market for federally underwritten mortgages. In 1968, it became a privately owned corporation, and its stock is now traded on the New York Stock Exchange.

Fannie Mae is the largest single investor in home loans in the United States. The company increases the liquidity of mortgage bankers, savings institutions and commercial banks by purchasing from them both conventional loans and loans insured by the Federal Housing Administration and guaranteed by the Veterans Administration. Fannie Mae finances its purchases by issuing debt and mortgage-backed pass-through securities similar to those issued by Freddie Mac. As a financial intermediary, Fannie Mae's profitability is sensitive to movements in interest rates. In recent years, the company has attempted to decrease its sensitivity to interest rate fluctuations by increasing fee income, issuing zero-coupon bonds and other debt in the Eurobond market, issuing yen-denominated securities abroad, and by participating in currency swaps.

Fannie Mae, Freddie Mac, and the Government National Mortgage Association (Ginnie Mae) have long dominated the secondary market for mortgages, particularly the mortgage-backed securities portion of the market. Recently, however, totally private institutions have begun to issue mortgage-backed securities, in part because regulatory changes and recent legislation have enabled private firms to compete more effectively with Fannie Mae and Freddie Mac. Privatization of Fannie Mae and Freddie Mac would eliminate the major hurdle private mortgage insurers face in playing a significant role in the nation's housing credit markets. As long as those two GSEs continue to enjoy their special status, private insurers will have difficulty in competing with them. To mitigate the effects of this unfair competition, the administration is proposing legislation to prohibit Fannie Mae and Freddie Mac from purchasing mortgages in the top quartile (but not to exceed $153,100) of the home price distribution in any housing market.

Student Loan Marketing Association.—SLMA (Sallie Mae) was created in 1972 to expand the amount of funds available for insured student loans. It does so by providing liquidity to lenders, which include savings and loan associations, commercial banks, mutual savings banks, educational institutions, and State and non-profit agencies.

One method that Sallie Mae uses to provide liquidity is the operation of a secondary market for student loans. Sallie Mae's secondary market involves the purchase of existing insured student loans from lenders. When this occurs, Sallie Mae gets title to the loans and is repaid directly by the borrowers. Another method is the provision of "warehousing" advances. Warehousing advances are Sallie Mae loans to lenders that are secured by student loans or certain types of obligations guaranteed by the Government. In such cases, the lenders continue to hold title to the loans and pay Sallie Mae interest on the funds borrowed. Advances are also available to State student loan agencies as a taxable source of funds for their operations.

Sallie Mae borrowing was carried out entirely through borrowing from the FFB until January 1982; since then, it has done all its new borrowing in private credit markets. It will borrow an estimated $3.0 billion in 1987. Sallie Mae is able to borrow at rates only slightly higher than Treasury bills, and virtually all of the student loans that it holds as assets are 100 percent federally insured. Sallie Mae's overall cost of funds in 1986 ranged from 5 to 17 basis points over Treasury bills of comparable maturity, while student loans in that year were guaranteed to yield the holder of the loan 350 basis points over the 91-day Treasury bill rate. As a result, Sallie Mae has maintained a profitable interest rate spread on its student loan portfolio even after its expenses in servicing student loans are taken into account. Sallie Mae's profit margins on its warehousing advances are considerably lower.

The continued profitability of Sallie Mae's operations ought to attract competitors to Sallie Mae's market and eventually drive down the yield associated with guaranteed student loans. However, such competition has not developed. The dominance of Sallie Mae in the secondary market for guaranteed student loans can apparently be attributed to the low-cost source of funds it enjoys as a GSE.

Farm Credit System.—The FCS, the forerunner of which was founded in 1916, is a system of cooperatives that provide credit to farmers and ranchers, their cooperatives, farm-related businesses, commercial fishermen, and rural homeowners. The FCS is supervised by the Farm Credit Administration (FCA), an independent Federal agency. The FCS obtains funds through the sale of securities to investors in the private credit markets. These securities are "joint and several," which means that default by one FCS institution requires all others to honor the obligations of the security.

The goals of the FCS are accomplished through its component parts: Federal Land Banks (FLBs) and Federal Land Bank Associations (FLBAs); Federal Intermediate Credit Banks (FICBs) and Production Credit Associations (PCAs); and the Banks for Cooperatives (BCs).

The past few years have been difficult for farmers and all financial institutions that serve them. The cash flow of many farmers has been reduced due to depressed commodity prices, and large numbers of borrowers have defaulted on their loans. Land prices have declined in many areas of the country, reducing the value of collateral pledged for loans. These factors combined to make 1985 the worst year in the history of the FCS since the Great Depression. In 1985, the system's net loss was $2.7 billion. During the first 9 months of calendar year 1986, the FCS reported a net loss of $1.5 billion.

Published accounts of FCS woes inevitably affected the yields of FCS bonds. Prior to 1985, system securities were priced at only 5 to 10 basis points above Treasury instruments of comparable maturity; that spread grew to 17 to 31 basis points by April 1985, and 35 to 114 basis points by September 1985. In December 1986, Farm Credit Bank issues maturing in 1997 averaged 89 basis points above similar Treasury bonds.

The financial crisis of the Nation's farmers and its impact on FCS led the administration and the Congress to seek changes in the structure and operations of the system. The Farm Credit Amendments Act of 1985 was signed into law by the President on December 23, 1985, and a subsequent law, the Farm Credit Amendments Act of 1986, was passed in October 1986. The new laws provide the basis for reestablishing FCS as a reliable source of financing for American agriculture.

The 1985 Act had 3 main parts: it created the Capital Corporation (CC); it gave the FCA stronger regulatory powers; and it gave the Secretary of the Treasury the discretion to provide financial assistance to the FCS in certain circumstances.

One function of the CC created by the 1985 Act was to reallocate resources within the system by transferring funds from stronger system institutions to weaker ones. However, a number of legal actions have been filed against the CC questioning whether the reallocations proposed are constitutional. In 3 out of 9 cases, preliminary injunctions have been issued against the FCA, while in the remaining 6 cases such injunctions have been denied. The outcome of these lawsuits could have a significant impact on the role and authority of the CC and its ability to carry out its responsibilities, and could further threaten the stability of the FCS.

Nevertheless, in spite of lawsuits filed against the CC questioning the constitutionality of resource allocations with the system, the 1986 law will initiate a mandatory stock purchase and assessment program ("assessment program") by the CC pursuant to its authority under the Farm Credit Amendments Act of 1985. The assessment program requires financially stronger institutions within the system to invest funds totaling $297 million in the CC, and is being used to facilitate the transfer of resources between system institution.

The 1985 Act sought to strengthen the regulatory powers of the FCA, and the 1986 amendments have the same goals. The 1986 Amendments allow system institutions, with the approval of FCA, to capitalize certain interest costs and a portion of their provisions for loan losses during the period July 1, 1986, through December 31, 1988. Institutions may also amortize such capitalized amounts over periods not to exceed 20 years.

The 1986 amendments are intended to provide the system with an opportunity to work through its current financial difficulties without the immediate need for direct Government financial assistance. The system hopes that implementation of the 1986 amendments will enable system institutions to report reduced operating losses for regulatory accounting purposes and thereby minimize the need for transfers of financial assistance within the system to avoid impairments of capital stock in stronger system institutions.

V. Changes in the Quantity and Price of Federal Credit

This section discusses some of the trends and policy initiatives in Federal credit activity that cut across programs. After a brief introduction to administration credit initiatives, the general quantity of new Federal and federally assisted credit, including that of GSEs, is discussed. The last section summarizes an administration proposal to raise the price of Federal and federally assisted credit by charging higher interest rates and fees.

The major trend in Federal credit activity relates to the administration's success in cutting and in some instances reversing the rate of growth in new direct loans. The administration has been less successful in reducing new loan guarantees. The reduction in the rate of growth in Federal credit activity results from measures taken by the administration to reduce Federal intervention in domestic credit markets. Reduced intervention has been accomplished through:

- across-the-board cuts in the volume of new credit authority;
- specific credit program eliminations or drastic reductions; and
- increases in interest rates and loan guarantee fees.

In addition, the administration has worked to improve the management of existing credit programs. By implementing modern business practices, the Government seeks to extend loans more prudently, service accounts more effectively, and collect payments more aggressively and in a more timely fashion. The goal of improved credit management is further enhanced by loan asset sales and the privatization of collection activites. The policies related to the better management of Federal credit programs are detailed in OMB Circular A-70, "Policies and Guidelines for Federal Credit Programs," and OMB Circular A-129, "Managing Federal Credit Programs."

Changes in the Quantity.—Changes in the quantity of credit activity in the economy are measured through the Federal Reserve Board's flow-of-funds accounts. Flow-of-funds accounts measure total net lending and borrowing between various sectors of the U.S. economy. Accordingly, comparing net Federal and federally assisted lending to total net lending in the U.S. economy provides a means for quantifying the amount of net lending directly influenced by Federal programs. The flow-of-funds accounts allow a comparison of changes in the degree of Federal influence over time.

The accompanying chart summarizes these relationships during the last decade. Federal and federally assisted lending in a given year is the difference between the amount of direct, guaranteed and GSE loans outstanding at the beginning and end of year. The net amount of Federal and federally assisted lending was $129.1 billion in 1986. The supply of credit is the net increase in the holdings of various investor groups. In 1986, this was $889.1 billion. The participation ratio of Federal and federally assisted lending to total lending, therefore, was 14.5 percent in 1986. This is below the peak for this decade of 22.6 percent in 1980.

These ratios should be used with caution for two reasons. First, and most importantly, the participation ratios measure volume and therefore do not indicate the full extent of Federal influence in allocating credit to favored borrowers. That influence is reflected in a more meaningful way by the degree of subsidy. A loan guarantee with a small degree of subsidy does not allocate capital to the same degree as a direct loan with a high degree of subsidy. Yet, the lending participation ratios do not distinguish between a dollar of guaranteed loans and a dollar of direct loans; they weigh both dollars equally.

Second, the participation ratios are shown on an aggregate basis for the entire economy and so do not reveal the Federal influence on borrowing by particular sectors, such as households, corporate businesses, or farms. This means that some sectors may be more affected by changes in Federal credit program levels than others, even when the overall lending participation ratio remains the same.

The Federal Government not only lends to various sectors of the economy, but it also borrows. The scope and details of Federal borrowing are discussed in Special Analysis E ("Borrowing and Debt"). The net annual amount of Federal and federally assisted borrowing in 1986 was $378.0 billion. The borrowing participation ratio, therefore, was 42.5 percent in 1986. As shown in the accompanying chart, the borrowing participation ratio is more volatile than the lending participation ratio, ranging from 19 percent to 55 percent of total borrowing between 1977 and 1986. The volatility is due primarily to swings in the budget deficit. Again, a cautionary note is in order. The full impact of Federal borrowing on the U.S. economy and the credit markets depends on competing demands from other borrowing sectors, as well as changes in the supply of credit available for borrowing. Table F-22 at the back of this special analysis provides additional details on participation ratios.

Federal Participation in Domestic Credit Markets

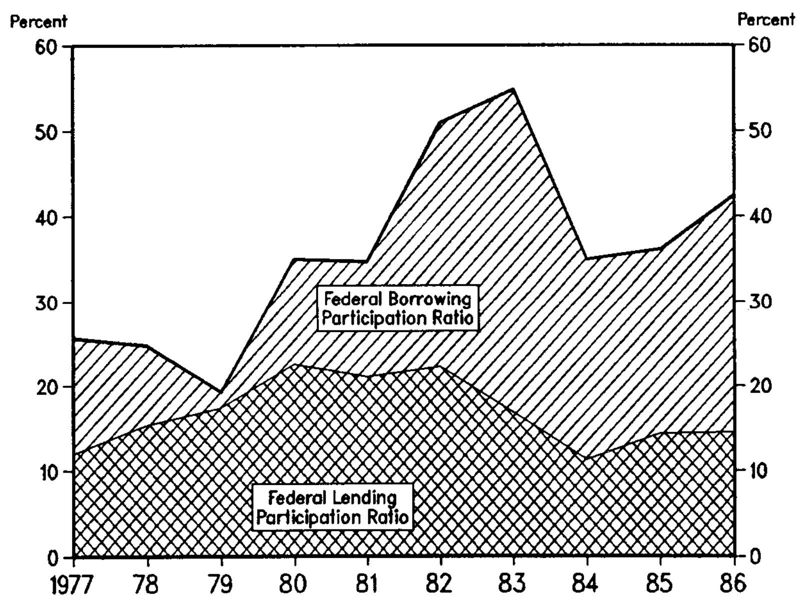


Table F-10 summarizes outstanding Federal and federally assisted loans from 1985 to 1988. Total direct loans outstanding at the end of 1986 were $251.6 billion and total guaranteed loans outstanding were $449.8 billion. In 1986, Federal and federally assisted loans outstanding increased by 11 percent over 1985. Increases of 14 percent in 1987 and 10 percent in 1988 are estimated.

Table F–10. **SUMMARY OF OUTSTANDING FEDERAL AND FEDERALLY ASSISTED CREDIT**

(In billions of dollars)

	Actual		Estimate	
	1985	1986	1987	1988
Direct loans	257.4	251.6	236.4	221.0
Primary guaranteed loans	410.4	449.8	526.2	580.3
Loans by Government-sponsored enterprises	370.0	453.3	548.5	644.1
Total, Federal and federally assisted loans	1,037.8	1,154.7	1,311.1	1,445.4
Federal debt held by the public	1,509.9	1,746.1	1,908.4	2,015.1
Primary guaranteed debt (same as guaranteed loans above)	410.4	449.8	526.2	580.3
Debt of Government-sponsored enterprises	351.6	458.1	545.3	641.2
Total, Federal and federally assisted debt	2,271.9	2,654.0	2,979.9	3,236.6

Changes in the Price.—As part of the administration goal of reducing Federal intervention in credit markets, interest rates and fees have been increased where possible. Interest rates and guarantee fees typically do not cover all the costs to the Federal Government of many credit programs. These costs include default risks for both direct and guaranteed loans, as well as servicing and administrative costs.

The administration therefore proposes to charge borrowers from several loan programs interest rates and loan guarantee fees that compensate the Government more adequately for the risks and costs it bears. The specific interest rates and fees will differ by program depending on the credit risks specific to that program as well as whether the interest rate and guarantee fees are set in legislation. As the interest rates and fees are increased, the level of subsidy is reduced.

VI. Federal Credit Subsidies

Federal credit programs provide more favorable terms than those otherwise obtained in the private market and thus result in a subsidy to the borrower. For direct loans, a subsidy results when one or all of the following terms of Federal credit are in place:

- Interest rates below commercial levels.
- Longer maturities than fully private loans.
- Deferral of interest.
- Allowance of grace periods.
- Waiver or reduction of loan fees.
- Higher loan amount in relation to the value of the underlying enterprise than a fully private loan.
- Availability of funds to borrowers for purposes for which the private sector would not lend—at virtually any interest rate under virtually any repayment terms.

For guaranteed loans, an interest rate subsidy occurs because the Government guarantee removes some or all risk of default or loss facing the lender and because the Government does not charge what a private insurer would charge for the same degree of guarantee. In a few cases, notably guaranteed student loans, there is an additional, explicit payment by the Government of a portion of the borrower's interest. The lender is therefore willing to lend to the guaranteed borrower at rates lower than the market rate since no premium for default risk is required.

In many cases, large interest rate subsidies may be intended, for a direct loan program may be established with an objective that explicitly requires a below-market interest rate. The Economic Support Fund, for example, extends loans at interest rates of about 3 percent per annum in order to meet its objective of aiding foreign countries. In other cases, the extent of the subsidy may be unintentional, as when a direct loan program's interest rate is initially set at a level comparable to a market interest rate but is never changed to keep pace with changes in market interest rates over time. For example, in 1944 Congress set the interest rate on some loans of the Rural Electrification Administration at 2 percent, which was slightly higher than the cost of Treasury borrowing at that time. Last year, the cost of long-term Treasury borrowing was about 8.4 percent, but REA's lending rate had been increased only to 5 percent.

Neither the unified budget nor the credit budget adequately takes into account the subsidy that results from interest rate spreads and other loan terms characteristic of Government credit. However, the cash outlays of the direct loan or loan guarantee program are reflected in the unified budget, while the new levels of annual loan activity (both direct loan obligations and guaranteed loan commitments) are summarized in the credit budget.

The administration's credit reform proposal, summarized above and in Part 3 of the Budget Supplement, evaluates the subsidy cost of Federal credit programs and incorporates them in the unified budget. Under the proposal, subsidies provided by loan programs would be evaluated by selling some direct loans to the public and reinsuring some guaranteed loans with private sector insurance companies. The subsidy for a direct loan would be the difference between the face value of the loan and the price offered by the market. The subsidy for a guaranteed loan would be reflected by the premium charged by the insurance company, in addition to the value of any explict interest subsidy. For direct loans not sold to the public and guarantees not reinsured with private companies, subsidies would be evaluated using a method similar to that described below.

This section presents estimates of the subsidies that will be provided by most Federal direct loan and loan guarantee programs in 1986. The direct loan subsidy is calculated as the discounted or present value of the additional payments that the borrower would have been required to pay for the loan if it had been a purely private loan. This method requires an estimation of the interest rate and other costs a representative borrower would have had to pay to a private lender absent the Government loan. It is not possible to determine this rate of return with precision, since the terms of a loan depend on such conditions as the purpose of the loan, the creditworthiness of the borrower, the competition among lenders, and specific circumstances facing the borrower and lender at the time the loan agreement is negotiated. These conditions differ greatly among loans. Therefore, estimated representative private loans have been used for comparison.

To derive the rate of return on a representative private loan, estimates have been made of the private loan terms according to the purpose of the loan (e.g., to buy a house or to provide a small business with working capital) and the type of borrower (e.g., a high-risk company versus a low-risk company) typically associated with the particular direct loan program. The estimates take into account not only the differences in interest rates, but also the differences in loan fees, maturities, and repayment schedules that would normally be expected for the type of loan being compared.

The subsidy estimates do not take into account several nonquantifiable variables such as different legal covenants in loan contracts. A simplifying assumption used in these calculations is that all loans in a given program bear a similar degree of risk. This assumption is not always true. Several programs (e.g., the Export-Import Bank or the Small Business Adminstration) make loans to a variety of borrowers with widely dissimilar risk characteristics.

The discount rate used to evaluate the present values of the Government and private loan is the internal rate of return on the private loan. This rate is a more appropriate discount rate than the simple interest rate on the private loan, because that interest rate does not reflect the return that lenders receive from commitment commissions and other loan fees, nor does it reflect the maturity and repayment schedule.

Table F-11 shows subsidy values for 89 percent of the obligations that direct loan programs made in 1986. The present value of the total subsidy is $7.7 billion. Comparable estimates for 1987 and 1988 are $6.9 billion and $6.7 billion.

The method of calculation used in Table F-11 measures the value to the borrower of Federal credit by comparing the terms and conditions associated with a Government loan to the alternative terms and conditions of financing for a similar loan from a

Table F–11. **ESTIMATED SUBSIDY COSTS FOR 1986 DIRECT LOAN OBLIGATIONS**

Agency and program	Present value of subsidy	
	Percent of direct loan obligations	Millions of dollars
Funds Appropriated to the President:		
Foreign military sales credit:		
Grants	100.0	2,966.7
Concessional	18.0	157.9
Treasury rates	10.3	113.6
Economic support fund	65.1	67.6
Guarantee reserve fund	10.0	105.0
AID functional development assistance	66.7	169.4
AID housing	24.0	9.4
AID private sector revolving fund	15.9	2.4
OPIC	9.4	1.3
Agriculture:		
ACIF:		
Emergency disaster	12.5	318.4
Farm operating	12.3	31.0
CCC commodity loans	2.4	417.4
Public Law 480 export credits	95.1	773.2
REA:		
Revolving fund	23.2	685.1
Rural Telephone Bank	16.2	20.7
Education:		
Guaranteed student loan defaults	85.0	1,133.9
Housing and Urban Development:		
Housing for the elderly and handicapped	17.4	96.7
Interior:		
Bureau of Reclamation	57.0	25.7
Bureau of Indian Affairs	22.4	3.2
Transportation:		
MarAd federal ship financing fund	8.0	100.8
Highway right-of-way loans	37.2	17.9
Veterans Administration:		
Vendee loans and loans acquired	6.3	61.1
Export-Import Bank	11.0	63.6
FSLIC	3.2	0.7
National Credit Union Adminstration:		
Central liquidity facility	3.0	0.9
Small Business Administration:		
Disaster	44.4	229.1
Business loans	20.1	9.4
Development companies	18.2	64.2
Investment companies	30.7	41.8
Minority business assistance	67.0	26.1
Tennessee Valley Authority:		
Seven States Energy Corporation	4.7	9.5
Home weatherization	26.0	16.9
Total, direct loan subsidies	....	7,740.6

private lender. An alternative measure of subsidy calculates the direct cash costs to the Government, which are always less than the benefit to the borrower for two reasons. First, the Government's cost of borrowing is always lower than that of the private sector due to the Government's sovereign power to tax and to print money, and to the safety and liquidity of Treasury securities. Second, the Government does not need to hold any reserves against its loan guarantees, which makes the Government less risk averse than is the private sector to the level and variance of risk inherent in the credit it grants.

If the cost to the Government were used instead of the benefit to the borrower as the basis for measuring subsidies, distortions would be created. The budget would continue to favor credit programs over direct spending programs; it would not give policymakers and the public the information they need to compare fairly those two kinds of programs and to determine what form of assistance is most cost effective. Furthermore, using cost to the Government would not take full account of the borrower's riskiness, which would skew the allocation of resources among borrowers, among credit programs, and between credit and other spending.

Guaranteed loan subsidies are calculated by the same method as direct loan subsidies. The guaranteed loan subsidy is the present value of the additional payments that borrowers would have paid if the loan had not been guaranteed by a Federal agency, and, in some cases, if the agency had not made explicit interest payments. In some cases, private insurance or guarantee coverage of a type offered by Federal programs is available from private insurers. An example is private mortgage insurance, which is comparable to the mortgage insurance or guarantees offered by the FHA and VA. In these cases, one means of estimating the subsidy is to calculate the present value of the difference in fees charged by the Federal Government and what a private insurer would have to charge to provide an identical guarantee. In other cases, private insurers simply do not offer insurance or guarantee coverage similar to that offered by Federal programs. The absence of private insurance may be because the credit risks of the guaranteed loans are so large or so immeasurable that private insurers will not undertake to offer guarantees or it may be because potential private insurance has been preempted by a Federal guarantee program, which inherently has an immensely larger capacity to bear risk and to charge guarantee fees below what the private insurer would charge. In these cases, the subsidy is calculated in terms of the interest rate and fees a private lender might have charged the borrower in the absence of a Federal guarantee.

Table F-12 presents these subsidy calculations for nearly all of the gross commitments that loan guarantee programs made in 1986. The present value of the total estimated subsidies is $10.2 billion. Comparable estimates for 1987 and 1988 are $10.6 billion and $9.2 billion.

Table F–12. **ESTIMATED SUBSIDY COSTS FOR 1986 GUARANTEED LOAN COMMITMENTS**

Agency and program	Present value of subsidy	
	Percent of guaranteed loan commitments	Millions of dollars
Funds Appropriated to the President:		
AID housing and other credit	22.4	32.5
Overseas Private Investment Corporation	12.6	17.1
Agriculture:		
ACIF	5.5	85.8
CCC export credits	2.6	65.1
Education:		
Guaranteed student loans	41.2	3,532.9
Health:		
Health education assistance loans	10.0	37.4
Housing and Urban Development:		
FHA fund	1.2	1,231.1
GNMA secondary mortgage guarantees	1.9	2,621.3
Transportation:		
MarAd federal ship financing fund	10.0	4.8
Veterans Administration:		
Loan guaranty revolving fund	6.3	2,160.7
Export-Import Bank:		
Financial guarantees	2.0	110.2
Small Business Administration:		
Business assistance	12.2	263.8
Total, guaranteed loan subsidies	....	10,162.6

Table F–12, like Table F–11, measures the value of the subsidy to the borrower, not the cost of the subsidy to the Government. It would be inappropriate to use such a cost to Government basis for calculating economic subsidies, since it would not measure the cost of the loan guarantee to the economy. This could lead to the mistaken perception that a program was economically self-sustaining when, in fact, it was not. For example, the Federal Government is not required to set aside reserves in order to minimize the risk that it will be forced out of business should it miscalculate the credit risks of guaranteeing a large number of loans.

Some qualifications should be kept in mind when reviewing the estimates of Federal credit subsidies. First, there are theoretical difficulties in estimating subsidies. For example, private investors might wish to have more detailed financial information about the borrower than the Federal Government might request. The private sector would therefore reflect these higher transaction costs in its charges for loans and loan guarantees. The subsidy estimates do not take account of such transaction costs.

Second, the subsidies shown are almost certainly underestimated because they are calculated on a marginal price basis. The implicit assumption is that the Federal program is not large enough to affect the price of similar unguaranteed loans. This is not true for some programs. The large size and pervasive nature of some Federal programs, especially in the housing sector, means that the Federal supply of credit is so large that the market clearing price of credit in that sector is probably lower than it would otherwise be. This means that the private lenders in that sector may charge less than they otherwise would, thereby lowering the subsidy estimate.

VII. Defaults

Federal credit programs have markedly different objectives than private lending institutions, which seek profits. Several Government credit programs, such as the Small Business Administration, are designed to play the role of "lender of last resort." Federal loans, therefore, often bear more risk than private lenders are willing to bear. Partially as a result, some Government loan programs have high default rates. The diverse characteristics of Federal credit programs, each with its own legislative mandate and a variety of different borrowers, make it difficult to compare default rates among Federal programs.

Table F–13 shows the amount of direct loans written off and the amount of guaranteed loans terminated for defaults. Of all direct loans outstanding, only 0.4 percent are recorded as write-offs in 1986. Of total guaranteed loans outstanding, 1.9 percent are reported to be terminated in 1986.

The agricultural and maritime programs have the highest estimated default or termination rates in 1987. In both instances the high delinquency and default rates can be traced to depressed market conditions. Starting in the early 1980's, the U.S. farm economy was characterized by declining income and asset values. As a result of the depressed conditions, delinquency, liquidation, and bankruptcy rates continue to rise.

An examination of world shipping markets reveals freight rates at a 5-year low and an enormous excess in shipping capacity. The sustained slump in world shipping has resulted in bleak shipping profits, forced many shipowners out of business, and motivated many usually accommodating private creditors to seek to liquidate their holdings at tremendous losses, rather than wait for further improvements.

The dramatic increase in terminations of defaulted loan guarantees in the economic development revolving fund in 1987 is the result of loans to failed steel companies. Losses from direct loan write-offs appear to have been a miniscule amount of loans outstanding over the last 2 years, according to the present system of Government reporting. To a large extent, however, this reflects the absence of Government-wide standards for writing off direct loans held in the Government's portfolio. Direct loans are frequently

Table F–13. **DIRECT LOAN WRITE-OFFS AND GUARANTEED LOAN TERMINATIONS FOR DEFAULTS**

	In millions of dollars			As percentages of outstanding loans [1]		
	Actual	Estimated		Actual	Estimated	
	1986	1987	1988	1986	1987	1988
Direct loans:						
Commodity Credit Corporation	1	63	63	0.01	0.35	0.42
FmHA agricultural credit insurance	205	500	400	0.72	1.77	1.47
Rural housing insurance fund	16	17	16	0.06	0.06	0.06
Guaranteed student loans	7	222	482	0.08	2.37	5.01
Other education loans	15	16	35	0.19	0.32	3.21
Federal Housing Administration	82	173	299	1.94	4.27	8.27
Small business assistance:						
Business loans	393	372	349	8.00	7.66	9.03
Disaster loan fund	161	138	105	3.67	3.68	3.68
Other	66	51	23	0.05	0.04	0.02
Total write-offs	946	1,552	1,772	0.38	0.64	0.77
Guaranteed loans:						
Commodity Credit Corporation	317	518	600	7.28	10.91	8.10
FmHA agricultural credit insurance	61	107	174	3.44	3.95	4.52
Rural development insurance fund	82	60	50	2.96	2.42	2.38
Economic development revolving fund	5	152	8	1.92	71.87	6.23
Guaranteed student loans	1,475	1,380	1,724	3.97	3.57	4.26
Medical facilities	5	23	2	0.53	2.86	0.30
Health education assistance loans	18	23	30	1.86	1.82	2.08
Federal Housing Administration fund	2,906	3,009	3,141	1.39	1.19	1.04
MARAD ship financing fund	1,243	600	100	21.73	12.99	2.44
VA loan guarantee revolving fund	1,541	1,562	1,591	1.11	1.05	1.01
SBA business loans	457	475	465	5.32	5.45	4.79
Other	25	33	21	0.11	0.14	0.09
Total terminations	8,135	8,005	7,906	1.88	1.64	1.43

[1] Average of loans outstanding over year

carried in the Government's portfolio at their nominal value regardless of their true value. The Eximbank, for example, still holds in its portfolio $89 million in principal and overdue interest on loans made to Cuba between 1951 and 1958. The FmHA holds in its portfolio, at their full nominal value, several billion dollars of loans that are delinquent by more than a year.

In the past, losses from loan guarantee programs were considered relatively small for two reasons. First, many of the guaranteed loans involved liens on marketable property, particularly houses. Second, due to the absence of Government-wide standards, many loans acquired as a result of defaults on guaranteed loans were never written off. This makes the losses due to Government guarantee programs look smaller than they are.

There has been a growing awareness that losses in both direct and loan guarantee programs are higher than reported. In recognition of this problem, the Treasury Department and the Office of Management and Budget are studying means to improve the Government's reporting of and control over defaults.

In addition, the administration has been working to reduce delinquency levels, recapture revenues, and improve overall credit management. Specifically, agencies will be held accountable for appropriate performance goals related to delinquency reductions. They have also been required to adopt the administration's nine-point program announced on August 18, 1986. The nine-point program includes:

- *Prescreening*—Avoid bad loans by using commercial credit reporting agencies to establish the creditworthiness of loan applicants (this measure is mandatory for all agency programs where creditworthiness is a criteria for receiving a loan).
- *Private sector credit bureau reporting*—Agencies are now referring credit information on Federal debtors to private sector credit bureaus where it can be accessed by both private and Federal loan officers.
- *Loan servicing*—Agencies have been required to use private sector contractors whenever possible; in cases where it is not possible, agencies are upgrading their loan servicing capabilities. Loan servicing will be part of all sales of direct loans and become the responsibility of the purchaser.
- *Private collection agencies*—A new policy is to turn over all debt more than six months delinquent that is held by the Government to private collection agencies that have the incentives, resources, and expertise to collect delinquent loan payments.
- *Income tax refund offset*—The Deficit Reduction Act of 1984 authorized the Internal Revenue Service to offset income tax refunds of taxpayers whom lending agencies have certified are delinquent on debt payments and who have failed to respond to agency debt collection efforts.
- *Offset Federal employees' salaries*—Agencies were given the authority in the Debt Collection Act of 1982 to offset the salaries of Federal employees who are delinquent on debt owed to Federal agencies.
- *Litigation*—Private sector attorneys will be used to assist the Justice Department in litigating cases, which will allow more timely litigation of uncollectible debt.
- *Write-offs*—Policies, procedures, and implementation plans to assure that uncollectible accounts are written-off are being developed.
- *Loan asset sales*—A number of loan portfolios will be sold in their entirety in 1988 and 1989. Larger portfolios will take longer to sell. There should be substantial credit management gains from selling loans, ranging from better loan origination and documentation, to more efficient servicing and collection.

Sale of existing loans will also provide insight into the subsidies implicit in these loans.

More information on the nine-point program can be found in the credit management and debt collection section of the document, "Management of the United States Government, FY 1988."

VIII. Federal Financing Bank

The Federal Financing Bank (FFB) began operation in May 1974 and has been a significant factor in financing Federal credit activities since then. The Bank is administered by the Treasury Department.

The FFB was designed to serve as a financial intermediary for the efficient financing of obligations issued, sold, or guaranteed by Federal agencies. Use of the FFB by Federal agencies leads to lower debt financing costs than if the agencies or the guaranteed borrowers were to sell their obligations individually in the credit market. Agency obligations trade at premiums above Treasury securities due to their relative illiquidity, smaller size of issue, and unique financial terms that distinguish them from Treasury securities and each other. This budget proposes to allow the Secretary of the Treasury to recapture for the U.S. Government the costs that use of the FFB allows agencies to avoid by charging borrowers a special premium.

The FFB performs three functions: (1) it purchases guaranteed loan assets from Federal agencies; (2) it disburses loans directly to borrowers when the loans are guaranteed by a Federal agency; and (3) it buys debt of Federal agencies that are otherwise authorized to borrow from the public. In all cases, the operation of the programs remain with the agencies that use the FFB. Prior to passage of the Balanced Budget and Emergency Deficit Control Act of 1985, the outlays of the first two types of transactions were considered to be outlays of the FFB and were "off-budget." The third type of FFB transaction was considered to be a means of financing agency outlays. Under Section 214 of the Act, all transactions by the FFB on behalf of a Federal agency are now considered to be a means of financing for the agency. As a result, FFB transactions formerly presented as a separate line item in this special analysis and elsewhere in the budget have been incorporated into the account of the agency originating the transaction.

The following provides a brief description of each of the functions of the FFB, all considered to be forms of lending to Federal agencies:

(1) Loan asset sales.—Agencies may sell loan assets to the FFB as a means of financing their direct loan programs. The largest volume of loan assets sold were certificates of beneficial ownership

(CBOs) issued by the Farmers Home Administration and the Rural Electrification Administration (REA). In 1988, neither agency plans any new net sales of loan assets to the FFB. Loan assets sold to the FFB are repurchased by the agency at scheduled intervals.

(2) Guaranteed loan originations.—The FFB disburses loans directly to borrowers when the loan is guaranteed by a Federal agency. The agency's guarantee program thus becomes a program that effectively makes direct loans. The only program that proposes to use the FFB in this manner in 1988 is the Tennessee Valley Authority's Seven States Energy Corporation.

(3) Agency debt.—Agencies authorized to borrow from the public, such as Eximbank, almost always borrow from the FFB (or the Treasury) instead, since it is less expensive than issuing their own securities and borrowing directly from financial markets. Other agencies that are not authorized to borrow from the public also borrow from the FFB. This borrowing itself has no effect on outlays; instead, outlays are recorded when the proceeds of borrowing are spent by the agencies.

Table F-14 summarizes the activities of the FFB for 1986 through 1992. Table F-21 at the end of this document shows the activities of the FFB over the same period by agency and account.

Table F-14. **SUMMARY OF FEDERAL FINANCING BANK ACTIVITIES**

(In billions of dollars)

	Actual 1986	Estimated					
		1987	1988	1989	1990	1991	1992
Assets purchased from Federal agencies:							
New acquisitions	3.1	0.4	0.2	0.9	1.7	0.5	4.1
Net lending	1.7	−4.6	−3.9	−6.4	−5.5	−5.3	−5.1
Loans outstanding	69.9	65.2	61.3	54.9	49.4	44.1	39.1
Loans originated on behalf of Federal agencies:							
New acquisitions	4.0	3.5	3.1	2.1	1.6	1.0	0.7
Net lending	1.1	−1.2	−1.5	−0.7	−0.6	−1.4	−1.7
Loans outstanding	54.6	53.4	52.0	51.3	50.6	49.3	47.6
Debt securities acquired from Federal agencies:							
New acquisitions	4.5	4.3	2.7	2.9	2.6	2.3	1.3
Net lending	0.6	0.5	*	1.1	1.2	0.9	−*
Loans outstanding	32.4	32.9	32.9	34.0	35.2	36.1	36.1
Total, all FFB acquisitions:							
New acquisitions	11.6	8.2	6.0	5.9	5.9	3.8	6.1
Net lending	3.4	−5.3	−5.4	−6.0	−4.9	−5.7	−6.8
Loans outstanding	156.9	151.5	146.2	140.2	135.2	129.5	122.7

*$50 million or less.

IX. Loan Asset Sales to the Public

In this budget, the administration proposes to continue and expand its pilot program of selling existing loan assets to the public without recourse—a program first proposed in the 1987 Budget. Certain additional loan asset sales were required by Omnibus Budget Reconciliation Act of 1986. These sales are designed to achieve 4 major goals: reduce the Government's cost of administering credit programs; provide an incentive for agencies to improve loan origination and documentation; assist in determining the subsidies of Federal credit programs; and increase budgetary offsetting receipts in the year of sale.

The nominal value of loans to be sold under the pilot program in 1988 is $11.2 billion; other loans with a nominal value of $1.4 billion will also be sold in that year for programmatic reasons. Table F-15 presents the composition of the face value sales. Sales in 1988 of pilot program loans are estimated to have a market value of $6.9 billion. These sales are estimated to reduce the budget deficit by $5.3 billion in 1988, after taking into account the loss of principal repayments and interest income from these loans that were incorporated in previous budget estimates.

Although loan asset sales reduce current budget deficits, they increase future deficits because they move to the present the anticipated future streams of principal and interest payments from the loans. However, this effect is mitigated by several factors. First, revenues from asset sales reduce Treasury borrowing and, therefore, lower interest outlays in subsequent years. Second, the savings from improved management of credit programs that occur as a consequence of asset sales are not explicitly reflected in the budget. Finally, the discount at which the loans are sold measure the present value of the subsidies implicit in the loans. The "loss" recognized at the time of sale merely makes that subsidy explicit.

Selling loan assets to the public with a Government guarantee is a form of federal borrowing from the public. The Government incurs a contingent liability in the amount of the loan guarantee. Guaranteed loan asset sales are a more costly means of borrowing for the Government than selling Treasury securities, since purchasers of the guaranteed loan assets frequently will offer prices well below the face value of the loans, despite the Government guarantee. The lower price is offered because the loan assets may be relatively illiquid or have unique characteristics that reduce their value to the purchaser. Yet, because of the Government guarantee, such sales tend to reduce the investment demand for Treasury securities. It is more efficient for the Government to meet its borrowing needs by issuing Treasury securities. For this reason, administration policy is to sell loan assets to the public without a Government guarantee.

Table F-15. **LOAN ASSET SALES TO THE PUBLIC**

(In millions of dollars)

Agency and program	1987	1988	1989	1990	1991	1992	Total 1987-92
PILOT							
Agriculture:							
Rural housing insurance fund	2,200	1,200	1,000	1,000	1,000	1,000	7,400
Rural development insurance fund	1,870	1,200	1,000	1,000	1,000	380	6,450
Rural Electrification Administration		1,000	1,000	1,000	1,000	1,000	5,000
Rural telephone bank		500	500	250			1,250
SBA:							
Business loan investment fund		1,000	1,000				2,000
Disaster loans	600	670	670	670	670	662	3,942
Development companies		500	397				897
HUD:							
FHA fund	300	350					650
Rehabilitation loans		350	308				658
Community development	35	200	94				329
Housing for the elderly and handicapped		500					500
Education:							
College housing loans	983	931	59	34			2,007
Higher education facilities		142	51	33			226
Veterans Administration:							
Vendee loans		300	300	300			900
Export-Import Bank	2,018	1,200	1,000	1,000	1,000	1,000	7,218
Interior:							
Bureau of Reclamation		358					358
HHS:							
Medical facilities		132					132
Health maintenance organizations		97					97
Transportation:							
Railroad rehabilitation		583					583
Tennessee Valley Authority			256				256
Subtotal, pilot	8,006	11,213	7,635	5,287	4,670	4,042	40,853
PROGRAMMATIC							
HUD:							
GNMA tandem plan	650	329					979
Education:							
Guaranteed student loans		250	300	350	400	450	1,750
Perkins (NDSL) loans		33	33	33	33	33	165
Veterans Administration:							
Vendee loans	690	745	779	832	670	685	4,401
Subtotal, programmatic	1,340	1,357	1,112	1,215	1,103	1,168	7,295
Total, sales to the public	**9,346**	**12,570**	**8,747**	**6,502**	**5,773**	**5, 210**	**48,148**

X. Federal Deposit Insurance and Contingent Liabilities

The Federal Government provides guarantees and insurance against several types of risk for many sectors of the economy. One kind of insurance the Government provides is the insurance against uncertain situations, or contingencies. Under this type of insurance, if a given situation occurs, such as borrower default or natural disaster, the Government assumes a liability and makes payment to the insured party. However, if the specified situation does not occur, the Government is not liable for any loss. When the Government makes an agreement such as that described above, it becomes exposed to the possibility of loss sometime in the future.

Table F–16 shows the current contingent liability of the Federal Government. Unlike an annual corporate financial statement, the data presented in Table F–16 do not represent the Government's expected loss contingency for 1987 alone, but rather the overall contingent liability or exposure of the Government resulting from all potential insurance claims and guaranteed loan defaults. As can be seen in the table, the Government bears risk from a variety of sources, including deposit insurance, loan guarantee programs, foreign political risk, flood and crop insurance, and pension insurance.

Table F–16. **CONTINGENT LIABILITY OF THE FEDERAL GOVERNMENT**

(In billions of dollars)

Program or activity	1985 actual	1986 actual
Deposit insurance:		
Federal Deposit Insurance Corporation	1,268.4	1,368.5
Federal Savings and Loan Insurance Corporation	769.0	817.2
National Credit Union Administration	104.0	130.0
Subtotal, deposit insurance	2,141.4	2,315.7
Other:		
Loan guarantee programs [1]	613.1	691.9
National flood insurance	133.8	133.8
Overseas Private Insurance Corporation	3.0	3.1
Federal crop insurance	6.7	7.2
Pension Benefit Guaranty Corporation	2.0	3.5
Subtotal, other	758.6	839.5
Total, contingent liabilities	2,900.0	3,155.2

[1] Gross basis.

The credit budget encompasses all loan guarantee programs, but only a small part of the transactions of Federal deposit insurance programs, and only the lending activity of the Pension Benefit Guaranty Corporation and Overseas Private Investment Corporation. Table F–16 also shows these and other programs that expose the Government to significant risk that are outside the scope of the credit budget; furthermore, there are additional, but smaller insurance programs not in the table that increase the Federal contingent liability.

Although only a small part of the transactions of Federal deposit insurance programs are included in the credit budget, these programs make up the largest portion of the Government's contingent liability. The Federal Government insures depositors through the

Federal Deposit Insurance Corporation (FDIC), the Federal Savings and Loan Corporation (FSLIC), and the National Credit Union Administration. Deposit insurance offered by these programs serves two purposes: it helps stabilize the Nation's monetary and financial system and thereby the economy as a whole; and it protects depositors in the insured financial intermediaries. As seen in Table F-16, the value of insured deposits at the end of 1986 was over $2.3 trillion.

Federal deposit insurance programs may assist insured depositors in a variety of ways. When an insured financial institution becomes troubled, deposit insurance programs may: (1) liquidate the institution and pay depositors directly; (2) merge the troubled institution with a healthier institution, in some cases providing financial assistance to the acquiring partner in the merger; or (3) provide financial assistance directly to the troubled institution in the expectation that it will recover. Financial assistance to private financial intermediaries has consisted of equity purchases, purchases of physical assets, and direct loans and loan guarantees.

Although similar to a guarantee, Federal deposit insurance is not included in the guaranteed loan portion of the credit budget, principally because it does not directly allocate credit to the ultimate borrowers of that credit. Deposit insurance directly affects the liabilities (deposits) of financial intermediaries but only indirectly their assets (loans). All other Federal guarantee programs are structured to influence the assets or loans of financial intermediaries directly. Nonetheless, it is argued that Federal deposit insurance gives insured institutions an incentive to take on more risk than they would otherwise, either by making riskier loans or by increasing leverage. To this degree, deposit insurance indirectly allocates credit. It also indirectly affects the allocation and amount of credit by changing depositor behavior as a result of its protection, and by insuring the stability of the financial system and the economy. Direct loan obligations of FDIC and FSLIC include two types of transactions: cash advances to troubled institutions, and purchases of loans to the public held in the failing financial institution's portfolio. Both of these transactions increase Federal outlays, and are included in the credit budget.

For 1987 and beyond, the FDIC does not plan to incur new direct loan obligations. Assistance to troubled institutions or purchases of failing banks will be in the form of cash grants or interest-bearing demand notes issued by FDIC. In the event of a liquidation, assets of the failed bank are held in receivership, rather than on the FDIC's books. These transactions increase outlays (and in the case of FDIC notes, agency debt), but would not affect the credit budget. FSLIC anticipates new direct loan obligations of $25 million in both

1987 and 1988. Direct loan obligations made by deposit insurance programs amounted to $183 million in 1986.

XI. Leasing

The Federal Government is both a lessor and a lessee in hundreds of leases involving billions of dollars every year. As a lessor, the Government allows private entities to contract for the use of on-shore and off-shore acreage for oil and gas exploration and lands for grazing and timber harvesting. Federal leases raise about $6 billion annually in proprietary receipts, primarily from rents and royalties on the Outer Continental Shelf.

As a lessee, the Federal Government uses both operating and capital leases to contract with private entities to use office facilities, computers, telecommunications equipment, satellites, ships, cars, planes, and other equipment. Operating leases are normally short term and do not involve a transfer of title to the asset. That is, the lessor holds title to, performs maintenance on, and regains the asset after the lease period.

Operating leases can be used to overcome peak load problems when the use of the asset is not needed indefinitely. Also, the lessee may not wish to take on the ownership risks of upkeep or may find that the lessor can provide more efficient maintenance services. Finally, the lessee may wish to avoid the purchase of an asset likely to be obsolete in a relatively short period of time.

In contrast, a capital lease arrangement is long term and involves a change in the basic ownership of an asset. In essence, capital leases are a means by which lessees can purchase an asset by borrowing from the lessor. This is obviously true in the case of lease-purchases, where the Government ends up holding title to the property at the end of the lease period. But even when this does not occur, if the lease covers a large part of the operating life of the asset, it has much the same economic impact as a front-end purchase that is eventually resold.

From a budgetary standpoint, capital leases can be more attractive than purchasing assets. Leasing entails lower outlays in the short-term and, under some circumstances, less budget authority. When capital assets are purchased, their entire purchase price requires obligational authority and is recorded as an outlay in the year of purchase. When capital assets are leased, only the annual lease payment is recorded as an outlay and, under certain lease contracts, there is no recognition of obligations to make payments in future years.

Yet, lease-purchase arrangements are inefficient borrowing mechanisms for the Government because the lessor (a private entity) will be charging rent based on an effective interest rate significantly above the Treasury's cost of money. Over the full period of the lease, the Government will be paying more for the asset than if it bought it outright and financed the purchase with Treasury bonds.

The Office of Management and Budget issued Circular No. A-104, "Comparable Cost Analysis for Decisions to Lease or Purchase General Purpose Real Property," in 1972 to provide Government-wide guidelines on leasing. The circular requires economic analysis to justify major lease-buy decisions. Yet, the circular did not apply to all lease-buy decisions.

Owing to the recognition that the budget scorekeeping system should treat capital leases and capital purchases similarly in decisions on whether to buy or lease, the administration released a revision of A-104 on June 1, 1986. The revised A-104 prescribes a uniform method for the economic analysis to be conducted when considering whether to use leasing in place of direct Government purchase and ownership as a means of acquiring the use of assets. The budgetary treatment of leases with options to purchase is being reviewed.

XII. Tax-Exempt Credit

Interest on State and local government obligations generally has been exempted from the Federal income tax since its adoption in 1913.[4] Federal tax exemption increases the demand for these obligations, since it results in higher after-tax interest rates for the lenders and investors. This increase in demand reduces the pretax interest rates of these obligations relative to the pretax interest rates of taxable securities. Consequently, tax-exempt interest rates in recent years have historically been about 75 percent of taxable interest rates on long-term obligations with similar credit risk. In contrast, because of a record supply of tax-exempt bonds and uncertainty generated by the pending tax bill in 1986, the spread between tax-exempt and taxable bonds was unusally low, and tax-exempt yields averaged 94 percent of 20-year Treasury bond yields.

Tax exemption reallocates scarce credit resources, just as do Federal direct loans and loan guarantees. Borrowers aided by Federal tax-exempt status have access to credit resources at preferential interest rates over competing borrowers without the tax-exempt status. Borrowers who benefit both from tax exemption and Federal guarantees have an advantage over all other borrowers, including the Federal Government, since the interest on Federal Government debt is taxable.

Although tax-exempt financing alters the allocation of credit and has costs similar to other Government financing programs, it is not

[4] Tax exemption is a tax expenditure. (See Special Analysis G, "Tax Expenditures.") Special Analysis G includes a discussion of revenue losses attributable to special provisions of the tax code, including various types of tax-exempt bonds.

included in the credit budget for several reasons. First, unlike other credit assistance, the statutory authority for tax-exempt credit generally allows unlimited access that is unilaterally elected by eligible borrowers. Second, tax-exempt credit is not controlled by the budget process in the same manner as direct loans or guaranteed loans; effective control of tax-exempt financing can only be achieved through legislated changes to the tax code.

A relatively small portion of tax-exempt financing is guaranteed by the Federal Government, and is therefore included in the credit budget as guaranteed loan commitments. This occurs when the Federal Government guarantees the financial assets that underlie the tax-exempt obligation. Examples include State and local government bonds that finance home mortgages guaranteed by the Federal Housing Administration or the Veterans Administration, or bonds that finance student loans guaranteed by the Department of Education.

Another example of a tax-exempt bond that is indirectly guaranteed by the Federal government is tax-exempt bond issues backed by special Treasury obligations, the State and local government series (SLGS). The bulk of these tax-exempt bonds have originated in connection with advance refundings. In an advance refunding, an institution purchases SLGS bonds, and the Treasury uses the proceeds of the sale as collateral for an outstanding bond issue of the institution. The original issue is now "guaranteed" by the Federal government.

Advance refundings generally occur so that issuers of tax-exempt bonds can get out of restrictive covenants or realize debt service savings. An example of a restrictive covenant might be a limit on the dollar volume of bonds that an institution can issue. By using an advance refunding, the institution can issue a new series of bonds and exceed the limit originally agreed upon.

In recent years, tax-exempt bonds collateralized by SLGS bonds have been growing in importance. At the end of 1986, over $100 billion of these bonds were outstanding, which represents approximately 14 percent of all outstanding tax-exempt issues.

This administration and previous ones have believed for several reasons that Federal agencies should not offer direct or indirect guarantees for securities that benefit from tax-exempt status. First, tax-exempt financing is an inefficient means of financing, since the tax loss to the Treasury is greater than the savings from the lower financing costs available to the borrower. Therefore, it should not be stimulated by benefitting from a Government guarantee. Second, the guarantee of tax-exempt financing confers double benefits on investors in those securities: they pay no Federal income tax and they bear no risk. This class of debt obligation is therefore superior to Treasury securities.

During the first half-century of the income tax, tax-exempt borrowing was mainly for public purposes such as financing roads and schools. From the 1960s on, however, the benefits of tax-exempt financing have increasingly been made available to private businesses. State or local governments typically establish authorities that function as financial institutions in providing tax-exempt financing to private borrowers. They use their tax-exempt financing to purchase an asset, which in turn, is purchased from them by the borrower, or to lend the proceeds of an issue to a private borrower. In general, the private borrower is solely responsible for the payment of interest and principal even in the event of default. The State or local government, in some cases, can benefit from investment earnings on funds held for temporary periods and from fees paid by borrowers.

Industrial development bonds (IDBs) issued for use by private business were made taxable in the 1968 and 1969 tax acts, but a number of major exceptions were permitted. Tax-exempt IDBs were permitted for pollution control, prior to the 1986 tax act. Tax-exempt IDBs are still permitted for sewage and waste facilities, multifamily rental housing, facilities financed with "small issues" of under $10 million in face amount, and certain other private business projects. In recent years, tax-exempt bonds have also become a common means of financing owner-occupied housing, student loans, and private nonprofit hospitals and educational facilities.

Concerned by the rapid growth of private purpose tax-exempt bonds, Congress has placed further restrictions on their use in recent years. The Omnibus Reconciliation Act of 1980 imposed a number of restrictions on tax-exempt mortgage subsidy bonds for owner-occupied housing, including limitations on the volume issued in each State. The Tax Equity and Fiscal Responsibility Act of 1982 required that IDBs be approved by an elected public official after a public hearing, and that assets of certain IDB-financed projects placed in service after 1982 be depreciated using the straight-line method rather than accelerated depreciation. The 1982 tax act also eliminated the tax exemption for "small issue" IDBs issued after 1986.

The Deficit Reduction Act of 1984 (DEFRA) restricted the annual volume of student loan bonds and most IDBs issued in each State to the greater of $150 per capita or $200 million, approximately $37 billion in 1984. The per capita limitation will be reduced to $100 in 1987 to reflect the termination of the small-issue exception for nonmanufacturing facilities; authority for small-issue IDBs for manufacturing facilities was extended through 1988. DEFRA also required IDB issuers to rebate any excess arbitrage earnings to the Federal Government, and prohibited the use of consumer loan bonds. Although the Act extended the use of mortgage subsidy bonds for 4 years, an optional program for issuers to provide mortgage credits to eligible homebuyers in lieu of tax-exempt bonds was enacted. Finally, volume limits on the use of veterans' housing bonds restricted their use to five States.

Even with these restrictions, the volume of private purpose tax-exempt bonds continued to increase. Table F–17 shows the growth in the volume of long-term, tax-exempt bonds. Total issues nearly quadrupled between 1981 and 1985, increasing from $55 billion to $218 billion. Over the same time period, the volume of private purpose tax-exempt bonds rose from $31 billion in 1981 to $116 billion in 1985. In 1976, private purpose tax-exempt bonds accounted for one-third of total tax-exempt, long-term issues. This percentage rose to 60 percent by 1980, and has remained fairly constant since then.

Table F-17. TAX-EXEMPT FINANCING

(In billions of dollars)

	Actual									Estimated	
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Private purpose tax-exempts	19.7	28.1	32.5	30.9	49.6	57.1	74.0	116.4	41.5	36.7	31.7
Housing bonds	6.9	12.1	14.0	4.8	14.6	17.0	20.5	38.1	8.3	10.3	6.6
Single-family mortgage subsidy bonds	3.4	7.8	10.5	2.8	9.0	11.0	12.8	12.0	6.0	7.0	3.3
Multi-family rental housing bonds	2.5	2.7	2.2	1.1	5.1	5.3	5.5	23.9	1.3	2.3	2.3
Veterans general obligation bonds	1.2	1.6	1.3	0.9	0.5	0.7	2.2	2.2	1.0	1.0	1.0
Private exempt bonds [1]	2.9	3.2	3.3	4.7	8.5	11.7	11.7	37.3	8.2	6.3	9.1
Student loan bonds	0.3	0.6	0.5	1.1	1.8	3.3	1.2	4.0	2.0	1.9	1.8
Pollution control industrial bonds	2.8	2.5	2.5	4.3	5.9	4.5	8.1	7.4	1.2	0.6	0.0
Small-issue industrial development bonds	3.6	7.5	9.7	13.3	14.7	14.7	18.3	17.5	11.7	3.5	3.2
Other industrial development bonds [2]	3.2	2.2	2.5	2.7	4.1	6.0	14.1	12.1	10.1	14.1	11.0
Public purpose tax-exempts [3]	29.3	20.3	22.0	24.2	35.3	36.2	41.7	101.8	103.0	53.0	56.0
Total new issues, long-term tax exempts [4]	49.1	48.4	54.5	55.1	84.9	93.3	115.7	218.2	144.5	89.7	87.7

[1] Private exempt entity bonds are obligations of the Internal Revenue Code Section 501(c)(3) organizations, such as private non-profit hospitals and educational facilities
[2] Other IDBs include obligations for private businesses that qualify for tax-exempt activities, such as sewage disposal, airports and docks.
[3] While most of these are commonly referred to as governmental bonds, some may be nongovernmental.
[4] Includes long-term refunding bonds including advance refundings.

Source: Office of Tax Analysis, Department of Treasury.

The Tax Reform Act of 1986 has the potential to reverse the trend of rapid growth in the issuance of tax-exempt securities. In particular, the Act is expected to reduce the volume of private activity bonds (those financing loans to industry or to individuals for mortgages or student loans).

The 1986 Tax Act combines the two existing State-by-State volume caps on mortgage revenue bonds and on student loan bonds and IDBs into a single tighter volume cap. The cap is initially set at the greater of $75 per capita or $250 million for each State, and is lowered to the greater of $50 per capita or $150 million beginning in 1988. Tax-exempt bonds can no longer be issued for certain purposes, such as pollution control and sports facilities. On the other hand, terminations required by prior law for both single-family mortgage revenue bonds and certain industrial development bonds were each extended by one year. The number of advance refundings of tax-exempt bonds was limited and the ability to earn arbitrage by investing proceeds of tax-exempt bonds in taxable instruments was reduced.

The effect of the new tax law on the demand side of the market for tax-exempt securities is uncertain. One important change made by the Tax Act that will tend to reduce the demand for tax-exempt bonds is the across-the-board reduction in marginal tax rates for both individuals and corporations. Another important change that will tend to reduce demand for tax-exempts is the disallowance for financial institutions of the deduction for the cost of carrying most tax-exempt debt.

The Tax Act also includes provisions that will tend to increase the demand for tax-exempt bonds. Individuals who have not previously purchased tax-exempt bonds may turn to the municipal market as other avenues for sheltering income from the Federal income tax are sharply curtailed. On the business side, because base-broadening measures will tend to increase taxable income for certain sectors of the economy, the demand for tax-exempt bonds will increase as a means of sheltering otherwise taxable income. The net effect of all the changes made by the Tax Act upon the yield of tax-exempt securities is uncertain.

XIII. Summary

The need for better control over Federal credit is widely recognized within the executive branch and the Congress. With $252 billion in direct loans outstanding and $450 billion in primary guaranteed loans outstanding in 1986, the Federal Government is the single largest financial intermediary in the United States. Its credit policy and practices affect all major sectors of the economy.

To gain better control over Federal credit, the Budget has included since January 1980 a credit control system, composed of the credit budget and credit limitations proposed in individual appropriations bills. This system has been strengthened by Gramm-Rudman-Hollings, which requires Congress to establish aggregate limits on new direct loan obligations and guaranteed loan commitments in the budget resolution process and incorporates credit in the budget reconciliation process. The management of Federal credit programs should be improved through the application of the administration's nine-point program.

Control over credit programs would be further improved by adoption of the administration's credit reform initiative. Under this reform, Federal agencies would obtain appropriations equal to the subsidy component of direct loans and loan guarantees they make each year. Details of this proposal and specific legislative language will be prepared and sent to the Congress in March 1987. The subsidy costs of operating these programs could then be compared to the cost of other Federal spending programs and to the economic and social benefits realized in achieving credit program objectives.

XIV. Appendix

Additional Discussion of Federal Credit Programs and Related Issues in the 1988 Budget Documents

- Special Analysis E ("Borrowing and Debt") contains information on Federal borrowing, borrowing by Government-sponsored enterprises, and the Federal Financing Bank.
- Special Analysis G ("Tax Expenditures") contains information on tax-exempt borrowing.
- Special Analysis H ("Federal Aid to State and Local Governments") contains information on Federal loans to State and local governments.
- Part 5 of the Budget Supplement ("Meeting National Needs: The Federal Program by Function") contains a discussion of major credit programs by budget function (e.g., Agriculture, Commerce and Housing, International Affairs).
- Part 3 of the Budget Supplement ("Federal Credit") presents an outline of the credit reform initiative and a summary of much of the material in this special analysis.
- Part 6 of the Budget Supplement ("Summary Tables") contains summary tables of the credit budget totals (Table 1) and summaries by agency of direct loan obligations and guaranteed loan commitments (Table 5).
- The Budget Appendix contains detailed information for each credit program by budget account. Part I of the Appendix ("Detailed Budget Estimates") provides credit program information for Federal agencies. Part IV ("Government-Sponsored Enterprises") provides information on these enterprises.

- The Historical Tables contains total direct loan obligations by sector—agriculture, business, education, and housing—and by agency or program for the period 1951–1992.
- Management of the United States Government, contains discussions of credit program management issues, the debt collection report, and agency credit management goals.

Table F-18. **DIRECT LOAN TRANSACTIONS OF THE FEDERAL GOVERNMENT (in millions of dollars)**

Agency or program		Actual 1986	Estimate					
			1987	1988	1989	1990	1991	1992
Funds Appropriated to the President:								
Economic support fund	Obligations	104	176	176	240	240	240	240
	Loan disbursements	90	176	176	240	240	240	240
	Change in outstandings	*83*	*77*	*54*	*120*	*114*	*87*	*71*
	Outstandings	**6,305**	**6,381**	**6,436**	**6,556**	**6,670**	**6,756**	**6,828**
Foreign military sales	Obligations	4,967	4,040	4,421	4,499	4,573	4,639	4,695
	Loan disbursements	5,536	5,190	5,352	5,034	4,676	4,635	4,575
	Change in outstandings	*2,979*	*568*	*−163*	*1,396*	*907*	*617*	*474*
	Outstandings	**22,124**	**22,692**	**22,529**	**23,925**	**24,832**	**25,449**	**25,923**
Guarantee reserve fund (foreign military sales defaults)	Obligations	1,050	951	891	900	900	900	900
	Loan disbursements	1,050	951	891	900	900	900	900
	Change in outstandings	*255*	*8*	.....	.....	.....	.....	.....
	Outstandings	**1,420**	**1,429**	**1,429**	**1,429**	**1,429**	**1,429**	**1,429**
Overseas Private Investment Corporation	Obligations	14	23	15	15	15	15	15
	Loan disbursements	10	7	9	8	6	6	6
	Change in outstandings	*−1*	*2*	*3*	*3*	*1*	*1*	*1*
	Outstandings	**41**	**43**	**46**	**49**	**50**	**51**	**52**
AID functional development assistance	Obligations	254	150	150	150	150	150	150
	Loan disbursements	309	255	225	200	175	150	150
	Change in outstandings	*308*	*232*	*197*	*154*	*112*	*70*	*56*
	Outstandings	**3,425**	**3,657**	**3,854**	**4,008**	**4,120**	**4,191**	**4,247**
AID development loans revolving fund	Obligations	.....	.....	.....	.....	.....	.....	.....
	Loan disbursements	*	.....	.....	.....	.....	.....	.....
	Change in outstandings	*−244*	*−334*	*−328*	*−381*	*−387*	*−377*	*−375*
	Outstandings	**8,494**	**8,160**	**7,833**	**7,452**	**7,065**	**6,688**	**6,313**
AID private sector revolving fund	Obligations	15	16	16	12	15	16	16
	Loan disbursements	8	14	18	12	11	10	11

	Change in outstandings	*8*	*14*	*14*	*3*	*−2*	*−5*	*−5*
	Outstandings	**11**	**25**	**39**	**42**	**39**	**34**	**29**
AID housing and other credit guarantees	Obligations	39	49	51	51	51	51	51
	Loan disbursements	39	49	51	51	51	51	51
	Change in outstandings	*21*	*13*	*20*	*3*	*7*	*8*	*8*
	Outstandings	**69**	**82**	**101**	**105**	**112**	**120**	**128**
AID miscellaneous appropriations	Obligations							
	Loan disbursements							
	Change in outstandings	*10*	*−7*	*−5*	*−6*	*−6*	*−6*	*−6*
	Outstandings	**234**	**227**	**221**	**215**	**210**	**204**	**198**
Agriculture:								
Farmers Home Administration:								
Agricultural credit insurance fund	Obligations	2,799	1,817	1,295	500	400	300	
	Loan disbursements	2,897	1,907	1,424	813	428	328	31
	Change in outstandings	*136*	*−924*	*−1,135*	*−1,596*	*−1,731*	*−1,531*	*−1,479*
	Outstandings	**28,698**	**27,775**	**26,639**	**25,043**	**23,312**	**21,781**	**20,302**
Rural housing insurance fund	Obligations	1,825	508					
	Loan disbursements	2,347	1,216	706	316	92	3	9
	Change in outstandings	*615*	*−2,594*	*−2,020*	*−2,138*	*−2,269*	*−2,253*	*−2,137*
	Outstandings	**29,295**	**26,701**	**24,680**	**22,542**	**20,273**	**18,020**	**15,884**
Rural development insurance fund	Obligations	421	107					
	Loan disbursements	463	389	610	295	126	87	66
	Change in outstandings	*249*	*−1,519*	*−766*	*−858*	*−1,033*	*−1,047*	*−1,040*
	Outstandings	**7,957**	**6,438**	**5,672**	**4,814**	**3,781**	**2,734**	**1,694**
Commodity Credit Corporation:								
Short and medium term export loans	Obligations							
	Loan disbursements							
	Change in outstandings	*24*	*−14*	*21*	*40*	*32*	*10*	*−4*
	Outstandings	**827**	**813**	**834**	**874**	**906**	**916**	**913**
Commodity loans	Obligations	17,391	17,130	12,785	10,460	9,485	9,189	8,832
	Loan disbursements	17,391	17,130	12,785	10,460	9,485	9,189	8,832
	Change in outstandings	*6,261*	*−2,627*	*−3,197*	*−2,112*	*−2,324*	*−499*	*−1,201*
	Outstandings	**18,494**	**15,867**	**12,670**	**10,557**	**8,233**	**7,734**	**6,533**

Table F–18. **DIRECT LOAN TRANSACTIONS OF THE FEDERAL GOVERNMENT (in millions of dollars)—Continued**

Agency or program		Actual 1986	Estimate					
			1987	1988	1989	1990	1991	1992
Storage facility loans	Obligations	1	*					
	Loan disbursements	1	*					
	Change in outstandings	*−223*	*−141*	*−32*	*	*	*	
	Outstandings	**174**	**33**	**1**	*	*		
Rescheduled guaranteed loans	Obligations	328	673	703	743	751	541	532
	Loan disbursements	328	673	703	743	751	541	532
	Change in outstandings	*442*	*765*	*789*	*827*	*780*	*468*	*369*
	Outstandings	**2,113**	**2,878**	**3,668**	**4,494**	**5,274**	**5,742**	**6,111**
Public Law 480 long-term export credits	Obligations	813	819	749	771	800	806	811
	Loan disbursements	773	819	749	771	800	806	811
	Change in outstandings	*577*	*628*	*619*	*637*	*665*	*615*	*632*
	Outstandings	**10,622**	**11,251**	**11,869**	**12,507**	**13,172**	**13,787**	**14,419**
Rural electrification and telephone revolving fund	Obligations	2,953	1,305	290	145			
	Loan disbursements	2,321	3,177	2,601	1,960	1,565	999	562
	Change in outstandings	*304*	*2,045*	*276*	*−320*	*−720*	*−1,254*	*−1,662*
	Outstandings	**35,941**	**37,986**	**38,262**	**37,942**	**37,222**	**35,967**	**34,306**
Rural telephone bank	Obligations	128	149	93	46			
	Loan disbursements	72	83	78	74	48	22	5
	Change in outstandings	*51*	*64*	*−493*	*−490*	*−211*	*15*	*−4*
	Outstandings	**1,434**	**1,498**	**1,005**	**515**	**304**	**320**	**316**
Commerce:								
Economic development revolving fund	Obligations	5	152	8	7	6	5	4
	Loan disbursements	8	152	8	7	6	5	4
	Change in outstandings	*−62*	*99*	*−41*	*−40*	*−37*	*−36*	*−35*
	Outstandings	**568**	**668**	**626**	**587**	**550**	**514**	**479**
EDA miscellaneous appropriations	Obligations							
	Loan disbursements							
	Change in outstandings	*−7*	*−2*	*−2*				
	Outstandings	**91**	**88**	**86**	**86**	**86**	**86**	**86**

ITA operations and administration	Obligations	1	6	7				
	Loan disbursements	*	9	8	1			
	Change in outstandings	*−1*	*6*	*−3*	*−5*	*−1*	*−1*	*−1*
	Outstandings	**8**	**14**	**12**	**7**	**6**	**5**	**4**
NOAA coastal energy impact fund	Obligations							
	Loan disbursements	5	8					
	Change in outstandings	*2*	*4*	*−3*	*−3*	*−3*	*−3*	*−3*
	Outstandings	**96**	**100**	**97**	**94**	**91**	**88**	**85**
NOAA Federal ship financing (fishing)	Obligations	4	2	2	2	2	2	2
	Loan disbursements	4	2	2	2	2	2	2
	Change in outstandings	*2*						
	Outstandings	**17**	**17**	**17**	**17**	**17**	**17**	**17**
Defense:								
Navy industrial fund	Obligations	568						
	Loan disbursements	568						
	Change in outstandings	*435*	*−167*	*−169*	*−178*	*−178*	*−178*	*−178*
	Outstandings	**1,748**	**1,582**	**1,412**	**1,234**	**1,056**	**878**	**700**
Defense stock fund	Obligations							
	Loan disbursements							
	Change in outstandings		*−1*					
	Outstandings	**1**						
Production guarantees	Obligations							
	Loan disbursements	3						
	Change in outstandings	*3*	*−10*					
	Outstandings	**10**						
Education:								
Guaranteed student loans	Obligations	1,334	1,232	1,404	1,811	1,840	1,795	1,663
	Loan disbursements	1,366	1,249	1,369	1,729	1,834	1,804	1,689
	Change in outstandings	*944*	*441*	*80*	*275*	*82*	*−128*	*−440*
	Outstandings	**9,146**	**9,587**	**9,667**	**9,943**	**10,025**	**9,897**	**9,457**
National direct student loans	Obligations	191						
	Loan disbursements	205						
	Change in outstandings	*139*	*−4,739*	*−14*	*−19*	*−25*	*−30*	*−36*
	Outstandings	**5,272**	**532**	**519**	**500**	**475**	**445**	**409**

Table F–18. **DIRECT LOAN TRANSACTIONS OF THE FEDERAL GOVERNMENT (in millions of dollars)—Continued**

Agency or program		Actual 1986	Estimate					
			1987	1988	1989	1990	1991	1992
College housing loans	Obligations	57						
	Loan disbursements	21	64	63	4	−18		
	Change in outstandings	*−72*	*−1,002*	*−911*	*−65*	*−60*	*−7*	*−7*
	Outstandings	**2,229**	**1,226**	**316**	**251**	**191**	**184**	**177**
Higher education	Obligations							
	Loan disbursements							
	Change in outstandings	*−16*	*−17*	*−9*	*−8*	*−6*	*−6*	*−5*
	Outstandings	**61**	**44**	**35**	**26**	**20**	**14**	**9**
Higher education facilities loans and insurance	Obligations							
	Loan disbursements							
	Change in outstandings	*−17*	*−18*	*−158*	*−58*	*−37*	*−4*	*−4*
	Outstandings	**339**	**320**	**163**	**104**	**67**	**64**	**60**
Energy:								
Geothermal resources	Obligations	4						
	Loan disbursements	4						
	Change in outstandings	*4*						
	Outstandings	**16**	**16**	**16**	**16**	**16**	**16**	**16**
Bonneville Power Administration	Obligations							
	Loan disbursements							
	Change in outstandings	*−1*	*	*	*	*	*	*
	Outstandings	**5**	**5**	**4**	**4**	**4**	**4**	**4**
Health and Human Services:								
Medical facilities guarantees and loan fund	Obligations	5	23	2	2	2	2	2
	Loan disbursements	5	23	2	2	2	2	2
	Change in outstandings	*−10*	*−5*	*−132*	*2*	*2*	*2*	*2*
	Outstandings	**137**	**132**		**2**	**3**	**4**	**6**
Health maintenance organization loan fund	Obligations							
	Loan disbursements	1						
	Change in outstandings	*−7*	*−8*	*−97*				
	Outstandings	**105**	**97**					

Health resources and services	Obligations	*	1	1	1	1	1	1
	Loan disbursements	1	1	1	1	1	1	1
	Change in outstandings	*−16*	*−8*	*−8*	*−10*	*−6*	*−6*	*−5*
	Outstandings	**495**	**486**	**479**	**468**	**462**	**456**	**451**
Health education assistance loans	Obligations	16	22	29	33	35	33	31
	Loan disbursements	17	22	29	33	35	33	31
	Change in outstandings	*17*	*22*	*28*	*32*	*34*	*32*	*29*
	Outstandings	**30**	**52**	**81**	**113**	**146**	**178**	**207**
Housing and Urban Development:								
Low-rent public housing	Obligations							
	Loan disbursements							
	Change in outstandings	*−35*	*−37*	*−39*	*−42*	*−44*	*−47*	*−50*
	Outstandings	**2,111**	**2,074**	**2,035**	**1,993**	**1,949**	**1,902**	**1,852**
Housing for the elderly or handicapped	Obligations	556	502	131	24	14	8	4
	Loan disbursements	55 3	553	538	501	323	53	18
	Change in outstandings	*523*	*521*	*3*	*464*	*284*	*12*	*−25*
	Outstandings	**6,189**	**6,710**	**6,713**	**7,177**	**7,460**	**7,472**	**7,447**
GNMA emergency mortgage purchases	Obligations							
	Loan disbursements	180	204					
	Change in outstandings	*−750*	*−522*	*−45*	*−1*	*−1*	*−1*	*−1*
	Outstandings	**884**	**361**	**316**	**315**	**315**	**314**	**313**
Payments on mortgage-backed securities	Obligations	8	802	306	196	128	266	86
	Loan disbursements	8	802	306	196	128	266	86
	Change in outstandings	*7*	*	*	*−2*	*−2*	*−1*	*−1*
	Outstandings	**10**	**10**	**10**	**8**	**6**	**5**	**4**
Federal Housing Administration fund	Obligations	423	321	395	443	573	807	811
	Loan disbursements	423	299	372	412	573	807	810
	Change in outstandings	*42*	*−393*	*−476*	*6*	*−109*	*−114*	*−66*
	Outstandings	**4,246**	**3,853**	**3,377**	**3,382**	**3,273**	**3,159**	**3,092**
Rehabilitation loan fund	Obligations	40	85					
	Loan disbursements	59	100	38				
	Change in outstandings	*−8*	*20*	*−387*	*−343*			
	Outstandings	**710**	**730**	**343**				

Table F-18. **DIRECT LOAN TRANSACTIONS OF THE FEDERAL GOVERNMENT (in millions of dollars)—Continued**

Agency or program		Actual 1986	Estimate 1987	1988	1989	1990	1991	1992
Revolving fund for liquidating programs	Obligations							
	Loan disbursements							
	Change in outstandings	*−27*	*−56*	*−212*	*−96*	*−2*	*−2*	*−6*
	Outstandings	**392**	**336**	**124**	**28**	**26**	**25**	**19**
Interior:								
Bureau of Reclamation loans	Obligations	45	44	27	22	15	6	5
	Loan disbursements	47	38	32	27	33	18	2
	Change in outstandings	*38*	*28*	*−326*	*27*	*33*	*18*	*2*
	Outstandings	**480**	**507**	**181**	**209**	**241**	**259**	**261**
BIA revolving fund	Obligations	14	16	13	13	13	13	13
	Loan disbursements	11	21	13	13	13	13	13
	Change in outstandings	*1*	*12*	*4*	*4*	*4*	*4*	*4*
	Outstandings	**106**	**118**	**122**	**125**	**129**	**132**	**136**
Indian loan guaranty and insurance fund	Obligations	6	7	5	4	4	4	4
	Loan disbursements	6	7	5	4	4	4	4
	Change in outstandings	*6*	*	*2*	*−2*	*−2*	*−2*	*−2*
	Outstandings	**12**	**12**	**14**	**12**	**11**	**9**	**7**
Transportation:								
Railroad rehabilitation and improvement financing	Obligations							
	Loan disbursements	9	9	5				
	Change in outstandings	*−86*	*1*	*−585*	*−9*	*−7*	*−5*	*−6*
	Outstandings	**634**	**635**	**50**	**41**	**34**	**29**	**23**
Federal-aid highways trust fund	Obligations	27						
	Loan disbursements	1	*	*				
	Change in outstandings	*1*	*	*				
	Outstandings	**76**	**77**	**77**	**77**	**77**	**77**	**77**
Right-of-way revolving fund	Obligations	48	48	48	48	48	48	48
	Loan disbursements	38	48	48	48	48	48	48

	Change in outstandings	*16*						
	Outstandings	**131**	**131**	**131**	**131**	**131**	**131**	**131**
Miscellaneous expired accounts	Obligations							
	Loan disbursements							
	Change in outstandings	*	*−1*					
	Outstandings	**1**						
Aircraft purchase loan guarantees	Obligations	2						
	Loan disbursements	2						
	Change in outstandings	*−21*	*−6*	*−5*	*−5*	*−4*	*−4*	*−4*
	Outstandings	**48**	**42**	**37**	**32**	**27**	**23**	**20**
MarAd Federal ship financing fund	Obligations	1,260	610	105	105	105	105	105
	Loan disbursements	1,260	610	105	105	105	105	105
	Change in outstandings	*878*	*608*	*103*	*103*	*103*	*103*	*103*
	Outstandings	**1,475**	**2,082**	**2,185**	**2,288**	**2,390**	**2,493**	**2,595**
Environmental Protection Agency:								
Abatement, control, and compliance	Obligations	32						
	Loan disbursements	22	49	−5	−4	−2	−1	
	Change in outstandings	*22*	*48*	*−8*	*−6*	*−5*	*−4*	*−3*
	Outstandings	**24**	**72**	**6 4**	**58**	**53**	**49**	**46**
NASA	Obligations							
	Loan disbursements							
	Change in outstandings		*−79*	*−91*	*−105*	*−121*	*−138*	*−157*
	Outstandings	**888**	**809**	**717**	**612**	**491**	**354**	**197**
Veterans Administration:								
Vendee loans and loans repurchased	Obligations	970	930	826	914	963	988	990
	Loan disbursements	970	930	826	914	963	988	990
	Change in outstandings	*−34*	*70*	*−275*	*− 266*	*−277*	*−6*	*−35*
	Outstandings	**1,188**	**1,258**	**983**	**717**	**440**	**433**	**398**
Direct loan revolving fund	Obligations	1	2	2	3	3	3	3
	Loan disbursements	1	2	2	2	2	2	2
	Change in outstandings	*−29*	*−23*	*−18*	*−21*	*−19*	*−17*	*−15*
	Outstandings	**125**	**102**	**84**	**63**	**44**	**27**	**13**
Other veterans programs	Obligations	1	1	1	1	1	1	1
	Loan disbursements	1	1	1	1	1	1	1

Table F-18. **DIRECT LOAN TRANSACTIONS OF THE FEDERAL GOVERNMENT (in millions of dollars)—Continued**

Agency or program		Actual 1986	Estimate 1987	1988	1989	1990	1991	1992
	Change in outstandings	*−5*	*−6*	*−6*	*−7*	*−7*	*−7*	*−8*
	Outstandings	**47**	**41**	**35**	**28**	**21**	**14**	**6**
District of Columbia: Loans to the District of Columbia	Obligations							
	Loan disbursements							
	Change in outstandings	*−564*	*−293*	*−30*	*−31*	*−33*	*−35*	*−37*
	Outstandings	**1,008**	**715**	**685**	**654**	**621**	**586**	**549**
Export-Import Bank [1]	Obligations	578	900	1,000	900	900	900	900
	Loan disbursements	906	771	693	700	700	700	700
	Change in outstandings	*−1,525*	*−3,681*	*−2,714*	*−975*	*−1,025*	*−1,075*	*−1,125*
	Outstandings	**14,351**	**10,670**	**7,956**	**6,981**	**5,956**	**4,881**	**3,756**
Federal Deposit Insurance Corporation [2]	Obligations	128						
	Loan disbursements	128						
	Change in outstandings	*−194*	*−53*	*−1*	*−50*	*−50*	*−50*	*−50*
	Outstandings	**3,423**	**3,370**	**3,369**	**3,319**	**3,269**	**3,219**	**3,169**
Federal Savings and Loan Insurance Corporation [2]	Obligations	21	25	25	25	25	25	25
	Loan disbursements	21	25	25	25	25	25	25
	Change in outstandings	*−73*	*8*	*25*	*15*	*15*	*15*	*15*
	Outstandings	**1,686**	**1,694**	**1,718**	**1,733**	**1,748**	**1,763**	**1,778**
National Credit Union Administration: Share insurance fund	Obligations	3	5	5	5	5	5	2
	Loan disbursements	3	5	5	5	5	5	1
	Change in outstandings	*−25*	*−15*	*−1*	*−2*	*−2*	*−2*	*−2*
	Outstandings	**24**	**9**	**8**	**6**	**4**	**2**	
Central liquidity facility	Obligations	31	56	72	150	150	150	150
	Loan disbursements	31	56	72	150	150	150	150
	Change in outstandings	*−117*	*24*	*25*	*25*	*25*	*25*	*25*
	Outstandings	**106**	**129**	**154**	**179**	**204**	**229**	**254**
Small business: Business and investment loans	Obligations	1,027	591	454	448	428	405	381

	Loan disbursements	982	698	528	448	428	405	381
	Change in out standings	*77*	*−181*	*−1,814*	*−1,486*	*152*	*89*	*43*
	Outstandings	**4,950**	**4,769**	**2,956**	**1,470**	**1,622**	**1,711**	**1,754**
Disaster loans [1]	Obligations	516	325	350	310	310	310	310
	Loan disbursements	361	296	304	297	279	279	279
	Change in outstandings	*−334*	*−939*	*−864*	*−744*	*−652*	*−557*	*−466*
	Outstandings	**4,222**	**3,283**	**2,419**	**1,675**	**1,023**	**466**	
Tennessee Valley Authority	Obligations	268	301	280	343	346	330	405
	Loan disbursements	268	301	280	343	346	330	405
	Change in outstandings	*180*	*−211*	*74*	*−634*	*−66*	*−109*	*17*
	Outstandings	**2,094**	**1,882**	**1,957**	**1,322**	**1,256**	**1,147**	**1,163**
Payments for Conrail securities	Obligations							
	Loan disbursements							
	Change in outstandings		*−851*					
	Outstandings	**851**						
United States Railway Association	Obligations							
	Loan disbursements							
	Change in outstandings	*6*	*−34*	*3*	*3*	*3*	*3*	*3*
	Outstandings	**84**	**50**	**52**	**55**	**58**	**62**	**65**
Other agencies and programs	Obligations	38	5	4	4	4	4	4
	Loan disbursements	99	77	35	5	5	4	4
	Change in outstandings	*−6*	*−38*	*−75*	*−98*	*−85*	*−74*	*−54*
	Outstandings	**966**	**928**	**853**	**755**	**670**	**595**	**541**
Grand total, net direct loans	Obligations	41,329	34,927	27,136	23,134	22,089	21,852	20,979
	Loan disbursements	42,232	39,467	32,087	27,848	25,341	24,016	22,531
	Change in outstandings	*11,155*	*−15,231*	*−15,321*	*−9,076*	*−8,195*	*−7,429*	*−8,885*
	Outstandings	**251,594**	**236,363**	**221,041**	**211,965**	**203,770**	**196,341**	**187,456**

* $500,000 or less.
[1] Obligations for 1989–1992 are not included in totals.
[2] Direct loan obligations and disbursements for these programs represent increases in their holdings of loan assets rather than cash disbursements.

Table F-19. **GUARANTEED LOAN TRANSACTIONS OF THE FEDERAL GOVERNMENT (in millions of dollars)**

Agency or Program		Actual 1986	Estimate 1987	1988	1989	1990	1991	1992
Funds Appropriated to the President:								
Foreign military sales	Commitments							
	New guaranteed loans							
	Change in outstandings	*−20*	*−20*	*−20*	*−20*	*−20*	*−20*	*−20*
	Outstandings	**160**	**140**	**120**	**100**	**80**	**60**	**40**
Overseas Private Investment Corporation	Commitments	136	200	150	150	150	150	150
	New guaranteed loans	81	80	80	80	80	80	80
	Change in outstandings	*45*	*45*	*45*	*45*	*45*	*45*	*45*
	Outstandings	**268**	**313**	**358**	**403**	**448**	**493**	**538**
AID housing and other credit guarantees	Commitments	145	145	100	100	100	100	100
	New guaranteed loans	66	75	75	75	75	75	75
	Change in outstandings	*40*	*47*	*44*	*41*	*38*	*36*	*34*
	Outstandings	**1,216**	**1,263**	**1,306**	**1,347**	**1,386**	**1,422**	**1,455**
Agriculture:								
Rural Electrification Administration	Commitments			840	1,115	1,388	1,388	1,388
	New guaranteed loans		100	329	836	1,318	1,759	2,052
	Change in outstandings	*−15*	*88*	*317*	*824*	*1,306*	*1,747*	*2,040*
	Outstandings	**1,030**	**1,118**	**1,435**	**2,260**	**3,565**	**5,312**	**7,352**
Farmers Home Administration:								
Agricultural credit insurance fund	Commitments	1,560	2,498	2,500	3,500	3,600	3,700	4,000
	New guaranteed loans	1,160	1,794	2,381	2,849	3,418	3,844	3,870
	Change in outstandings	*776*	*1,098*	*1,175*	*957*	*1,284*	*1,193*	*747*
	Outstandings	**2,161**	**3,258**	**4,434**	**5,391**	**6,675**	**7,868**	**8,615**
Rural housing insurance fund	Commitments							
	New guaranteed loans	*						
	Change in outstandings	*−138*	*−15*	*−291*	*−184*	*−3*	*−4*	*−9*
	Outstandings	**617**	**602**	**311**	**127**	**124**	**120**	**111**
Rural development insurance fund	Commitments	55	115					
	New guaranteed loans	127	70	81	39	11	7	4
	Change in outstandings	*−285*	*−290*	*−465*	*−316*	*−220*	*−186*	*132*
	Outstandings	**2,626**	**2,337**	**1,871**	**1,555**	**1,335**	**1,150**	**1,282**

Commodity Credit Corporation export credits	Commitments	2,503	5,500	3,500	3,500	3,500	3,500	3,500
	New guaranteed loans	1,595	5,500	3,500	3,500	3,500	3,500	3,500
	Change in outstandings	*−1,485*	*3,428*	*745*	*322*	*−317*	*300*	*250*
	Outstandings	**3,609**	**7,038**	**7,782**	**8,104**	**7,788**	**8,088**	**8,338**
Commerce:								
Economic development programs	Commitments	22	22					
	New guaranteed loans	22	22					
	Change in outstandings	*51*	*−149*	*−17*	*−16*	*−14*	*−13*	*−12*
	Outstandings	**286**	**137**	**120**	**104**	**90**	**77**	**65**
ITA operations and administration	Commitments							
	New guaranteed loans	*	*					
	Change in outstandings	*−5*	*−8*	*−8*	*−2*	*	*	*
	Outstandings	**20**	**12**	**4**	**2**	**2**	**2**	**1**
National Oceanic and Atmospheric Administration	Commitments	19	50					
	New guaranteed loans	19	50					
	Change in outstandings	*35*	*38*	*−12*	*−12*	*−12*	*−12*	*−12*
	Outstandings	**193**	**231**	**219**	**207**	**195**	**183**	**171**
Education: Guaranteed student loans	Commitments	8,575	9,591	9,398	10,715	11,857	12,498	12,651
	New guaranteed loans	6,320	9,075	9,061	10,050	11,294	11,973	12,261
	Change in outstandings	*657*	*2,450*	*1,131*	*1,025*	*1,643*	*1,862*	*1,778*
	Outstandings	**37,482**	**39,931**	**41,063**	**42,088**	**43,731**	**45,594**	**47,372**
Energy:								
Geothermal resources development fund	Commitments							
	New guaranteed loans							
	Change in outstandings	*−4*						
	Outstandings	**50**	**50**	**50**	**50**	**50**	**50**	**50**
Health and Human Services:								
Medical facilities guarantees and loan fund	Commitments							
	New guaranteed loans							
	Change in outstandings	*−119*	*−143*	*−132*	*−132*	*−132*	*−132*	*−132*
	Outstandings	**876**	**732**	**601**	**469**	**338**	**206**	**75**
Health education assistance loans	Commitments	374	343	100	100	100	100	
	New guaranteed loans	321	343	100	100	100	100	
	Change in outstandings	*275*	*310*	*58*	*52*	*48*	*48*	*−52*
	Outstandings	**1,106**	**1,416**	**1,474**	**1,527**	**1,575**	**1,623**	**1,572**

Table F-19. **GUARANTEED LOAN TRANSACTIONS OF THE FEDERAL GOVERNMENT (in millions of dollars)—Continued**

Agency or Program		Actual 1986	Estimate 1987	1988	1989	1990	1991	1992
Housing and Urban Development:								
Low-rent public housing	Commitments							
	New guaranteed loans							
	Change in outstandings	*−275*	*−312*	*−339*	*−367*	*−394*	*−422*	*−450*
	Outstandings	**8,612**	**8,300**	**7,961**	**7,594**	**7,200**	**6,777**	**6,327**
Revolving fund (liquidating)	Commitments							
	New guaranteed loans							
	Change in outstandings	*−3*	*−1*	*−4*	*−9*	*−11*	*−15*	*−13*
	Outstandings	**54**	**53**	**49**	**40**	**29**	**14**	**1**
Federal Housing Administration	Commitments	102,592	86,975	70,000	68,999	71,347	73, 500	75,220
	New guaranteed loans	52,220	73,203	59,663	55,158	56,445	58,234	59,674
	Change in outstandings	*28,041*	*57,030*	*41,952*	*34,628*	*33,058*	*32,853*	*32,306*
	Outstandings	**223,520**	**280,550**	**322,502**	**357,129**	**390,188**	**423,041**	**455,347**
GNMA mortgage-backed securities	Commitments	137,962	132,500	100,000	100,000	100,000	100,000	100,000
	New guaranteed loans	81,779	87,700	67,000	67,000	67,000	67,000	67,000
	Change in outstandings	*40,204*	*50,817*	*34,246*	*29,397*	*28,800*	*27,996*	*27,788*
	Outstandings	**241,230**	**292,047**	**326,292**	**355,689**	**384,489**	**412,485**	**440,272**
Interior:								
Indian loan guaranty and insurance fund	Commitments	37	40	34	28	20	20	20
	New guaranteed loans	37	40	34	28	20	20	20
	Change in outstandings	*24*	*28*	*22*	*8*			
	Outstandings	**142**	**170**	**192**	**200**	**200**	**200**	**200**
Transportation:								
MarAd Federal ship financing fund	Commitments	48						
	New guaranteed loans	82	50					
	Change in outstandings	*−1,448*	*−750*	*−300*	*−300*	*−300*	*−300*	*−300*
	Outstandings	**4,995**	**4,245**	**3,945**	**3,645**	**3,345**	**3,045**	**2,745**
Aircraft purchase loan guarantees	Commitments							
	New guaranteed loans							

	Change in outstandings	*−131*	*−76*	*−37*	*−31*	*−30*	*−29*	*−25*
	Outstandings	**276**	**200**	**163**	**132**	**102**	**73**	**49**
Miscellaneous expired accounts	Commitments							
	New guaranteed loans							
	Change in outstandings							
	Outstandings	**997**	**997**	**997**	**997**	**997**	**997**	**997**
Treasury:								
Guarantees of New York City notes	Commitments							
	New guaranteed loans							
	Change in outstandings	*−190*						
	Outstandings							
Biomass energy development	Commitments							
	New guaranteed loans	294	283					
	Change in outstandings	*283*	*273*					
	Outstandings	**796**	**1,069**	**1,069**	**1,069**	**1,069**	**1,069**	**1,069**
Veterans Administration:								
Loan guarantee revolving fund	Commitments	34,297	35,000	27,930	27,700	24,800	21,000	18,900
	New guaranteed loans	21,966	26,198	25,367	24,996	22,508	19,094	17,175
	Change in outstandings	*8,254*	*11,194*	*8,483*	*6,911*	*3,486*	*−432*	*−2,336*
	Outstandings	**142,562**	**153,756**	**162,239**	**169,150**	**172,636**	**172,204**	**169,868**
Export-Import Bank	Commitments	5,508	11,355	10,000	10,000	10,000	10,000	10,000
	New guaranteed loans	3,167	4,894	5,289	1,300	1,300	1,300	1,300
	Change in outstandings	*−341*	*703*	*678*	*−500*			
	Outstandings	**4,785**	**5,488**	**6,166**	**5,666**	**5,666**	**5,666**	**5,666**
Federal Savings and Loan Insurance Corporation	Commitments	506	103	300	100	100	100	100
	New guaranteed loans	506	103	300	100	100	100	100
	Change in outstandings	*438*	*53*	*294*	*50*	*50*	*50*	*50*
	Outstandings	**2,952**	**3,005**	**3,299**	**3,349**	**3,399**	**3,449**	**3,499**
National Credit Union Administration	Commitments	6	2	1				
	New guaranteed loans	6	2	1				
	Change in outstandings	*1*	*−2*	*−2*	*−1*			
	Outstandings	**5**	**3**	**1**				
Small business:								
Business and investment loan guarantees	Commitments	2,754	3,567	3,510	3,510	3,510	3,510	3,510
	New guaranteed loans	1,754	2,900	3,010	3,000	3,000	3,000	3,000

Table F-19. **GUARANTEED LOAN TRANSACTIONS OF THE FEDERAL GOVERNMENT (in millions of dollars)—Continued**

Agency or Program		Actual 1986	Estimate 1987	1988	1989	1990	1991	1992
	Change in outstandings	*-461*	*705*	*715*	*610*	*530*	*340*	*260*
	Outstandings	**8,362**	**9,067**	**10,063**	**10,673**	**11,203**	**11,543**	**11,803**
Pollution control equipment guarantees	Commitments	25	50					
	New guaranteed loans	16	25					
	Change in outstandings	*-51*	*5*					
	Outstandings	**276**	**281**					
Disaster loans	Commitments							
	New guaranteed loans							
	Change in outstandings	*	*	*	*	*	*	*
	Outstandings	**3**	**3**	**2**	**2**	**2**	**1**	**1**
Tennessee Valley Authority	Commitments							
	New guaranteed loans							
	Change in outstandings			*-1*				
	Outstandings	**1**	**1**					
Synthetic Fuels Corporation	Commitments							
	New guaranteed loans							
	Change in outstandings	*-4*						
	Outstandings							
Other agencies and programs	Commitments	81	150					
	New guaranteed loans	1	148	85				
	Change in outstandings	*-132*	*122*	*38*	*-61*	*-65*	*-70*	*-75*
	Outstandings	**651**	**772**	**810**	**749**	**684**	**613**	**539**
Subtotal, guaranteed loans (gross)	Commitments	297,205	288,205	228,362	229,517	230,472	229,566	229,539
	New guaranteed loans	171,538	212,655	176,355	169,111	170,169	170,085	170,111
	Change in outstandings	*74,017*	*126,666*	*88,313*	*72,921*	*68,770*	*64,835*	*61,995*
	Outstandings	**691,921**	**818,587**	**906,900**	**979,821**	**1,048,591**	**1,113,425**	**1,175,420**
Less secondary guaranteed loans:[1] GNMA guarantees of FHA/VA/FmHA pools	Commitments	137,962	132,500	100,000	100,000	100,000	100,000	100,000

	New guaranteed loans	81,779	87,700	67,000	67,000	67,000	67,000	67,000
	Change in outstandings	*40,204*	*50,817*	*34,246*	*29,397*	*28,800*	*27,996*	*27,788*
	Outstandings	**241,230**	**292,047**	**326,292**	**355,689**	**384,489**	**412,485**	**440,272**
Subtotal, guaranteed loans (net)	Commitments	159,243	155,705	128,362	129,517	130,472	129,566	129,539
	New guaranteed loans	89,759	124,955	109,355	102,111	103,169	103,085	103,111
	Change in outstandings	*33,814*	*75,849*	*54,067*	*43,524*	*39,970*	*36,839*	*34,207*
	Outstandings	**450,691**	**526,540**	**580,608**	**624,132**	**664,102**	**700,941**	**735,148**
Less guaranteed loans held as direct loans:[2] By GNMA	Commitments							
	New guaranteed loans	180	204					
	Change in outstandings	*−750*	*−522*	*−45*	*−1*	*−1*	*−1*	*−1*
	Outstandings	**884**	**361**	**316**	**315**	**315**	**314**	**313**
Total, primary guaranteed loans	Commitments	159,243	155,705	128,362	129,517	130,472	129,566	129,539
	New guaranteed loans	89,580	124,751	109,355	102,111	103,169	103,085	103,111
	Change in outstandings	*34,564*	*76,371*	*54,113*	*43,525*	*39,971*	*36,840*	*34,207*
	Outstandings	**449,808**	**526,179**	**580,292**	**623,816**	**663,787**	**700,627**	**734,834**

* $500,000 or less.

[1] Loans guaranteed by the Federal Housing Administration, the Veterans Administration, or the Farmers Home Administration are included above. GNMA places a secondary guarantee on these loans, so they are deducted here to avoid double counting.

[2] When guaranteed loans are acquired by a budget account,they are counted as direct loans and shown in the direct loan table. Consequently, they are deducted from thetotals in this table.

Table F–20. **LENDING AND BORROWING BY GOVERNMENT-SPONSORED ENTERPRISES**

(In millions of dollars)

Enterprise		Actual 1986	Estimate 1987	Estimate 1988
LENDING				
Student Loan Marketing Association	Obligations	4,238	4,662	5,128
	New transactions	4,238	4,662	5,128
	Net change	2,613	2,874	3,162
	Outstandings	14,189	17,063	20,225
Federal National Mortgage Association:				
Corporation Accounts	Obligations	32,102	27,386	28,575
	New transactions	26,806	28,804	25,505
	Net change	948	4,319	2,604
	Outstandings	97,717	102,036	104,640
Mortgage-backed securities	Obligations	61,824	55,600	58,600
	New transactions	51,963	46,732	49,256
	Net change	37,590	31,878	35,856
	Outstandings	86,359	118,237	154,093
Farm Credit Banks:				
Banks for cooperatives	Obligations	28,988	39,565	39,277
	New transactions	28,988	39,561	39,277
	Net change	−356	−14	1,878
	Outstandings	7,177	7,163	9,041
Federal intermediate credit banks	Obligations	12,716	6,563	6,467
	New transactions	12,716	6,563	6,467
	Net change	−6,924	−630	−108
	Outstandings	8,701	8,070	7,963
Federal land banks	Obligations	1,660	1,239	1,454
	New transactions	1,660	1,876	1,876
	Net change	−18,578	−3,241	−3,241
	Outstandings	27,358	24,117	20,876
Federal Home Loan Bank system:				
Federal home loan banks	Obligations	165,574	165,000	170,000
	New transactions	165,574	165,000	170,000
	Net change	13,048	6,711	9,997
	Outstandings	100,064	106,775	116,772
Federal Home Loan Mortgage Corporation:				
Corporation accounts	Obligations	5,054	5,275	5,375
	New transactions	5,054	5,275	5,375
	Net change	271	1,839	3,761
	Outstandings	13,359	15,198	18,959
Participation certificate pools [1]	Obligations	78,867	81,653	70,025
	New transactions	78,867	81,653	70,025
	Net change	54,882	55,265	47,145
	Outstandings	146,871	202,136	249,281
Subtotal, lending (gross)	Obligations	391,024	386,943	384,901
	New transactions	375,867	380,127	372,909
	Net change	83,494	99,001	101,054
	Outstandings	501,794	600,795	701,849
Less loans between sponsored enterprises	Obligations	....	....	....
	New transactions	....	....	....
	Net change	−240	−250	....
	Outstandings	950	700	700

Table F–20. **LENDING AND BORROWING BY GOVERNMENT-SPONSORED ENTERPRISES—Continued**

(In millions of dollars)

Enterprise		Actual 1986	Estimate 1987	Estimate 1988
Less secondary funds advanced from Federal sources:				
SLMA from FFB [2]	Obligations			
	New transactions			
	Net change	–30	–30	–30
	Outstandings	4,970	4,940	4,910
TVA to FNMA	Obligations			
	New transactions			
	Net change			
	Outstandings	80	80	80
Less guaranteed loans held as direct loans by:				
Federal National Mortgage Association [3]	Obligations			
	New transactions			
	Net change	–3,385		
	Outstandings	27,679	27,679	27,679
Federal home loan banks	Obligations			
	New transactions			
	Net change	491	99	291
	Outstandings	3,005	3,104	3,395
Federal Home Loan Mortgage Corporation [3]	Obligations			
	New transactions			
	Net change	1,254		
	Outstandings	3,129	3,129	3,129
Farm Credit Banks	Obligations			
	New transactions			
	Net change	–39	–13	3
	Outstandings	21	8	11
Student Loan Marketing Association [2]	Obligations			
	New transactions			
	Net change	2,643	2,904	3,191
	Outstandings	9,219	12,123	15,314
Total lending	Obligations	391,023	386,943	384,901
	New transactions	375,866	380,126	372,909
	Net change	83,330	95,212	95,609
	Outstandings	453,272	548,483	644,093
BORROWING				
Student Loan Marketing Association	Net change	2,856	2,988	3,410
	Outstandings	15,526	18,515	21,925
Federal National Mortgage Association [4]	Net change	39,526	34,108	38,284
	Outstandings	179,988	214,096	252,380
Farm Credit System:				
Banks for cooperatives	Net change	422	–858	–373
	Outstandings	8,489	7,631	7,258
Federal intermediate credit banks	Net change	–2,561	–3,315	–256
	Outstandings	12,961	9,646	9,389

Table F-20. **LENDING AND BORROWING BY GOVERNMENT-SPONSORED ENTERPRISES—Continued**

(In millions of dollars)

Enterprise		Actual 1986	Estimate 1987	Estimate 1988
Federal land banks	Net change	−3,595	−9,221	−1,204
	Outstandings	42,653	33,431	32,227
Federal Home Loan Bank system:				
Federal home loan banks	Net change	14,509	6,917	9,000
	Outstandings	88,083	95,000	104,000
Federal Home Loan Mortgage Corporation	Net change	55,952	59,159	50,692
	Outstandings	161,767	220,926	271,618
Subtotal, borrowing (gross)	Net change	107,109	89,778	99,553
	Outstandings	509,467	599,245	698,797
Less borrowing from other sponsored enterprises	Net change	−203	−325	14
	Outstandings	1,230	905	919
Less borrowing from Federal sources:				
SLMA from FFB [2]	Net change	−30	−30	−30
	Outstandings	4,970	4,940	4,910
TVA to FNMA	Net change	....	....	....
	Outstandings	80	80	80
Total borrowing from the public	Net change	107,342	90,133	99,569
	Outstandings	503,187	593,320	692,888
Less investments in Federal securities	Net change	−756	−39	234
	Outstandings	1,986	1,947	2,181
Less borrowing for guaranteed loans held as direct loans by:				
Federal National Mortgage Association	Net change	−3,385	....	....
	Outstandings	27,679	27,679	27,679
Federal home loan banks	Net change	491	99	291
	Outstandings	3,005	3,104	3,395
Federal Home Loan Mortgage Corporation	Net change	1,254	....	....
	Outstandings	3,129	3,129	3,129
Farm Credit Banks	Net change	−39	−13	3
	Outstandings	21	8	11
Student Loan Marketing Association [2]	Net change	2,643	2,904	3,191
	Outstandings	9,219	12,123	15,314
Total borrowed	Net change	107,134	87,182	95,850
	Outstandings	458,148	545,330	641,179

[1] All new transactions are loans purchased from FHLMC corporation accounts.

[2] All SLMA lending financed through the FFB has been counted in Table F0918 as direct loans. All SLMA loans are student loans guaranteed by the Federal Government and, therefore, counted in Table F0919 as guaranteed loans The first deduction eliminates the overlap of this table with the direct loan table; the second deduction removes the non-FFB financed remainder of SLMA to eliminate overlap with the guaranteed loan table.

[3] The estimates for 1987 and 1988 are made by OMB.

[4] Loans purchased at discount are recorded at their acquisition cost.

Table F–21. **FEDERAL FINANCING BANK ACTIVITIES**

(In millions of dollars)

Agency and program	Actual 1986	Estimated					
		1987	1988	1989	1990	1991	1992
Assets purchased from:							
Overseas Private Investment Corporation:							
New acquisitions							
Net lending	–5	–1	–1				
Loans outstanding	1	1					
Farmers Home Administration:							
Agricultural credit insurance fund:							
New acquisitions	1,470			654	1,398	244	3,831
Net lending	220	–385	–385	–3,306	–1,931	–1,731	–1,679
Loans outstanding	28,395	28,010	27,625	24,319	22,388	20,657	18,978
Rural housing insurance fund:							
New acquisitions	750						
Net lending	750	–1,860	–1,365	–1,919	–2,240	–2,270	–2,135
Loans outstanding	29,101	27,241	25,876	23,957	21,717	19,447	17,312
Rural development insurance fund:							
New acquisitions	265						
Net lending	235	–1,645	–720	–720	–920	–1,000	–1,020
Loans outstanding	7,878	6,233	5,513	4,793	3,873	2,873	1,853
Rural Electrification Administration:							
New acquisitions	617	388	211	207	255	249	233
Net lending	517	–704	–1,405	–465	–369	–290	–222
Loans outstanding	4,241	3,538	2,132	1,668	1,298	1,008	786
Medical facilities guarantees:							
New acquisitions							
Net lending	–15	–6	–35				
Loans outstanding	108	102	67	67	67	67	67
Health maintenance organizations:							
New acquisitions	1						
Net lending	–7	–8	–24				
Loans outstanding	102	95	71	71	71	71	71
Small business development companies:							
New acquisitions							
Net lending	–7	–7	–7	–6	–6		
Loans outstanding	26	19	12	6			
Subtotal, assets purchased:							
New acquisitions	3,103	388	211	861	1,653	493	4,064
Net lending	1,688	–4,614	–3,942	–6,416	–5,466	–5,291	–5,055
Loans outstanding	69,852	65,238	61,297	54,880	49,414	44,122	39,067
Loans originated on behalf of:							
Foreign military sales credit:							
New acquisitions	1,484	754	799	359	139	30	
Net lending	708	–539	–1,611	–43	–332	–575	–661
Loans outstanding	18,797	18,258	16,647	16,604	16,272	15,697	15,036

Table F-21. **FEDERAL FINANCING BANK ACTIVITIES—Continued**

(In millions of dollars)

Agency and program	Actual 1986	Estimated 1987	1988	1989	1990	1991	1992
Defense production guarantees:							
New acquisitions	3	....	....	....	....	....	....
Net lending	3	−9	....	....	....	....	....
Loans outstanding	9	....	....	....	....	....	....
Navy industrial fund:							
New acquisitions	568	....	....	....	....	....	....
Net lending	435	−167	−169	−178	−178	−178	−178
Loans outstanding	1,748	1,582	1,412	1,234	1,056	878	700
Rural Electrification Administration:							
New acquisitions	1,318	2,348	1,975	1,492	1,196	739	374
Net lending	−216	−69	1,096	641	372	−68	−417
Loans outstanding	21,460	21,390	22,486	23,127	23,499	23,431	23,014
Low-rent public housing:							
New acquisitions							
Net lending	−35	−37	−39	−42	−44	−47	−50
Loans outstanding	2,111	2,074	2,035	1,993	1,949	1,902	1,852
Revolving fund, liquidating programs (HUD):							
New acquisitions	....	....	....	....	....	....	....
Net lending	−1	−2	−2	−2	−2	−2	−6
Loans outstanding	32	31	29	27	26	24	18
Community development grants:							
New acquisitions	89	66	29	....	....	....	....
Net lending	11	−8	−51	−78	−65	−54	−34
Loans outstanding	300	292	241	163	98	44	10
Loans to territories:							
New acquisitions							
Net lending	−1	−2	−2	−2	−2	−2	−2
Loans outstanding	62	60	59	57	55	53	51
Railroad programs:							
New acquisitions	2	2	1	....	....	....	....
Net lending	−93	−5	−5	−9	−7	−5	−6
Loans outstanding	61	55	50	41	34	29	23
Guarantees of SLMA obligations:							
New acquisitions							
Net lending	−30	−30	−30	....	−30	−30	−30
Loans outstanding	4,970	4,940	4,910	4,910	4,880	4,850	4,820
Federal buildings fund:							
New acquisitions	....	....	....	....	....	....	....
Net lending	−6	−6	−7	−8	−8	−9	−10
Loans outstanding	402	396	389	381	373	364	354
NASA:							
New acquisitions	....	....	....	....	....	....	....
Net lending	....	−79	−91	−105	−121	−138	−157
Loans outstanding	888	809	717	612	491	354	197

Table F–21. **FEDERAL FINANCING BANK ACTIVITIES—Continued**

(In millions of dollars)

Agency and program	Actual 1986	Estimated 1987	1988	1989	1990	1991	1992
Small Business Administration:							
New acquisitions	308	138	43	....	....	....	....
Net lending	163	–17	–617	–527	–90	–80	–65
Loans outstanding	1,783	1,766	1,149	622	532	452	387
Oregon veterans housing:							
New acquisitions	....	....	....	....	....	....	....
Net lending	–60	....	....	....	....	....	....
Loans outstanding	....	....	....	....	....	....	....
Washington Metro Area Transportation Authority:							
New acquisitions	....	....	....	....	....	....	....
Net lending	....	....	....	....	....	....	....
Loans outstanding	177	177	177	177	177	177	177
Seven States Energy Corporation (TVA):							
New acquisitions	203	196	209	272	277	261	337
Net lending	188	–244	78	–354	–135	–178	–51
Loans outstanding	1,840	1,595	1,673	1,319	1,184	1,007	956
Subtotal, loans originated:							
New acquisitions	3,975	3,504	3,056	2,123	1,611	1,030	711
Net lending	1,068	–1,215	–1,451	–706	–643	–1,366	–1,666
Loans outstanding	54,641	53,426	51,975	51,269	50,626	49,260	47,594
Debt securities acquired from:							
Export-Import Bank:							
New acquisitions	801	700	400	300	300	300	300
Net lending	–1,141	–2,401	–1,815	–700	–600	–600	–600
Loans outstanding	14,268	11,868	10,052	9,352	8,752	8,152	7,552
Tennessee Valley Authority:							
New acquisitions	2,425	1,896	514	817	451	374	484
Net lending	696	1,396	314	317	251	374	484
Loans outstanding	15,077	16,473	16,788	17,104	17,355	17,729	18,213
Central liquidity facility (NCUA):							
New acquisitions	34	59	74	50	50	50	50
Net lending	–118	25	25	25	25	25	25
Loans outstanding	104	129	154	179	204	229	254
Department of Transportation:							
New acquisitions	....	....	....	....	....	....	....
Net lending	....	–39	....	....	....	....	....
Loans outstanding	74	35	35	35	35	35	35
Postal Service:							
New acquisitions	1,250	1,635	1,700	1,769	1,840	1,562	476
Net lending	1,164	1,499	1,499	1,500	1,500	1,148	*
Loans outstanding	2,854	4,353	5,852	7,352	8,852	10,000	10,000

Table F-21. **FEDERAL FINANCING BANK ACTIVITIES—Continued**

(In millions of dollars)

Agency and program	Actual 1986	Estimated 1987	1988	1989	1990	1991	1992
Subtotal, debt securities:							
New acquisitions	4,510	4,290	2,689	2,936	2,641	2,286	1,310
Net lending	601	480	23	1,141	1,176	947	−91
Loans outstanding	32,377	32,858	32,881	34,022	35,198	36,146	36,054
Total, all FFB acquisitions:							
New acquisitions	11,588	8,182	5,955	5,920	5,905	3,808	6,085
Net lending	3,357	−5,349	−5,369	−5,981	−4,933	−5,710	−6,813
Loans outstanding	156,871	151,522	146,152	140,171	135,238	129,528	122,716

*$500,000 or less.

Table F–22. **FEDERAL PARTICIPATION IN DOMESTIC CREDIT MARKETS**

(In billions of dollars)

	Actual									
	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
Total funds loaned in U.S. credit markets [1]	307.9	379.0	418.7	352.9	410.1	392.3	511.3	703.4	765.0	889.1
Direct loans	11.6	19.8	19.6	24.2	26.1	23.4	15.3	6.3	28.0	11.2
Guaranteed loans	13.5	13.4	25.2	31.6	28.0	20.9	34.1	20.1	21.6	34.6
Government-sponsored enterprise loans [2]	11.7	25.2	28.1	24.1	32.4	43.3	37.1	53.1	60.7	83.3
Federal and federally assisted lending	36.8	58.4	72.9	79.9	86.5	87.6	86.5	79.5	110.3	129.1
Federal lending participation ratio (percent)	12.0	15.4	17.4	22.6	21.1	22.3	16.9	11.3	14.4	14.5
Total funds borrowed in U.S. credit markets [1]	307.9	379.0	418.7	352.9	410.1	392.3	511.3	703.4	765.0	889.1
Federal borrowing from public	53.5	59.1	33.6	70.5	79.3	135.0	212.3	170.8	197.3	236.3
Borrowing for guaranteed loans	13.5	13.4	25.2	31.6	28.0	20.9	34.1	20.1	21.6	34.6
Government-sponsored enterprise borrowing [2]	12.0	21.4	21.9	21.4	34.8	43.8	34.6	55.5	57.9	107.1
Federal and federally assisted borrowing	79.0	93.9	80.7	123.5	142.1	199.7	281.0	246.4	276.8	378.0
Federal borrowing participation ratio (percent)	25.7	24.8	19.3	35.0	34.7	50.9	55.0	35.0	36.2	42.5

[1] Funds loaned to and borrowed by nonfinancial sectors, excluding equities.

[2] The data in Table F–22 for total funds loaned are defined as excluding financial sectors. Nonetheless, the Government-sponsored enterprises, as well as Federal assisted lending, are properly compared with total funds loaned. Government-sponsored enterprises lending is a proxy for the lending by non-financial sectors that is intermediated by the sponsored enterprises. It assists the ultimate non-financial borrowers whose loans are purchased or otherwise financed by the sponsored enterprise.

Source: Federal Reserve Board Flow-of-Funds Accounts for total funds loaned and borrowed.

SPECIAL ANALYSIS G

TAX EXPENDITURES

The Congressional Budget Act of 1974 (Public Law 93-344) requires a listing of tax expenditures in the Budget. The act defines tax expenditures as "revenue losses attributable to provisions of the Federal tax laws which allow a special exclusion, exemption, or deduction from gross income or which provide a special credit, a preferential rate of tax, or a deferral of liability."

The definition of tax expenditures requires a distinction between the baseline provisions of the tax structure and special or preferential provisions that are exceptions to the baseline structure. Because Public Law 93-344 does not provide an exact specification of the baseline provisions of the tax law, determination of what provisions constitute special or preferential provisions, and therefore should be listed as tax expenditures, is necessarily a matter of judgment.

Prior to 1983, the listing of tax expenditures in Special Analysis G generally matched those published by the Congressional Budget Office and the Joint Committee on Taxation. Both the executive branch and congressional staffs used the concept of a "normal tax" as the baseline, or standard, by which to identify exceptions to the Internal Revenue Code. The normal tax standard is a variant of a comprehensive income tax, albeit with several major exceptions. It does not deviate significantly from the concept used in deriving the original tax expenditure listing published by the Treasury Department in 1968.

After 1982, tax expenditures in Special Analysis G were measured against an alternative baseline which is referred to as the "reference tax law." This year's Special Analysis G displays tax expenditures as compared to both the reference tax baseline used since 1983 and the normal tax baseline used prior to 1983. In the following sections both baselines are described in general terms, then the conceptual and practical differences between them are discussed, and finally the major categories of tax expenditures are reviewed.

The Tax Reform Act of 1986 (Public Law 99-514) has affected the fiscal year 1988 tax expenditure budget in three ways. First, specific items were repealed outright, or restricted in scope, while some new tax expenditures were enacted. Second, the act significantly affected the reference tax law and thereby changed the listing identified by this standard. These two kinds of changes will be discussed in the text below. Finally, the significant reductions in individual and corporate tax rates have correspondingly reduced the values of almost all tax expenditures. The act reduced the top individual marginal tax rate from 50 percent to 38.5 percent in 1987 and to 28 percent in 1988. The maximum corporate tax rate of 46 percent was reduced to 40 percent in 1987 and to 34 percent in 1988. Thus the value of preferential deductions taken by individuals in the top income bracket has been reduced by 23 percent in 1987 and will be reduced by another 21 percent in 1988, a total of 44 percent as compared with 1986. For corporations, the respective reductions in value of preferential deductions are 13 percent for each of the two years, for a total of 26 percent.

In preparing the President's tax reform proposals of May 1985 and through the course of the 15-month legislative process culminating in the Tax Reform Act of 1986, a number of questions have been raised concerning the definitions of the normal tax and reference tax law standards for identifying tax expenditures. Furthermore, a number of tax law provisions came to light that might have been included in previous tax expenditure budgets under either standard. Utilizing the knowledge and experience gained from the tax reform process, a comprehensive review is expected to be completed this year of the concepts on which the tax expenditure budget is based, its content, and the format in which it is displayed.

Pre-1983 Budget Concepts

The "normal tax" structure used as a departure point for identifying and measuring tax expenditures has many features in common with a comprehensive income tax. Taxable income, under such a comprehensive tax, is defined as the sum of consumption, including all taxes, and the change in net wealth in a given period of time. The concept of a normal income tax does not specify any particular structure of tax rates, nor the definition of the taxpaying unit (as between families and individuals). It also allows for personal exemptions and a standard deduction. In addition, the concept of a normal tax, as would a comprehensive income tax, allows for deductions from gross income needed to measure net taxable income. Examples are the deductions for interest incurred to finance the holding of income-producing assets and for employee business expenses. The normal tax structure does allow, however, for several major departures from what is commonly understood to be the base of a truly comprehensive income tax. For example:

- Under the normal tax structure, income is taxed only when realized, not as accrued. Thus, for example, the benefit, relative to strict accrual accounting of income, from deferring tax on accrued, but unrealized, capital gains is not regarded as a tax expenditure.

- The fact that the current tax system taxes only cash income. No income derived in the form of consumption benefits from capital owned and used directly by households, or their consumption of goods they themselves produce, is regarded as part of the normal tax structure. Thus, the exclusions from tax of imputed income from owner-occupied homes and consumer durables as well as tax-free consumption by farmers of products grown on their farms are not regarded as tax expenditures.
- The normal tax structure includes a separate tax on corporation income, although neither economic theory nor common international practice justifies a totally separate corporation income tax. At the same time, the normal tax structure allows for provisions such as subchapter S corporations, that eliminate the separate corporate tax by attributing income to shareholders. The additional revenue resulting from the maintenance of a separate, unintegrated corporation tax could well be considered a "negative" tax expenditure if the normal tax base were defined as the comprehensive income of individuals, with corporate retained earnings attributed to individual shareholders.
- The normal tax structure does not adjust the basis of capital assets or debt for changes in the price level over the time assets are held. Thus it overstates real capital gains, interest income, as well as interest costs, and understates depreciation during a period of inflation. If the normal tax were a true comprehensive income tax, failure to take account of inflation in measuring depreciation, capital gains, and interest income of lenders would be regarded as a negative tax expenditure. In turn, failure to take account of inflation in measuring the interest costs of borrowers would be regarded as a positive tax expenditure, or subsidy for borrowing.

Notwithstanding these major differences from a fully comprehensive income tax, the normal tax concept can be thought of as a base for a practical income tax intended to avoid these complexities. Moreover, these departures from a comprehensive tax that define the normal tax had essentially remained unchanged until 1982.

The normal tax as described above is, of course, not the only broad-based or normative tax system that can be used as a standard for identifying tax expenditures. One could, for example, use as the standard a truly comprehensive income tax in which the tax base is equal to consumption plus the change in net wealth of individuals and families. Under such a standard, as indicated in the previous discussion, the failure to include accrued but unrealized income in the tax base would be regarded as a tax expenditure, while the double taxation of corporate dividends would be regarded as negative tax expenditure, or tax penalty.

Post-1982 Budget Concepts

Both definition and measurement of tax expenditures have undergone major changes in recent years, in part reflecting a changed perception of what constitutes the major structural features of the current tax system.

In the budgetary context implied by the Congressional Budget Act of 1974, it is useful to distinguish two categories of items that had been labeled tax expenditures in previous budgets. The first category consists of deviations from general rules of the existing tax system that could be measured and evaluated similarly to that of subsidy and transfer programs on the outlay side of the budget. The second category consists of more general deviations of the current tax structure from some normative, comprehensive income or other broad-based tax. The items in the second group are no longer labeled tax expenditures as such. Rather, they are items to be considered in a more general reform of the existing income tax.

To distinguish the "special" provisions that substitute for outlay expenditures from provisions that might be considered deviations from desirable norms, tax expenditure budgets since fiscal year 1983 were constructed on the basis of a revised baseline with an added selection criterion. Under this procedure, a provision in the tax laws is listed as a tax expenditure if: (a) absent the provision, the remaining body of tax law enables a taxpayer to determine his tax liability, i.e., there is already an enacted general tax rule, the "reference tax law," to which the particular provision is an exception; and (b) the particular provision applies to a distinctive class of transactions sufficiently narrow in scope that it could be replaced by an expenditure program administrable by a Federal agency other than the Internal Revenue Service.

Beginning with the fiscal year 1983 budget, tax expenditures also have been estimated in terms of "outlay equivalents." This ensures that the resource cost of tax expenditure programs will be comparable, or additive to, Federal Government expenditures, the amounts of which are pretax market magnitudes. For example, the objective of encouraging the substitution of alcohol for gasoline in motor fuels could be accomplished by allowing, say, a government subsidy of 60 cents per gallon for alcohol paid to either purchasers or producers of alcohol who blend this with gasoline for sale as a motor fuel ("gasohol"). In this event, the government pays 60 cents of the cost of alcohol, an amount that enters the gross income of the blender, along with the sale price of the gasohol. In determining the blender's net income, the cost of the alcohol (along with his other expenses) is deducted from his cash-subsidy-augmented gross income, and he pays tax accordingly. Currently, a 60-cent per gallon of alcohol subsidy is provided blenders as a credit against their income tax otherwise due. If this subsidy, cleared through a gasohol blender's income tax account, is to cost the government and be worth to a blender no more than a 60-cent cash payment, the blender should be required to include the 60 cents in his gross income by reducing his deduction for alcohol purchased by the 60 cents paid by the government. However, the gasohol income tax credit is not so structured. The gasohol blender is not required to include the 60 cent credit against tax otherwise due in his taxable income. This increases the subsidy by an amount equal to the additional "tax saving" resulting from the tax exemption of the 60 cents. The outlay equivalent of the current gasohol tax subsidy is therefore larger than the 60 cents per gallon revenue loss from the gasohol credit.

Neither the Congressional Budget Office nor the Joint Committee on Taxation has adopted any of these revisions. Both continued to use a modified income tax norm, described above, as their basis for identifying tax expenditures. As a consequence, Special Analysis G did not fully correspond in the 1983 and 1984 budgets to these other tax expenditure listings, a condition some have found confusing. Beginning with the 1985 budget, therefore, tax provisions qualifying as tax expenditures under the broader income tax norm have been listed in Special Analysis G in addition to those that meet the more restrictive tests used since 1983. The discussion below sets out in greater detail the reference tax law used to identify tax expenditures and identifies some of the departures of this reference tax law from the normal income tax standard used prior to 1983.

Reference Tax Rules and Comparison to Normal Tax Standard

The reference tax rules from which departures represent expenditure-like government programs include:

1. *Definition of the taxpaying unit.* Taxpaying units are individuals (single, married, head of household), corporations (except those electing subchapter S treatment, cooperatives, real estate investment trusts, and other financial organizations that attribute their income to members in whose hands it is taxable), as well as trusts and estates (to the extent income is not distributed to beneficiaries). Certain otherwise taxable corporations and associations whose activities and ownership meet the requirements of section 501 are exempt from income tax, as are government-owned enterprises encompassed by section 115.

The taxpaying units are the same in the normal and reference tax structures with one major exception. In the normal tax, controlled foreign corporations are not regarded as entities separate from their controlling U.S. shareholders. Therefore, the deferral of tax on income accumulated within controlled foreign corporations is regarded as a tax expenditure. In contrast, except for tax haven activities, the reference tax rules follow the current tax system in treating controlled foreign corporations as separate taxable entities whose income is not subject to U.S. tax until distributed to U.S. taxpayers. Under that definition of the tax unit, deferral of tax on controlled foreign corporation income is not a tax expenditure because U.S. taxpayers generally are not taxed on accrued, but unrealized income. Since the Tax Reform Act of 1986 generally did not change these provisions, the reference tax law is not changed.

2. *Tax rate schedules.* Separate schedules for single individuals, heads of household, married persons filing jointly, married persons filing separately, and corporations are all regarded as part of the reference tax system. The rate structures imposed on the tax base of these entities are whatever current law provides. The Tax Reform Act of 1986 reduced the number of personal income tax brackets and reduced the marginal tax rates in two stages, as noted above. Corporate tax rates were also reduced, and one bracket eliminated. The normal tax system is similar, except that it specifies a single rate (the current maximum rate) on corporate income. The lower tax rates applied to the first $75,000 of corporate income ($100,000 before 1987) are thus regarded as a tax expenditure relative to the normal tax standard.

3. *General accounting rules for determining income subject to tax.* Income subject to tax is gross income less costs of earning that income. Since its inception, the Federal income tax has defined gross income to include payments (or obligations to receive payment) from all sources, foreign and domestic, that are: (1) consideration received in the exchange of goods and services (including one's labor services), or of property; and (2) the taxpayer's share of gross, or net income earned and/or reported by another entity, such as interest, dividends, rents, royalties, and profits of partnerships, subchapter S corporations, and cooperatives. Under the reference tax law rules, therefore, gross income does not include gifts, defined as receipts of money or property that are not consideration in an exchange, or most transfer payments (gifts from the Federal Government). Gross income does, however, include transfer payments associated with past employment, such as social security benefits. The normal tax baseline also does not include gifts between individuals as gross income; however, under the normal tax baseline used prior to 1983, all cash transfer payments (gifts from government to private individuals) are regarded as gross income,

and exemptions of such gifts from tax under current law are identified as tax expenditures.

Costs of earning gross income are deductible in determining taxable income under the reference tax rules. These costs include: (1) expenses incurred in earning gross personal service income (not including expenditures on goods and services for personal use); (2) costs of earning income incurred by a taxpayer's trade or business including costs of goods sold (compensation of employees, goods and services purchased from other firms, royalties paid), an allowance for physical capital used up in producing the output that generates the gross income of the business (depreciation in the case of machinery, equipment, and structures; depletion in the case of mineral deposits); and (3) interest paid creditors who have advanced funds to help finance the ownership and use of assets by the trade or business.

With one exception, both the reference and normal tax law standards have used as the baseline the general statutory provisions governing these allowable deductions. The exception relates to the rules for determining tax depreciation allowances. Under the reference tax law standard, accelerated cost recovery system (ACRS) allowances, available for property placed in service before January 1, 1987, serve as the baseline. The system of depreciation allowances provided by the Tax Reform Act of 1986 (see below) will be the reference tax law baseline for investments placed in service after 1986. Thus, under the reference tax law standard, there are no tax expenditures from "accelerated depreciation".

Under the normal tax baseline, however, the depreciation norm for depreciable personal property equals the allowances that would be determined by using statutory accelerated methods (declining balance at double the straight-line rate or sum-of-years digits) over tax lives equal to mid-values of the asset depreciation range (ADR, a statutory system in effect from 1971 through 1980), and 40-year straight line depreciation for depreciable real property. Consequently, from 1981 through 1986, ACRS depreciation provisions generated tax expenditures under the normal tax baseline. Since the Tax Reform Act of 1986 provides depreciation allowances approximately equal to the norms specified in the normal tax baseline for machinery and equipment, such post-1986 investment will no longer generate tax expenditures under this standard.

In addition to rules for determining what is includable in gross income and the deductions that are to be allowed, an operational income tax system also requires the stipulation of rules (income tax accounting) valuing goods and services exchanged and rules for determining when gross income is reportable and when deductions may be taken. On these matters, both the reference and normal tax law approaches use the provisions of enacted law as baselines for identifying tax expenditures. These include: (1) reliance on valuations determined at the time transactions occur (realization as opposed to accrual accounting); (2) exclusion from gross income of the market value of services from durable goods or other self-produced income, such as do-it-yourself repairs and maintenance; (3) reliance on historical cost to determine allowable deductions for capital cost recovery and in the computation of gain on the sale of an asset (no inflation adjustments); (4) distinguishing current expense from capital expenditures, with the former deductible from gross income in the period when the transaction is completed, while the latter is recovered by depreciation or depletion deductions over the asset's productive life; and (5) specification of the accounting period for summarizing transactions to determine income subject to tax, computing tax due and payable, as well as a stipulation of when tax must be paid.

As part of the computation of tax liability, both the reference and normal tax law standards accept, without classifying it as a tax expenditure, a tax credit for foreign income taxes paid up to the amount of U.S. income taxes that would otherwise be due. This prevents the double taxation of income earned abroad.

Major Departures From the Reference Rules

Beginning with the 1983 budget, the reference tax law standard has been used to identify provisions that substitute for budget outlays. For example, compared to the general rules described as the reference tax law:

- Not all consideration received in exchange for goods and services is reportable as gross income. Some forms of employee compensation, such as certain military housing and food allowances or employer-paid fringe benefits, are specifically excluded from employees' reportable gross income although it is clearly a consideration received in exchange for labor services and is properly deductible from the gross income of the trade or business of employers who are taxable entities.
- Holders of State and local tax-exempt government bonds are specifically exempt from reporting interest payments on those obligations as gross income, although these payments are no less income than interest, dividends, rents, and royalties received from other payees.
- Dividend and interest receipts of pension funds, the value of which accrues to taxable beneficiaries, are not reportable as gross income when received, either by the qualified pension trusts or by the beneficiaries; they become reportable, after compounding at pretax rates of interest, only when they are paid out as retirement benefits.

Defense Department outlays reported in the budget for military personnel are lower because part of military compensation is paid in tax-free housing and food allowance dollars. Exclusion of this compensation from tax substitutes for higher direct outlays to obtain the same quality and quantity of military personnel whose compensation in this form, if received from another employer, would be subject to tax. Similarly, the nontaxability of interest paid by State and local government borrowers enables them to obtain funds at lower rates with a saving to their taxpayers. This particular exclusion is, therefore, a substitute for interest subsidies or capital grants to State and local governments on the outlay side of the budget. The exclusion of employer-paid pension, health, and other insurance benefits for employees and the preferred treatment of pension trust income substitute for Federal Government outlays that would pay part of the costs of private retirement, health, and insurance plans.

The tax laws also provide many deductions from gross income in the derivation of taxable income that have no apparent relation to the cost of earning the reported gross income, as the general rule requires. For example:

- Individuals may deduct amounts paid to charitable, educational, scientific, or religious organizations, although these are not costs of earning reportable gross income.
- Some oil, gas, and mineral producers are allowed deductions for percentage depletion that are not limited to recovery of the cost of acquiring the mineral deposit. In addition, some investments in the acquisition of depletable and depreciable property may be deducted in the year incurred, rather than capitalized and recovered as production ensues. These special rules for cost recovery of oil and gas, as well as mineral deposits, permit investment costs in these activities to be recovered more rapidly than the reference tax rules allow in activities generally. Furthermore, they often permit more than the full investment to be recovered tax free, contrary to the income accounting rules applied to taxpayers using other forms of capital.
- Individuals are allowed to deduct mortgage interest paid from their pretax incomes, although under the reference tax rules applicable to housing they have not reported the (imputed) gross income received from the housing they own with the aid of the debt they are servicing.

These particular exceptions to the general reference tax rules governing the use of deductions for computing taxable income have direct incentive effects that could just as well be obtained with outlay programs. Deductibility of qualified contributions lowers the private price of giving, as would matching grants to qualified organizations based on contributors' support. The preferential treatment of minerals investment and production expands mineral output as would direct subsidies paid to mineral producers. The deductibility of mortgage interest encourages home ownership much the same as Federal mortgage interest subsidy programs do.

Finally, there are special exceptions to the general rules for determining net income tax due and payable. After a taxpayer has determined his pretax income, taking into account all preferential exclusions for gross income and all the special deductions, and has applied the appropriate tax rate schedule, the tax liability thus derived is not necessarily the amount he must pay. For example, the taxpayer may take as credits against his tax otherwise due and payable amounts determined by expenditures during the tax year on:

- Child and dependent care.
- Newly constructed or substantially rehabilitated low-income housing.
- Incremental research and experimentation.
- Rehabilitating old and historic structures.

It is not difficult to visualize equivalent outlay programs designed to subsidize these particular classes of transactions directly.

All of these departures from the reference tax rules are also departures from the normal tax rules and appear in the tax expenditure budgets constructed from both baselines. The major items that are tax expenditures relative to the normal tax baseline (pre-1983 budget method), but that are not items of tax expenditure relative to the reference tax law rules used beginning with the 1983 budget are: deferral of income of controlled foreign corporations, expensing of research and development expenditures, progressive corporation income tax rates, "gifts" or unilateral transfers from governments, and the difference between statutory depreciation rules (ACRS) for investments made between 1981 and 1986 and alternative rules designed to provide a more accurate measure of economic income from capital investments.

Measuring Tax Expenditures

Accounting for budget outlays on a functional or programmatic basis, as in Part 5 of the Budget, provides a measure of Federal Government influence on the allocation of resources in the economy. The functional purposes may be broadly divided into: (1) the provision of public goods and services; (2) the provision of subsidies; and (3) the payment of transfers. Budget outlays for public goods and services such as national defense, are used to acquire labor and capital services directly used in the production of such goods. Subsidies, such as those for school lunches, are intended to reduce market prices below the cost of resources used to produce them.

Transfers, such as aid to families with dependent children, are intended to provide a level of income to recipients they otherwise would not achieve.

Government receipts and outlays reallocate resources because they change the composition of GNP from what it would be in their absence. The decisions to provide public goods and services, to subsidize certain prices (and hence outputs), and to make transfers result in producing a slate of goods and services that otherwise would not be produced. This occurs because control over resources is removed from the private sector either by taxation or by borrowing and made available for public use. Functional budget outlay figures, then, provide a basis for evaluating programs. The amount of an outlay measures the resource cost to the Federal Government of accomplishing the program objective. Because GNP is a (gross) measure of the market value of goods and services, the ratio of total budget outlays to GNP is commonly used as an indicator of the size of Government relative to the private economy.

When functional budget outlay figures are used to evaluate specific programs, it is essential that the outlay figures be both consistent and comprehensive measures of resource costs. In this regard, it is important that resource costs represent the pretax price of resources. The market value of all goods and services summarized in GNP not only includes the effects of indirect taxes (sales and property taxes) on market prices, but also the before tax incomes of suppliers of labor (wages) and capital (rent, interest, and profit). Consistency of budget outlay figures requires that all such amounts also be stated in pretax magnitudes. Generally, budget outlays for the purchase of goods and services are gross of taxes; the payments to vendors and Government employees are gross income to the sellers out of which taxes will be paid as determined by the reference tax law in effect. Similarly, subsidy outlays in the budget generally enter the gross incomes of sellers of subsidized goods and services, along with the remainder of the sales proceeds realized by sellers as payment by private purchasers of the subsidized goods.

In some instances budget outlays for goods and services or subsidies are exempted from tax by a special tax provision. When this occurs, the outlay figure understates the resource cost of the program of which it is a part and is, therefore, not comparable with other outlay amounts. For example, as noted above, the budget outlays for certain housing and meal allowances of military personnel are not includable in their incomes and therefore understate the cost of this National Defense budget element. If this form of compensation were treated under the generally applicable reference or normal tax rule as income taxable to the employee, the Defense Department would have to make larger cash payments to its military personnel to leave them as well off after tax as they are now with nontaxable allowances. Only when the existing tax subsidy is added to the tax-exempt budget outlay is this element of National Defense expenditure comparable with other defense outlays.

The estimates of tax expenditures in table G–1 have been prepared to conform to the objectives of functional budget accounting for outlays. Thus, table G–1 figures are estimated as outlay equivalents, the magnitudes of which are consistent with direct budget outlays. The entries should be viewed as amounts that should be added to functional budget outlays and restored to budget receipts to provide a more consistent and comprehensive display of the resource reallocations produced by Federal fiscal measures.

All tax expenditure estimates reported were prepared by the Treasury Department and are based upon income tax law enacted as of December 31, 1986. In table G–1 the estimates show the expenditure equivalent of each special tax provision by fiscal year. The estimating procedure for tax expenditures uses the implicit assumption—the same that governs estimates of out-year budget outlays—that the existing tax structure and all other institutional resource cost determinants are given. It is also assumed that aggregate output and incomes remain at the levels that underlie the 1988 budget estimates. In table G–2 the estimates show the revenue loss of each special tax provision by fiscal year. They do not account for the nontaxability of certain of the items and therefore, are not comparable to outlay figures in the budget.

The tax expenditure estimates presented in this Special Analysis, including those computed on a revenue loss basis shown in Table G–2 should not be interpreted as estimates of the increase in Federal receipts (or reductions in budget deficit) that would accompany the repeal of the special provisions. There are four reasons why such an interpretation is not possible.

First, repeal of some provisions could affect the aggregate level of income and economic growth. All receipts and expenditures in the budget are based on projections of income and growth that assume all existing laws, amended only as proposed in the budget, will continue. Consequently, large changes in outlays or tax expenditures could be expected to alter projected growth rates, aggregate national income and product, and, thus, the tax base over the forecast period.

Second, many individual tax expenditures, like some subsidy programs financed by outlays, are not independent of each other. If one subsidy program is repealed or severely curtailed, it is frequently the case that demand for, and budget cost of, another Federal subsidy program will be increased. For example, if the exclusion of employer-paid medical insurance from the gross income of employees were repealed, this form of employee compensation would become more costly from the employees' point of view and would likely be substituted for, in part, by other forms of compensation such as employer-paid pensions and other tax-favored fringes. Thus, the budget impact of repealing the exclusion of employer-paid medical insurance would not be an increase in revenues equal to the estimated cost of that tax expenditure, but a smaller amount due to some increase in tax expenditures for pensions or other fringes. Similarly, a cut in support prices for one commodity might very well result in an increase in outlays for other price-supported commodities.

Third, an inherent characteristic of tax expenditures is that they are all cleared through individual and corporation tax accounts and, for this reason, their values become interdependent. For example, the exclusion of interest received from State and local governments has the effect of lowering a taxpayer's taxable income, and in a tax system with progressive tax rates, this reduces the value to the taxpayer of other tax expenditures in the form of deductions, such as charitable contributions. If the interest exclusion alone were repealed, this taxpayer could be thrust into a higher tax bracket, automatically increasing the value of charitable contributions and their budget cost, even if the taxpayer did not make larger contributions. On the other hand, if both the interest exclusion and the charitable deduction were repealed simultaneously, the increase in tax liability would be greater than the sum of the two separate tax expenditures, each estimated on the basis that the other remains in force.

Finally, the annual value of tax expenditures in the form of tax deferrals, like the outlay figures for government lending programs, is highly time-dependent while the unified budget is prepared on a strict cash receipts and disbursement basis. For example, the annual budget cost of tax deferrals arising from the exclusion from employees' gross income of their employers' contributions to their pension plans is the sum of two exclusions: the employers' current year pension plan contributions and the current year pension fund asset earnings, both accruing to the current benefit of employees but not included in their gross income. If the tax expenditure composed of these two exclusions were repealed, the immediate budget impact would be only the employees new tax on the employers' current year contributions. Only as the existing population of covered employees retired and received their annuities, thereby depleting the stock of asset-reserves previously accumulated with untaxed dollars, would the deficit-reducing impact of repealing this tax expenditure be fully registered in the budget.

Tax Expenditures by Function

The 1986–88 outlay equivalent estimates of tax expenditures are displayed by functional category in table G–1 and revenue loss estimates for the same items are shown in table G–2. Whenever an item is identified as a tax expenditure by application of the normal tax rules, but not by the reference tax rules, both are shown in the tables, the former designated as "Pre-1983 budget method", the latter as "Post-1982 budget method." The headings are the functional categories used in Part 5 of the budget.

Inasmuch as the sources of data for estimating tax expenditures are largely corporation and individual income tax returns, the estimates are arrayed by type of return. It must be emphasized, however, that listing estimates under the corporation and individual headings does not imply that these categories of filers benefit from the functional program served by the special tax provisions in proportion to the respective tax expenditure amounts shown. Rather, these breakdowns principally show the specific tax accounts through which the cost of the program is cleared. Corporations as such neither pay tax nor receive Government payments. They are the institutional conduit through which their employees, creditors, and stockholders engage in exchanges with customers and the Government. Thus, the reduction in tax deposits of corporations resulting from minerals tax preferences makes possible higher wages and/or more employment for mineral workers, higher royalties payable to mineral land owners (usually not the mining company), and may even make possible lower minerals prices. Little, if any, of the subsidy remains in the pockets of corporations' creditors and equity holders in the form of interest rates or rates of return that are higher than such capital can earn elsewhere in the economy. Similarly, the exemption from Federal income tax of interest paid by State and local governments provides a subsidy to those governments in the form of lower borrowing rates. Individual and corporate holders of such debt only benefit from the tax exemption to the extent their marginal tax rates exceed the percentage spread between taxable and nontaxable interest rates.

With these caveats in mind, a review follows of the tax expenditure estimates by functional category, as shown in tables G–1 and G–2.

National defense.—The housing and meals provided military personnel, either in cash or in kind, are excluded from income subject to tax. The exclusion is a tax expenditure relative to the normal as well as the reference tax rules.

International affairs.—A U.S. citizen or resident alien who is a resident of a foreign country or who is present in one or more foreign countries for a prescribed period is allowed tax relief on foreign earnings. Beginning in 1982, the prescribed period of time abroad is a minimum of 11 out of the past 12 months.

Eligible taxpayers in 1987 may exclude $70,000 per year of foreign earned income and may exclude or deduct reasonable housing costs in excess of one-sixth of the salary of a civil servant at grade GS–14, step 1. These provisions do not apply to persons who are employed by the U.S. Government. However, they do apply to persons who are not U.S. Government employees but who are paid from public funds. The tax expenditure estimate also includes the effect of another provision that excludes from their taxable income certain allowances received by Federal employees working abroad. These provisions depart from the income measurement rules of both the reference and normal tax law under which no allowance is made for regional cost-of-living differentials. Their effect is to reduce the employers' cost of employing U.S. taxpayers abroad.

The Foreign Sales Corporation (FSC) provisions exempt from tax a portion of U.S. exporters' foreign trading income. The exemption rate is intended to reflect the sales functions of a FSC, which is a foreign corporation; the FSC provisions, therefore, conform to the General Agreement on Tariffs and Trade (GATT). However, they are a departure from both the reference and normal income tax standards.

With certain limited exceptions, the income of foreign corporations controlled by U.S. shareholders is not subject to U.S. taxation because, under the reference tax rules, corporations chartered and operating in foreign countries are not subject to U.S. income reporting and taxation. Therefore, the income of even those foreign corporations controlled by U.S. shareholders (individuals and corporations) subject to U.S. taxation becomes taxable only when the controlling U.S. shareholders receive dividends or other distributions with respect to their foreign stockholding.

As previously noted, this rule, however, is a deviation from the normal income tax standard under which a controlling interest in a foreign corporation, defined as ownership of more than 50 percent of the foreign corporation's common stock by U.S. shareholders, each holding 10 percent or more of the stock, is considered a partnership interest held by the U.S. shareholders. Under this normal tax accounting rule, the currently attributable foreign source pretax income from such an interest is subject to U.S. taxation, whether or not distributed. Thus, when the normal tax rule is taken as a baseline, the excess of controlled foreign corporation income over the amount distributed to a U.S. shareholder gives rise to a tax expenditure in the form of a tax deferral, that is, an interest-free loan. This tends to encourage investment abroad by U.S. shareholders. The Tax Reform Act of 1986 additionally restricted the types of foreign income eligible for such deferral.

Under both the reference and normal tax rules, the worldwide income of U.S. persons is taxable by the United States and a credit for foreign taxes paid is allowed. Because the amount of foreign taxes that can be credited is limited to the precredit U.S. tax on the foreign source income, an accurate "sourcing" of domestic and foreign gross incomes and deductions is required to determine the U.S. tax owed with respect to foreign- and domestic-source incomes.

The Tax Reform Act of 1986 revised the sourcing rules extensively but provided two exceptions. First is an exception for sales of inventory property that reduces the U.S. tax of exporters. The second exception concerns the rules that require allocation of interest expenses between domestic and foreign activities of a U.S. taxpayer. These rules were also extensively revised by the act, but financial institutions are exempted from application of these new rules, as are certain financing operations of nonfinancial enterprises.

General science, space, and technology.—Research and development expenditures are intended to result in new products or processes, cost reductions, or other effects whose benefits will in nearly all cases continue into the future. Such expenditures are, therefore, capital outlays under the normal income tax rules that will generate amortization deductions over the period they are productive. Quantification is to a substantial degree arbitrary, however, due to lack of a clearly defined norm for the expected amortization period. Yet, the expensing of R&D expenditures is a departure from the normal tax rules and is, therefore, considered a tax expenditure under this standard. It is not the case under the reference tax rule, because Code section 174 makes such expensing the general tax rule.

The Economic Recovery Tax Act of 1981 (ERTA) added a credit for increasing research activities. The credit was equal to 25 percent of the increase in certain research and experimentation expenditures over the average expenditure during the preceding three years. The taxpayer was not required to reduce his otherwise allowable deduction for R&E expenses by the amount of credit allowed. Although the credit expired at the end of 1985, it was reinstated through 1988 by the Tax Reform Act of 1986, but at a reduced rate of 20 percent. The act also tightened definitions of qualified R&E and provided a separate credit at the same rate, but with a fixed base, for grants to universities for basic research.

As is discussed in the section on International Affairs, both the reference and normal tax rules for taxing the worldwide income of U.S. persons require an accurate "sourcing" of deductions. Regulations issued in 1976 were designed to achieve a reasonable allocation of R&E expenses as between domestic and foreign activities, but successive legislative enactments suspended their operation to

August 1, 1986. The Tax Reform Act of 1986 then substituted for the regulations a statutory allocation rule which reduces by half the benefit enjoyed by taxpayers during the 10-year suspension of the proposed regulation.

Energy.—Certain expenditures necessary to discover fuel mineral properties may be deducted in whole or in part as current expenses rather than being capitalized and amortized over the productive life of the property. Included in this category are a number of expenditures, the tax treatment of which departs from both the reference and normal tax rules.

In the case of oil and gas investments, prior to enactment of the Tax Reform Act of 1986, the intangible drilling costs (IDCs) of successful wells could be expensed, such as wages and the costs of using machinery for grading and drilling, and for nonsalvageable materials used in constructing wells. The Tax Reform Act restricts this provision to successful domestic wells.

However, integrated oil companies may currently deduct only 70 percent of such costs and amortize the remaining 30 percent over five years; prior to 1987, these percentages were 85 and 15, respectively. Other oil producers may currently deduct 100 percent of their IDCs, but the amount of annual IDCs in excess of the amount which could be deducted had the IDCs been capitalized and amortized over ten years, less 65 percent of the taxpayer's oil and gas income is subject to the minimum tax. In the case of other fuel minerals, expensing may be applied to the exploration and development costs of surface stripping and the construction of shafts and tunnels. Only 70 percent of these exploration and development costs may be currently deducted. The remaining 30 percent are deductible over five years. Under prior law, these percentages were also 85 and 15 respectively. These departures from both the reference and normal tax rules yield subsidies to the domestic supply of these energy resources.

In addition, mineral fuel producers generally may take percentage depletion deductions rather than cost depletion as provided in the reference and normal tax rules. Under cost depletion, actual outlays, to the extent not immediately recovered through expensing of exploration, discovery, and development costs, may be deducted over the productive life of the property, much as other businesses may take deductions for the depreciation of the capital goods they use, the cost of which is capitalized when acquired. Unlike depreciation, however, percentage depletion deductions are not limited to the cost of the investment. Under percentage depletion, taxpayers may deduct a percentage of gross income from mineral production at rates that are 22 percent for uranium, 15 percent for oil, gas and oil shale, and 10 percent for coal. However, the deduction is limited to 50 percent of net income from the property (65 percent of taxable income in the case of oil and gas). Percentage depletion for oil and natural gas is available only for limited quantities of output from independent oil and gas producers and royalty owners. Production from geothermal deposits is eligible for percentage depletion at the same rate as allowed for oil and gas, but with no limit on output and no limitation with respect to qualified producers. In lieu of taking percentage depletion, holders of royalties from coal deposits could treat their payments as capital gains rather than ordinary income.

A variety of tax incentives were available to stimulate energy conservation and encourage conversion to energy sources other than oil or natural gas. Individuals could take a 15 percent income tax credit for home insulation and other energy-conserving components up to a maximum amount of $300. A credit of 40 percent of the first $10,000 of qualifying expenditures was allowed on residential solar and other renewable energy source property. The residential energy credits expired on December 31, 1985.

The Tax Reform Act of 1986 extends through 1988 the energy tax credits for solar energy property and geothermal energy property at declining rates. The solar energy credit is 15 percent in 1986, 12 percent in 1987, and 10 percent in 1988. The geothermal energy credit is extended at 15 percent in 1986 and 10 percent in 1987–88. The credit for ocean thermal property is extended through 1988 at a 15 percent rate. The credit for biomass property is extended for two years, at 15 percent in 1986, and 10 percent in 1987. Other energy tax credits provided under prior law were allowed to expire, as scheduled, at the end of 1985. However, the credit for small scale hydroelectric generating property is available through December 31, 1988, for projects filed with the Federal Energy Regulatory Commission (FERC) before January 1, 1986.

Prior to December 31, 1982, there were also additional 10 percent credits allowed for alternative energy property (i.e., property using fuel other than oil or natural gas), specially defined energy property (i.e., property used in an existing industrial, agricultural or commercial facility to reduce the amount of energy consumed or heat wasted), recycling equipment, shale oil equipment, cogeneration equipment, alumina electrolytic cells, and equipment for producing natural gas from geopressurized brine. The additional investment credit can still be claimed for long term projects under these provisions if the taxpayer completed all engineering studies and applied for all required environmental and construction permits in connection with the project prior to January 1, 1983.

A nontaxable $3 per barrel of oil-equivalent production credit is provided for several forms of alternative fuels. As a general rule, it is available as long as the price of oil stays below $29.50 (in 1979 dollars).

Gasohol (a motor fuel composed of at least 10 percent alcohol) is exempt from 6 of the 9 cents per gallon Federal excise tax on gasoline. There is a corresponding income tax credit for alcohol used as a fuel in applications where the excise tax is not assessed. This credit, equal to a subsidy of 60 cents per gallon for alcohol used as a motor fuel, is intended to encourage substitution of alcohol for petroleum-based gasoline. A similar subsidy was provided for neat alcohol fuels; this was 90 cents per gallon before it was repealed by the enactment of the Tax Reform Act.

Tax-exempt bond financing for small scale hydroelectric generating facilities expired at the end of 1985. However, if an application for license of such a facility had been filed with FERC before January 1, 1986, tax-exempt financing is available through 1988. Another prior law provision authorizing tax-exempt financing for steam generating or alcohol production facilities was repealed by the Tax Reform Act of 1986. Both these incentives had been intended to increase the supply of nonpetroleum energy sources.

Natural resources and environment.—As is true for fuel minerals, certain capital outlays associated with exploration and development of nonfuel minerals may be expensed rather than capitalized and depreciated over the life of the asset. Most nonfuel mineral extractors also make use of percentage depletion rather than cost depletion, with percentage depletion rates ranging from 22 percent for sulphur down to 5 percent for sand and gravel.

Interest on State and local government debt issued to finance pollution control and waste disposal facilities of private firms was excludable from income subject to tax. This authorization was repealed for pollution control equipment and a cap placed on the amount of debt that could be issued for waste disposal facilities by the Tax Reform Act.

Expenditures to preserve and restore historic structures qualified for a 25 percent investment credit prior to 1987. Furthermore, taxpayers were permitted to depreciate 87.5 percent of the investment notwithstanding the 25 percent capital grant implicit in the credit. Annual depreciation amounts were determined by the 18-year straight-line method. Beginning in 1987, as provided in the Tax Reform Act of 1986, the credit is reduced to 20 percent, the depreciable basis of restored historic structures must be reduced by the full amount of the credit taken, and annual depreciation deductions must be determined by the straight-line method over 27.5 years for residential structures and 31.5 years otherwise.

The pretax income derived from the cutting of timber and iron ore royalties was taxed as capital gain at rates lower than those applicable to ordinary income prior to passage of the Tax Reform Act. The act repealed the capital gain distinction except that, in 1987, the maximum capital gains rate is restricted to 28 percent.

The Tax Reform Act of 1986, for the first time, codified and made uniform the definition of the costs that must be capitalized when incurred in the production of goods for inventory, for use in one's own trade or business, or under contract for another party. In addition, when the production of property extends over more than two years, the producer is required to capitalize interest he might have paid to the extent that the production costs he had incurred could have been used to retire debt. These new cost accounting rules are effective with respect to all such production begun after December 31, 1986. However, timber production was specifically exempted from these "multiperiod" cost capitalization rules formulated in the act. The new special benefit thus derived from this taxable income deferral is especially important in forestry due to the extremely long period of production.

Private forestry is, in addition, encouraged by a special provision permitting up to $10,000 ($5,000 for a married taxpayer filing a separate return) of direct costs incurred in a taxable year to forest or reforest a site for the commercial production of timber to be amortized over a 7-year period rather than to be capitalized and recovered when the timber is cut, 20 or more years later. The $10,000 of costs are also eligible for a special 10 percent investment tax credit, notwithstanding that investments in timber stands are not depreciable nor that the regular investment tax credit has been repealed by the Tax Reform Act.

Agriculture.—Farmers, other than certain corporations and partnerships engaged in agriculture, are allowed to deduct currently certain expenditures for feed and fertilizer as well as for soil and water conservation measures. The latter are limited by the Tax Reform Act to projects conforming to state and federal plans. Current expensing is allowed, even though these expenditures are for inventories held at the end of the year or for capital improvements that are otherwise required to be capitalized under reference tax income accounting rules. Capital gains treatment generally applies to the profit from the sale of livestock and certain other agricultural products but, as previously noted, ordinary tax rates will apply after 1986.

The Tax Reform Act of 1986 provides a special one-time grant to those farmers with accumulated unused ("carryover") investment tax credits as of the end of 1986, i.e., claimable credits for qualified investment made in prior years but which exceeded the annual tax liability limitations. Taxpayers who had reported gross farm income in excess of 50 percent of their total gross income during the prior three years were allowed by the act to carryback for 15 years the least of 50 percent of their unused credits, their total net tax liability over the 15 years, or $750. This provision was a special exception to the general rule that had limited carryback periods for investment credits to three years and to that particular provision in the act which reduced by 35 percent the value of all other taxpayers' carryover credits as of the end of 1986.

The Tax Reform Act also provides farmers two additional tax subsidies: The first is an exemption from the newly codified uniform production cost capitalization rules, described above. This provides an additional gain (income) to those farmers who are engaged in the establishment of orchards, the construction of farm facilities for their own use, or the production of any goods for sale the production period of which extends for more than one year. However, farmers who elect to expense their multiperiod production costs must use straightline depreciation methods with respect to all the depreciable property they use.

The second new farm subsidy enacted by the Tax Reform Act concerns the tax treatment of "forgiven" debt, i.e., settlement of a debt for an amount less than the principal of a loan. Normally, the amount of loan forgiveness is accounted for as a gain (income) of the debtor, a loss of the creditor, and the debtor must either report the gain, or reduce his recoverable basis in the property to which the loan relates. If he elects to reduce basis and the amount of forgiveness exceeds his basis in the property, the excess forgiveness is taxable. However, in the case of insolvent ("bankrupt") debtors, the amount of loan forgiveness never results in an income tax liability. The insolvent taxpayer's carryover losses and unused credits are extinguished first, and then his basis in assets reduced to no less than amounts still owed creditors. Finally, the remainder of taxable income is itself forgiven. The act provides that any farmer with forgiven debt will be considered "insolvent" for tax purposes and thus qualify for income tax forgiveness.

Commerce and housing credit.—This category includes a number of tax expenditure provisions that also affect economic activity in other functional categories. In general, provisions related to investment, such as accelerated depreciation, could as well have been classified under the natural resources and environment, energy, agriculture, or transportation categories.

Beginning in 1987, the Tax Reform Act repealed the exclusion of up to $100 ($200 on a joint return) previously allowed for dividend income.

The interest on small issue industrial development bonds (IDBs) issued by State and local governments to finance private business property is excluded from income subject to tax. Depreciable property financed with small issue IDBs must be depreciated using the straight-line method. Small issue IDBs are generally limited only to the face amount of the bond issue, although certain facilities, such as recreation or entertainment facilities, cannot be so financed. The tax exemption of small issue bonds expired on December 31, 1986, except for small issue IDBs exclusively issued to finance manufacturing facilities for which the tax exemption is scheduled to expire three years later.

Interest is exempt from taxation on all mortgage revenue bonds issued before January 1, 1989, by State and local governments to finance below-market rate mortgages for certain owner-occupied homes. Bond proceeds generally are used to finance homes purchased by first time buyers of dwellings with prices under 110 percent (90 percent after 1986) of the average area purchase price. The annual volume of mortgage revenue bonds is restricted to State-by-State ceilings. The Tax Reform Act included mortgage revenue bonds under the new unified volume cap which also covers student loan bonds and IDBs, as noted below.

Because mortgage revenue bonds were found to be relatively inefficient in providing subsidies to first time home buyers, States have been authorized through December 31, 1988, to issue mortgage credit certificates (MCCs) in lieu of qualified mortgage bonds. MCCs entitle home buyers to income tax credits for a specified percentage of interest on qualified mortgage loans. When utilizing MCCs the entire amount of the subsidy flows directly to the home buyer without part of it ending up with investors and middlemen as under the bond program.

The aggregate annual amount of MCCs a State may issue may not exceed 20 percent (25 percent after August, 15 1986) of the amount of qualified mortgage bonds that may be issued under the annual State by State ceiling and that the State elects to surrender in lieu of MCCs. Because of this relationship between MCCs and qualified mortgage bonds, their outlay equivalent and revenue loss estimates are presented in tables G–1 and G–2 as single line items.

Prior to 1987, State and local government issues of IDBs to finance private multifamily residential rental projects were restricted to multifamily rental housing projects that included 20 percent (15 percent in targeted areas) of units for low and moderate income families whose income did not exceed 80 percent of the area's median income. The Tax Reform Act increased these percentages set aside for low and moderate income families while lowering the defined income limits. The setaside is either 40 percent for tenants having incomes of no more than 60 percent of the area median income, or 20 percent for families with incomes of 50 percent or less of the area median income. Other tax-exempt bonds for multifamily rental projects are issued generally with the requirement that all tenants must be low or moderate income families.

There are also limits imposed on State and local government bonds for private activity, specifically IDBs and student loan bonds. The annual limit on the aggregate volume of student loan and most industrial development bonds that each State could issue was initially the greater of $150 for each resident of a State or $200 million. The Tax Reform Act of 1986 combines the prior law volume cap for single-family mortgage revenue bonds and multi-family rental housing bonds with the cap for student loans and IDBs. The cap is set at the greater of $75 per capita or $250 million for each State through 1987 after which it is the greater of $50 per capita or $150 million for each State.

The earnings of credit unions not distributed to members as interest or "share dividends" are exempt from income tax. Under the Tax Reform Act of 1986, commercial banks with less than $500 million in assets, mutual savings banks, and savings and loan associations also are provided a subsidy. They are permitted to deduct additions to bad debt reserves in excess of actually experienced losses. Under prior law, all commercial banks were eligible for such treatment. Moreover, deductions for additions to loss reserves in excess of prior loss experience were permitted. Under the Tax Reform Act, the deduction for additions to loss reserves allowed qualifying mutual savings banks and savings and loan associations was reduced from 40 percent of otherwise taxable income to 8 percent. To qualify, the thrift institutions must maintain a specified fraction of their assets in the form of mortgages, primarily residential.

Life insurance policies, other than term policies, generally contain a savings element. Savings in the form of policyholder reserves are accumulated from premium payments and interest is earned on the reserves. Such interest income is taxable neither as it accrues nor when received by beneficiaries upon the death of the insured.

A special deduction for life insurance companies equal to 20 percent of their life insurance company taxable income was enacted in 1984. The Tax Reform Act of 1986 repealed this provision beginning after December 31, 1986.

Under the Tax Reform Act of 1986, deductions allowed individuals for interest paid on consumer credit, which had been allowed without limit under prior law, will be phased out over a 5-year period. For 1987, only 65 percent of such interest is deductible, which drops to 40 percent in 1988, 20 percent in 1989, 10 percent in 1990, and none in 1991 and thereafter.

Owner-occupants of homes may deduct mortgage interest and property taxes (but not maintenance outlays or depreciation) on their primary and secondary residences as itemized nonbusiness deductions. However, under the Tax Reform Act, the mortgage interest deduction is limited to interest on debt no greater than the owner's basis in the residence, plus qualified medical and educational expenses financed by the mortgage. These are tax expenditures because, under the reference and normal tax rules, the taxpayers are not required to report gross income from the properties to which the deductions pertain.

The Tax Reform Act of 1986 eliminates the special tax treatment of taxpayer's long-term capital gains, that is, gains on the sales of assets held longer than 6 months. Beginning in 1987, capital gains will be subject to tax at the same rate as other income. However, for 1987 only, when the maximum ordinary income tax rate for individuals will be 38.5 percent, the maximum tax rate on long-term capital gains will be limited to 28 percent.

Under prior law, sixty percent of net long-term gains from the sale of capital assets were excluded from taxable income. However, the excluded 60 percent of net long-term gains was treated as a preference item in computing the alternative minimum tax for individuals. This tax was applicable only if it was greater than a taxpayer's regular income tax. Half of net long-term capital losses and 100 percent of net short-term capital losses could be offset against ordinary income up to a maximum deduction of $3,000 per year with an unlimited carryforward. This maximum offset and unlimited carryforward of excess losses has been retained in current law.

Capital gains of corporations will also be taxed as ordinary income, although again for 1987 only, when the maximum corporate tax rate will be 40 percent, the maximum tax on such gains will be 28 percent. Under prior law, with the maximum corporate tax rate at 46 percent, corporations could elect a 28 percent alternative tax rate on capital gains. The tax expenditure is the subsidy provided by taxing at a preferential rate these gains that would otherwise have been taxed at ordinary rates.

Capital gains on the sale of a home are recognized only to the extent that the "adjusted sales price" exceeds the cost of a new home purchased and occupied within 2 years before or after the sale. The "adjusted sales price" is the amount realized (gross proceeds less selling expenses) minus qualified fixing up expenses. If a new house is constructed, it must be occupied within 2 years after the sale of the previous residence. The deferral of tax with respect to these gains on owner-occupied dwellings is the tax expenditure.

A taxpayer who is 55 years of age or older at the time of the sale of his residence may elect to exclude up to $125,000 of gain from its sale. This is a once-in-a-lifetime election. In effect, this provision converts some prior deferrals of tax into forgiveness of tax.

The gain on the sale of capital assets acquired by inheritance is computed as the excess of the sales price over their value at the time of the original owner's death, rather than as the excess over their value at the time of acquisition by the original owner. The estimate assumes that the difference in the computed gain would be taxed as part of the capital gain in the year of sale.

The Tax Reform Act of 1986 repealed the 10 percent tax credit for investment in depreciable personal property (6 percent for investment in 3-year recovery period assets) that had been provided, at different rates and with certain time lapses, since 1962. Otherwise qualified property acquired after December 31, 1985, will receive no investment credit unless it satisfies certain transition rules regarding prior commitments to its purchase and its placement in service before specified dates extending through 1991. Prior to 1983, taxpayers were permitted to recover the full price of the asset notwithstanding the grant implied by the tax credit received. After 1983, an investor was required to either reduce his recoverable basis in the asset by half the credit allowable or to accept a 2 percentage point reduction in the credit rate. The Tax Reform Act provides that, with respect to transition property qualifying for investment credits after 1985, the investor must reduce his recoverable basis by the full amount of the credit allowed.

As a general rule, investments in land, buildings, or otherwise eligible property used abroad were not eligible for the investment tax credit. Credits for property subject to long construction periods could be claimed as the purchaser made progress payments. The maximum annual amount of credit allowed was limited to the first $25,000 of tax liability plus a statutory percentage of tax liability in excess of $25,000. This percentage was 85 percent in 1986. Claimable credits in excess of the annual tax liability limitation could be carried back 3 years and thus qualify for "refund," or they could be carried forward 15 years.

In addition to repealing the investment tax credit, the Tax Reform Act of 1986 provided that taxpayers reduce by 35 percent the amount of their as yet unused ("carryover") credits creditable against 1987 and later tax liabilities. Moreover, the annual amount of credit carryforward allowed in 1987 and later years was limited to $25,000 plus 75 percent of tax liability in excess of $25,000, provided the net tax due and payable is not reduced thereby to less than 75 percent of the alternative minimum tax otherwise due and payable for the year. However, the Act provided two exceptions to these modifications of investment credit carryforwards to benefit steel companies and farmers. As noted in the discussion of farming tax subsidies, this exception provides that the qualified steel companies may elect to receive as tax refunds the lesser of the amounts determined by carrying back to the preceding 15 years, the lesser of 50 percent of their unused investment tax credits as of the end of 1986, or their net tax liability for those years. To qualify for this grant-like tax subsidy, the steel companies must have been described in the Steel Import Stabilization Act or have been incorporated on February 11, 1983, in Michigan; altogether 10 steel companies qualified.

The Tax Reform Act also replaced previous statutory and administrative rules governing annual depreciation allowances. In place of the previous six recovery period classes introduced in 1981, the Act provides eight: six for depreciable personal property, and two for depreciable real property. The recovery periods for personal property range from 3 to 20 years as compared to the 3 to 15 year range under prior law. The recovery period for residential real property now is 27.5 years, and for nonresidential, 31.5 years; under prior law, the recovery period was 19 years for both residential and nonresidential property.

For the four of these personal property classes with recovery periods of less than 15 years, the annual depreciation deduction may be computed by declining balance formulas at twice the straight-line rate; for the two with recovery periods of 15 and 20 years, the declining balance rate is 1.5 times the straight-line rate. Under prior law, the declining balance rate for all personal property was 1.5 times the straight-line rate. Residential property only can be depreciated by the straight-line method over 27.5 years and nonresidential property over 31.5 years; under prior law, declining balance rates were permitted ranging from 1.75 to 2 times (for low-income housing) the straight-line rate.

The Tax Reform Act's new depreciation rules for personal property not only slow the depreciation rates to 1.5 or less times the straight-line rate, but follow reasonably closely the ADR midpoints that, as previously noted, approximate the depreciation norm of the normal tax standard used in the "Pre-1983 budget method". There are, therefore, no tax expenditures from depreciation of personal property type assets placed in service after December 31, 1986. However, the Tax Reform Act provisions for recovery periods of depreciable real property are more accelerated then the statutory 40 year guideline for such property that is leased to tax-exempt organizations. Therefore, a tax expenditure is generated from the depreciation of real property under the normal tax standard used in the "Pre-1983, budget method". There are none from the depreciation of any assets under the "Post-1982 budget method", because the Tax Reform Act's depreciation system now is the reference tax law standard.

In 1984, the Deficit Reduction Act reduced the tax benefits that were up to then available for tangible property leased by tax-exempt entities, including federal, state, and local governments. The Act provided that lessors of property to tax-exempt entities could only use far less rapid write-offs. These more restrictive depreciation rules for lessors were continued by the Tax Reform Act of 1986.

When an individual or corporation acquires or otherwise enters into a new business, certain "start-up" expenses, such as the costs of investigating opportunities and legal services, are normally incurred. The taxpayer may elect to amortize these outlays over 60 months although they are similar in kind to other payments he makes for nondepreciable intangible assets to be used in the business that are not recoverable until the business is sold.

Before expiring at the end of 1985, taxpayers who held common or preferred stock in a qualified dividend reinvestment plan established by a domestic public utility company could exclude from tax up to $750 per year ($1,500 for joint returns) of distributions in the form of common stock rather than cash. The stock so received had a zero basis; the proceeds of sales of the stock were taxed as capital gain if the sale took place at least one year after the record date of the distribution. This creates a subsidy and, therefore, a tax expenditure, because under the normal and reference tax rules, distributions from corporate income are taxable to individual shareholders as ordinary income in the year received.

Prior to enactment of the Tax Reform Act of 1986, corporate tax rates ranged from 15 percent of the first $25,000 of taxable income to 46 percent on all income over $100,000. As compared with a flat 46 percent tax rate, the graduated rates reduced corporate tax liabilities by $20,250 for corporations with $100,000 of taxable income. This was "recaptured" in the cases of corporations with taxable incomes over $1 million by a 5 percent tax which therefore eliminated the benefits of this rate graduation for all corporations with taxable incomes over $1.4 million. The Tax Reform Act modified the graduated corporate rate schedule so that the first $50,000 of taxable corporate income is taxed at 15 percent, the next $25,000 at 25 percent, and all taxable income over $75,000 at the maximum rate which, beginning in 1988, will be 34 percent. As compared with a flat 34 percent tax, the new rate graduation thus provides a $11,750 reduction of tax for corporations with taxable incomes of $75,000. The Tax Reform Act provides that this benefit will be "recaptured" in the cases of corporations with taxable incomes of $100,000 or more by a 5 percent tax on corporate income in excess of $100,000, thereby eliminating all benefit for corporations with incomes over $335,000.

Under the "Post-1982 Budget Method", graduated rates are part of the reference tax rules and, therefore, do not give rise to a tax expenditure. Under the "Pre-1983 Budget Method", however, this rate progression departs from the normal tax rule that all corporation income be taxed at the single rate at which most corporation income is taxed (34 percent) and gives rise to a tax expenditure intended to encourage small business.

Transportation.—Certain companies that operate U.S. flag vessels receive an indefinite deferral of income taxes on that portion of their income used for shipping purposes, primarily construction, modernization and major repairs of ships, and repayment of loans to finance these qualified investments. Prior to January 1, 1987, the deferral permitted was indefinite. Under the terms of the Tax Reform Act, the deferral will be limited to 25 years. Within this period, the deferred taxable income will have to be spent for qualified investments or be taxed. Also, before repeal of the investment tax credit by the Tax Reform Act, a credit of one half the regular investment credit could be claimed on the tax-deferred amounts withdrawn from capital construction funds. This was an exception to the tax law standards that the credit may be claimed only with respect to the taxpayer's basis in qualified property.

Until expiration on December 31, 1984, State and local governments were allowed to issue tax-exempt obligations to finance the purchase of mass transit commuting vehicles for lease to government transit agencies.

As a consequence of the deregulation of motor carriers in 1980, the value of operating authorities held by affected firms diminished. Under the reference and normal tax rule asset value changes are recognized only when an exchange transaction occurs, so this loss of value would occasion no income tax consequence. A motor carrier would simply experience a diminished gross income as competition reduced tariffs and, accordingly, would pay less income tax. Only in the event a carrier liquidated or sold out to another firm would the loss trigger a tax refund. To relieve existing motor carriers continuing in business of some of the loss they experienced due to deregulation, a tax expenditure was provided in the form of an exceptional 60-month amortization of their investment in operating authorities (a nondepreciable intangible asset). The provision applies to taxable years ending after June 30, 1980. The Tax Reform Act extended this special treatment to bus operators and freight forwarders.

Community and regional development.—Until it expired on December 31, 1986, taxpayers could, under certain conditions, elect to amortize rehabilitation expenditures for low and moderate income rental housing over a 5-year period in lieu of ACRS depreciation. Rehabilitation expenditures could not exceed $20,000 per dwelling unit but had to exceed $3,000 to qualify. The limit was $40,000 per dwelling unit if the rehabilitation was on units which the tenants could purchase at a price that limited the profit to the seller.

In place of the five-year amortization the Tax Reform Act of 1986 introduced a low income housing tax credit for investment in new, substantially rehabilitated, and certain unrehabilitated, existing, low income housing. For qualified projects without other federal subsidies, the credit is structured to have a present value of 70 percent of construction or rehabilitation costs incurred and is allowed over 10 years. For federally subsidized projects and those involving unrehabilitated existing low income housing, the credit is structured to have a present value of 30 percent. Notwithstanding the capital grant character of this subsidy, the recoverable basis of the investor is not reduced by the substantial credit allowed.

An investment tax credit is available for the rehabilitation of buildings that are used for business or productive activities (other than for residential purposes). Prior to the Tax Reform Act, the credit was 15 percent of rehabilitation expenditures for buildings at least 30 years old and 20 percent for buildings at least 40 years old. The basis of the rehabilitation recoverable as depreciation had to be reduced by the amount of the credit. Under the Tax Reform Act of 1986, the credit rate was reduced to 10 percent of rehabilitation expenditures, and is available only with respect to buildings erected before 1936. Full reduction in the taxpayer's recoverable basis by the amount of the credit is required.

Until passage of the Tax Reform Act of 1986, the interest on IDBs issued by State and local governments to finance airports, docks, wharves, and sports and convention facilities was exempt from tax. The Act repealed authorization to issue such bonds to finance all sports and convention facilities as well as privately owned airports, docks, and wharves. Government-owned airports, docks and wharves, may continue to be financed with tax-exempt bond issues, and these bonds are not covered by a volume cap.

Education, training, employment, and social services.—Under the Tax Reform Act of 1986, scholarships and fellowships no longer will be excluded from taxable income to the extent they exceed tuition and course-related expenses of the grantee. Previously, the first $300 per month received by students as scholarship or fellowship aid was excluded from students' gross incomes, provided the amounts were not emoluments awarded them for services they perform in association with the payor. From a strictly economic point of view, scholarships and fellowships are either gifts not conditioned on the performance of services, or they are rebates of educational costs by the institutions in which students are enrolled. Thus, under the post-1982 budget method utilizing the reference tax law standard, the exclusion is not a tax expenditure because the reference law does not include either gifts or price reductions in a taxpayer's gross income. However, under the "Pre-1983 Budget Method," the exclusion is considered a tax expenditure, because under the normal tax standard gifts of Government funds—and many scholarships are derived directly and indirectly from Government funding—are includable in gross income.

Interest on State and local government debt issued to finance student loans and facilities used by private nonprofit educational facilities is excluded from income subject to tax. The Treasury Department has exclusive jurisdiction over any determination by the executive branch as to whether interest on any such obligation is exempt from tax. As mentioned before, the aggregate volume of such private activity bonds that each State may issue during any calendar year is limited.

Prior to passage of the Tax Reform Act of 1986, taxpayers could claim personal exemptions for dependent children age 19 or over who received parental support payments of $1,000 or more per year if the children were full-time students. The student could also claim an exemption on his own return; the extra exemption claimed by parents was, therefore, a tax expenditure. Under the Tax Reform Act, a taxpayer may not claim a personal exemption if already claimed as a dependent on another tax return.

Many employers provide employee benefits that are excluded from employee income. The employers' costs for these benefits are deductible business expenses. The exclusion from an employee's income of the value of meals and lodging provided by an employer for his own convenience is a tax expenditure, as are the exclusion of housing allowances and the rental value of parsonages from the taxable income of ministers.

From January 1, 1979, through December 31, 1985, an employer was able to set up an educational assistance program to provide educational benefits to his employees. The program could pay for tuition, fees, books, and supplies, and amounts received under the program were excluded from an employee's gross income. Employer contributions to prepaid legal services plans and the value of legal services received under such plans were also excluded from employee income until the exclusion expired at the end of 1985. However, the Tax Reform Act retroactively reinstated both exclusions and extended their availability for two years.

Prior to January 1, 1983, a corporation could claim an additional 1 percent investment tax credit if an equivalent amount of its common stock were set aside in a employee stock ownership plan (ESOP). A further one-half of 1 percent investment tax credit could be claimed to the extent that additional employer contributions to an ESOP were matched by employee contributions. The base for the tax credit for contributions of stock to an ESOP is limited to one-half of 1 percent of total compensation paid to all employees under the plan from 1983 through 1986, after which it expires. Employees generally are prohibited from withdrawing their share of an ESOP for 7 years. The effective subsidy rate for this form of employee compensation exceeds 100 percent; the employer is fully reimbursed for the stock he transfers, and the benefited employees are not required to include this compensation in their current year gross income.

Contributions to charitable, religious, and certain other nonprofit organizations are allowed as an itemized deduction for individuals, generally up to 50 percent of adjusted gross income. Between 1982 and 1986, nonitemizers could also deduct some or all (depending on the year) of their charitable contributions. Taxpayers whose contributions to charitable or educational organizations are in the form of capital assets (usually securities that have appreciated in value) obtain a deduction for the contribution at the current value of the asset without taxation of the appreciation in value. Beginning in 1982, corporations could also deduct charitable contributions of up to 10 percent of their pretax income. The Tax Reform Act of 1986 includes in the alternative minimum tax bases of individuals and corporations the untaxed appreciation of contributed property. Tax expenditures resulting from the deductibility of contributions are shown separately for educational and other institutions. Contributions to health institutions are reported under the health function.

A 30 percent tax credit may be claimed by married couples for child and dependent care expenses incurred when both spouses work full time or when one spouse works part time or is a student. The credit may also be claimed by divorced or separated parents who have custody of children and by single parents. Expenditures up to a maximum $2,400 for one dependent and $4,800 for two or more dependents are eligible for the credit. The credit is equal to 30 percent of qualified expenditures for taxpayers with incomes of $10,000 or less with the credit reduced by one percentage point for each $2,000 of income between $10,000 and $28,000. This aid to encourage employment of spouses is supplemented by excluding from employees' income the value of employer-furnished child care.

An additional aid to spousal employment was repealed by the Tax Reform Act effective January 1, 1987. This provision allowed a deduction for two-earner married couples filing jointly. The deduction was equal to the lesser of $3,000 or 10 percent of the income of the lower earning spouse. The deduction was justified by the argument that the income of second earners is stacked on top of their spouse's earnings and thus taxed at a higher marginal rate than if the second earner had been taxed as a single person. This so-called "marriage penalty" largely disappears with the introduction of only two marginal tax rates of 15 and 28 percent in 1988.

The targeted jobs tax credit, previously scheduled to expire December 31, 1985, was reinstated retroactively and extended through 1988 by the Tax Reform Act of 1986. Employers may claim a tax credit for qualified wages paid to individuals who are certified as members of various targeted groups. The amount of the credit that may be claimed is 40 percent of the first $6,000 paid during the first year of employment. A tax credit equal to 85 percent of the summer employment wages paid 16 and 17 year old youths who are members of low income families is also provided. These credits are structured to ensure the wage subsidy they provide is taxable; the employer must reduce his deduction for wages paid by the amount of the credit claimed.

Prior to the Tax Reform Act of 1986, to encourage the adoption of children found by a State to be difficult to place without financial assistance to the adopting parents, taxpayers could deduct up to $1,500 of adoption expenses incurred during a year. Only those adoption expenses incurred with respect to a child with "special needs" as defined in section 473 of the Social Security Act qualified for this tax expenditure. The Act repealed this provision, replacing it with a direct expenditure program.

Health.—Employee compensation in the form of payments by employers for health insurance premiums and other medical expenses are deducted as business expenses by employers but excluded from employee gross income. The exclusion from employee income of this form of compensation gives rise to a tax expenditure.

For tax years beginning in 1983, the floor for deductible medical expenses was increased from 3 percent to 5 percent of a taxpayer's adjusted gross income. Beginning in 1984, the one percent of adjusted gross income floor under the deductible amount of drug expenditures was eliminated. However, only expenditures for prescription drugs and insulin are now deductible. The Tax Reform Act of 1986 raised the floor for these expenditures to 7.5 percent of adjusted gross income beginning in 1987.

Interest on State and local government debt issued to finance hospital construction is excluded from income subject to tax.

Contributions to nonprofit health institutions are allowed as a deduction for individuals and corporations. Tax expenditures resulting from the deductibility of contributions to other charitable institutions are listed under the education, training, employment, and social services function.

Drugs for the treatment of rare diseases or physical conditions are often called "orphan drugs" because the narrow markets for their use discourages private firms from undertaking the costly investment in clinical testing that must be completed before manufacture and general distribution may be approved by the Food and Drug Administration. To encourage the development of such drugs, a tax credit equal to 50 percent of the clinical testing costs incurred by the taxpayer was introduced. Because the drug firm is not required to reduce its deduction for testing expense (an R&D expenditure), this credit reduces the private cost of clinically testing "orphan drugs" to little more than 24 cents per $1 expended.

This tax expenditure was scheduled to expire at the end of 1987 but was extended through 1990 by the Tax Reform Act of 1986.

Income security.—The exclusion from taxable income of public assistance benefits received by individuals is listed as a tax expenditure under the "Pre-1983 Budget Method" because, under the normal tax rules, cash transfers from government are includable in gross income. In contrast, gifts not conditioned on the performance of services, including transfers from government as well as from individuals, are not taxable under the reference tax baseline. Therefore, under the "Post-1982 Budget Method" the exclusion from taxable income of public assistance benefits is not shown as a tax expenditure.

Beginning on January 1, 1988, the Administration proposes to tax the income replacement portion, but not the medical payments, of the special benefits received by disabled coal miners suffering from "black lung" ailments, which is currently excluded from taxable income. This, as well as the exclusion from tax of a portion of unemployment benefits give rise to tax expenditures. The Tax Reform Act of 1986 eliminated the latter exclusion, beginning in 1987. In prior years, if the sum of a taxpayer's adjusted gross income, unemployment compensation and excludable disability income was over $12,000 ($18,000 for a joint return), the lesser of one-half of that amount over the $12,000 limit or the actual unemployment benefits were taxable.

Disability-related military pension income received by current retirees is mostly excluded from income subject to tax. The exclusion is a tax expenditure because of the subsidy it provides.

Certain contributions to pension plans by employers, amounts set aside by the self-employed, and contributions to individual retirement accounts (IRAs) are excluded from the individual's adjusted gross income in the year of contribution. Self-employed persons can make deductible contributions to their own retirement (defined contribution) plans equal to 25 percent of their income up to a maximum of $30,000 per year. Prior to 1987, employees could deduct annual contributions to an IRA of $2,000 (or 100 percent of compensation, if less), or $2,250 on a joint return if one spouse had no income. The Tax Reform Act of 1986 maintained these limits on deductible IRA contributions if neither an individual nor his spouse is an active participant in an employer-provided retirement plan, or if their adjusted gross income falls below $40,000 ($25,000 for a single taxpayer). The allowable IRA deduction is phased out between $40,000 to $50,000 for a joint return and $25,000 to $35,000 for a single return. Beyond these income limits, nondeductible contributions to IRAs are available to taxpayers who are active participants in employer-provided retirement plans. The Act also limits to $7,000 per year the amount which an employee can exclude from his adjusted gross income under a qualified cash or deferred arrangement with his employer (401(k) plan). Further, the Act limits to $9,500 annually the amount an employee may exclude from his adjusted gross income of his own contributions to a tax-sheltered annuity (403(b) plan). The investment income earned by pension funds and other qualifying retirement plans is not taxable when earned, and, therefore, is also a tax expenditure.

The exclusion from employee income of certain other employer payments, including payments for premiums of group life insurance and accident and disability insurance, are listed here because of their relationship to income security. The exclusion of certain other benefits is listed under the education, training, employment, and social services function.

The Tax Reform Act of 1986 eliminated the additional personal exemptions previously allowed taxpayers who were blind or 65 years of age or older. Instead, the Act provides that taxpayers in either of these categories may take an additional $750 standard deduction, if single, or $600, if married. Moreover, for 1987, such taxpayers may avail themselves of the new larger standard deductions (greater by $620 to $1,860, depending on filing status) other taxpayers may not use until 1988.

Effective December 31, 1983, the tax credit for the elderly was expanded to cover as well the permanently disabled. Prior to then, a limited portion of disability payments made by employers was excluded from the taxable income of the disabled employees. The credit allows individuals who are 65 years of age or older to take a tax credit equal to 15 percent of earned and retirement income up to $2,500 for single individuals and married couples filing a joint return where only one spouse is 65 years of age or older, and up to $3,750 for joint returns where both spouses are 65 years of age or older. The $2,500/$3,750 base is reduced by one-half of the taxpayer's adjusted gross income over $7,500 for single individuals and $10,000 for married couples filing a joint return. The credit works similarly for the disabled under this provision.

Premiums paid for casualty and theft insurance with respect to items of one's personal or real property are considered personal expenditures on a par with purchases of the property itself. Neither the purchases of property nor insurance premiums are deductible, therefore, as costs of earning income, and receipt of reimbursement for insured loss of such property is not reportable as gross income by the insured. Thus, under neither the reference nor normal tax baselines would the amount of an uninsured loss of such property be reportable. However, a special provision permits taxpayers to deduct casualty and theft losses of more than $100 each, but only to the extent that total losses during the year exceed 10 percent of adjusted gross income (AGI). This special relief for taxpayers suffering an uninsured loss is, accordingly, a tax expenditure.

The earned income credit may be claimed by low-income workers with minor dependents. The Tax Reform Act of 1986 liberalized this form of assistance. Before 1987, the credit was 11 percent of the first $5,000 of earned income, for a maximum annual credit of $550. The credit phased out at the rate of 12⅔ cents per dollar of the larger of earned income or adjusted gross income (AGI) over $6,500. For 1987, the credit will be 14 percent of the first $6,080 of income, a maximum credit of $851.20, and the credit will be reduced by 10 percent of income over $6,920. After 1987, the maximum amount of income on which the credit may be taken will be adjusted for inflation, as will the income level at which the phase-out begins. Furthermore, in any tax year the amount of the credit allowed must be reduced by the alternative minimum tax liability of the tax payer. Earned income tax credits in excess of tax liabilities are paid to individuals. This portion of the credit is included in outlays, while the amount that offsets tax liabilities is shown as a tax expenditure.

Social Security.—Social security benefits, like other forms of deferred employee compensation, give rise to tax expenditures to the extent that they exceed employees' contributions of previously taxed income to pay for those benefits. These additional retirement benefits are paid for by employers' contributions that were excluded from employees' taxable compensation. Up to one-half of any recipient's social security benefits and tier 1 railroad retirement benefits may be subject to inclusion in the income tax base. Thus, this tax expenditure is reduced to the portion which remains excluded from the tax base. Benefits will be taxable if a recipient's "modified adjusted gross income" plus one-half of his or her social security and railroad retirement benefits exceed a certain base amount: $32,000 for those filing joint tax returns; $25,000 for single persons; and zero for those married filing separately (if they did not live apart from their spouse for the entire year). Modified adjusted gross income is AGI plus (a) the amount, if any, taken as a deduction for two-earner married couples, (b) foreign or U.S. possession income excluded from AGI, and (c) tax-exempt interest excluded from AGI. After 1987, because the Tax Reform Act of 1986 repealed the two-earner deduction, modified AGI is equal to AGI plus (b) and (c) only. If the modified AGI exceeds the specified base amount, the lesser of one-half of the excess or one-half of the social security or railroad retirement benefits must be included in income subject to tax.

Other benefit payments from the Social Security Trust Fund, for disability and for dependents and survivors, are excluded from beneficiaries' gross incomes and thus also give rise to tax expenditures. However, beginning in 1984, Social Security disability benefits were modified when the elderly tax credit (see Income Security, above) was expanded.

Veterans benefits and services.—All compensation due to death or disability and pensions paid by the Veterans Administration are excluded from taxable income. GI bill benefits are also excluded.

The interest on general obligation bonds issued by State and local governments to finance housing for veterans is excluded from income subject to tax. However, there are restrictions on veterans mortgage revenue bonds including limits on their issuance to pre-existing State programs (five) and amounts based upon previous volume levels for the period beginning on January 1, 1979 and ending on June 22, 1984. Furthermore, future issuance of these bonds is limited to veterans who served in active duty before 1977.

General government.—Through 1986, a 50 percent credit could be claimed for political contributions up to $100 ($200 for joint returns). This provision was repealed by the Tax Reform Act of 1986.

General purpose fiscal assistance.—Interest on State and local government debt is excluded from Federal taxation. Most of these bonds are owned by individuals, but a substantial proportion is also held by commercial banks and casualty and property insurance companies. As a result of the tax exemption, State and local governments can sell debt obligations at a lower interest cost than would be possible if such interest were subject to tax. The exclusion of interest on State and local government securities to finance private activities, such as student loans, businesses, private nonprofit organizations, and housing, is classified elsewhere. Only the excluded interest on bonds for public purposes, such as schools, roads, and sewers, is included in this functional tax expenditure.

The deductibility of nonbusiness State and local taxes gives indirect assistance to these governments by reducing the costs of the services they provide and, thus, the burden on their taxpayers. The Tax Reform Act of 1986 disallows the deduction for general sales taxes beginning in 1987. The estimates shown here are primarily for the deductibility of State and local income taxes and pre-1987 sales taxes. The deductibility of property taxes on owner-occupied homes is classified under commerce and housing credit.

Under certain conditions, U.S. corporations receiving income from an active trade or business, or from investments located in a U.S. possession, can claim a special credit against U.S. tax otherwise due. The Tax Reform Act of 1986 modified the rules for measuring both active and passive income earned in U.S. possessions that had the effect of slightly reducing the amount of such income eligible for the special credit.

Interest.—The interest on U.S. savings bonds is not taxable until the bonds are redeemed, thereby deferring tax liability.

Table G–1. **OUTLAY EQUIVALENT ESTIMATES FOR TAX EXPENDITURES BY FUNCTION**

(In millions of dollars)

Description	Fiscal years					
	Corporations			Individuals		
	1986	1987	1988	1986	1987	1988
National defense:						
Exclusion of benefits and allowances to Armed Forces personnel				2,535	2,435	2,235
International affairs:						
Exclusion of income earned abroad by United States citizens				2,405	2,350	2,225
Exclusion of income of foreign sales corporations (FSC)	1,575	1,475	1,310			
Inventory property sales source rules exception		495	705			
Certain nonfinancial institutions operations interest allocation rules exception		25	55			
Deferral of income from controlled foreign corporations:						
Pre-1983 budget method	650	325	100			
Post-1982 budget method						
Total (after interactions) [1]	2,225	2,320	2,170	2,405	2,350	2,225
General science, space, and technology:						
Expensing of research and development expenditures:						
Pre-1983 budget method	840	1,330	1,370	35	60	60
Post-1982 budget method						
Credit for increasing research activities	2,265	1,260	1,060	30	30	25
Suspension of the allocation of research and experimentation expenditures	440	535	200			
Total (after interactions)	3,855	3,385	2,875	70	100	95
Energy:						
Expensing of exploration and development costs:						
Oil and gas	−1,255	−1,255	−950	490	435	465
Other fuels	35	35	35			
Excess of percentage over cost depletion:						
Oil and gas	300	195	135	1,075	655	450
Other fuels	320	220	175	20	15	15
Capital gains treatment of royalties on coal	15	5		110	25	
Exclusion of interest on State and local industrial development bonds for certain energy facilities	180	200	205			
Residential energy credits:						
Supply incentives				175	20	
Conservation incentives				70		
Alternative, conservation and new technology credits:						
Supply incentives	360	325	90	15	5	
Conservation incentives	*	*	*			
Alternative fuel production credit	25	15	15			
Alcohol fuel credit [2]	10	10	10			
Energy credit for intercity buses	5	*	*			
Special rules for minning reclamation reserves	50	45	40	5	5	5
Total (after interactions)	30	−145	−175	1,390	825	665
Natural resources and environment:						
Expensing of exploration and development costs, nonfuel minerals	30	30	30	5	5	5
Excess of percentage over cost depletion, nonfuel minerals	410	295	280	25	20	20

Table G–1. **OUTLAY EQUIVALENT ESTIMATES FOR TAX EXPENDITURES BY FUNCTION—Continued**

(In millions of dollars)

Description	Fiscal years					
	Corporations			Individuals		
	1986	1987	1988	1986	1987	1988
Exclusion of interest on State and local IDBs for pollution control and sewage and waste disposal facilities	1,455	1,660	1,930			
Tax incentives for preservation of historic structures	155	135	140	310	280	280
Capital gains treatment of iron ore	*	*		25	5	
Capital gains treatment of certain timber income	550	140		120	30	
Expensing of multiperiod timber growing costs		125	250		80	180
Investment credit and seven-year amortization for reforestation expenditures	50	50	55	260	275	275
Total (after interactions)	2,595	2,385	2,630	730	680	745
Agriculture:						
Expensing of certain capital outlays	75	65	70	425	425	460
Expensing of certain multiperiod production costs					*	5
Treatment of loans forgiven solvent farmers as if insolvent				10	10	10
Capital gains treatment of certain income	65	15		755	160	
Special investment credit carryback rules for farming						310
Total (after interactions)	130	75	65	1,105	555	730
Commerce and housing credit:						
Dividend exclusion				740	185	
Exclusion of interest on small issue industrial development bonds	2,470	2,635	2,805			
Exemption of credit union income	285	270	250			
Excess bad debt reserves of financial institutions	735	525	75			
Exclusion of interest on life insurance savings				9,450	7,960	8,345
Deductions for special percentage of taxable income for life insurance companies	2,110	1,440				
Deductibility of interest on consumer credit				18,155	10,835	5,560
Deductibility of mortgage interest on owner-occupied homes				30,670	23,840	19,855
Deductibility of property tax on owner-occupied homes				8,595	7,955	7,205
Exclusion of interest on State and local housing bonds for owner-occupied housing	1,900	2,010	2,035			
Exclusion of interest on State and local debt for rental housing	1,275	1,335	1,320			
Capital gains (other than agriculture, timber, iron ore and coal)	2,460	625		44,375	15,570	1,445
Deferral of capital gains on home sales				2,960	5,240	6,550
Exclusion of capital gains on home sales for persons age 55 and over				1,275	2,255	2,820
Carryover basis of capital gains at death				7,690	13,600	17,010
Investment credit, other than ESOP's, rehabilitation of structures, energy property, and reforestation expenditures	28,010	18,500	11,810	3,355	2,115	1,370
Special investment credit carryback rules for steel companies			565			
Accelerated depreciation on rental housing:						
Pre-1983 budget method	1,665	1,520	1,210	1,235	1,260	1,110
Post-1982 budget method						

Table G–1. **OUTLAY EQUIVALENT ESTIMATES FOR TAX EXPENDITURES BY FUNCTION—Continued**

(In millions of dollars)

Description	Fiscal years					
	Corporations			Individuals		
	1986	1987	1988	1986	1987	1988
Accelerated depreciation of buildings other than rental housing:						
Pre-1983 budget method	3,575	3,470	3,065	1,585	1,705	1,655
Post-1982 budget method	...	...	...	...	...	...
Accelerated depreciation of machinery and equipment:						
Pre-1983 budget method	29,550	24,685	23,105	8,285	7,655	7,395
Post-1982 budget method	...	...	...	...	...	...
Safe harbor leasing rules	1,600	975	660	...	...	...
Amortization of start-up costs	35	30	25	295	255	195
Reinvestment of dividends in public utility stock	...	...	...	170	...	...
Reduced rates on the first $100,000 of corporate income:						
Pre-1983 budget method	8,700	7,915	5,845	...	...	...
Post-1982 budget method	...	...	...	...	...	...
Total (after interactions) [1]	84,930	66,305	52,440	134,670	97,415	78,100
Transportation:						
Deferral of tax on shipping companies	130	115	115	...	...	...
Exclusion of interest on State and local government bonds for mass commuting vehicles	20	20	55	...	...	...
Deduction for motor carrier operating rights	15	...	...	*	...	...
Total (after interactions)	165	135	170	*	...	...
Community and regional development:						
Five-year amortization for housing rehabilitation	15	15	15	25	30	30
Credit for low-income housing investments	...	15	55	...	155	520
Investment credit for rehabilitation of structures (other than historic)	285	190	150	150	100	85
Exclusion of interest on IDBs for airports, docks and sports and convention facilities	595	685	785	...	...	...
Total (after interactions)	940	950	1,055	185	300	665
Education, training, employment, and social services:						
Exclusion of scholarship and fellowship income:						
Pre-1983 budget method	...	...	...	770	705	585
Post-1982 budget method	...	...	...	...	...	...
Exclusion of interest on State and local student loan bonds	...	...	...	285	310	315
Exclusion of interest on State and local debt for private nonprofit educational facilities	260	280	285	...	...	...
Parental personal exemption for students age 19 or over	...	...	...	1,240	2,195	2,270
Deductibility of charitable contributions (education)	485	465	435	1,180	860	805
Employer educational assistance	...	...	...	75	80	25
Total education (after interactions) [1]	745	745	720	3,600	4,210	4,055
Exclusion of employer provided child care	...	...	...	25	35	45
Exclusion of employee meals and lodging (other than military)	...	...	...	970	910	760
Exclusion of contributions to prepaid legal services plans	...	...	...	60	75	20
Investment credit for ESOPs	2,005	870	320	...	...	...
Credit for child and dependent care expenses	...	...	...	4,260	4,345	4,590

Table G–1. **OUTLAY EQUIVALENT ESTIMATES FOR TAX EXPENDITURES BY FUNCTION—Continued**

(In millions of dollars)

Description	Fiscal years					
	Corporations			Individuals		
	1986	1987	1988	1986	1987	1988
Targeted jobs credit	430	255	400	80	45	60
Deduction for two earner married couples				6,510	1,625	
Total training and employment (after interactions)	2,435	1,125	720	12,015	7,075	5,490
Deductibility of charitable contributions, other than education and health	600	580	540	12,265	8,875	8,305
Deduction for certain adoption expenses				*	*	
Exclusion of parsonage allowances				175	185	195
Total social services, (after interactions)	600	580	540	12,440	9,060	8,500
Grand total (after interactions) [1]	3,780	2,450	1,980	28,055	20,345	18,045
Health:						
Exclusion of employer contributions for medical insurance premiums and medical care				29,910	28,730	30,205
Deductibility of medical expenses				3,825	2,325	1,725
Exclusion of interest on State and local debt for private nonprofit health facilities	2,105	2,250	2,250			
Deductibility of charitable contributions (health)	295	285	270	1,730	1,250	1,170
Tax credit for orphan drug research	*	*	*			
Total (after interactions)	2,400	2,535	2,520	35,465	32,305	33,100
Income security:						
Exclusion of railroad retirement system benefits				420	400	370
Exclusion of workmen's compensation benefits				2,500	2,425	2,270
Exclusion of public assistance benefits:						
Pre-1983 budget method				580	490	355
Post-1982 budget method						
Exclusion of special benefits for disabled coal miners				145	130	115
Exclusion of untaxed unemployment insurance benefits				1,080	270	
Exclusion of military disability pensions				120	110	105
Net exclusion of pension contributions and earnings:						
Employer plans				71,940	64,505	58,185
Individual Retirement Accounts				22,470	15,150	11,635
Keogh plans				3,730	2,820	1,715
Exclusion of other employee benefits:						
Premiums on group term life insurance				2,960	2,730	2,485
Premiums on accident and disability insurance				175	160	160
Income of trusts to finance supplementary unemployment benefits				30	30	30
Additional exemption for the blind				35	10	
Additional deduction for the blind					10	10
Additional exemption for elderly				2,785	710	
Additional deduction for the elderly					810	1,150
Tax credit for the elderly and disabled				110	105	90
Deductibility of casualty losses				270	230	225
Earned income credit [3]				700	1,110	1,595
Total (after interactions) [1]				107,850	90,360	78,885
Social Security:						
Exclusion of social security benefits:						
Disability insurance benefits				1,195	1,145	1,040
OASI benefits for retired workers				13,270	12,980	12,025
Benefits for dependents and survivors				3,920	3,800	3,545
Total (after interactions)				18,385	17,925	16,610

Table G–1. **OUTLAY EQUIVALENT ESTIMATES FOR TAX EXPENDITURES BY FUNCTION—Continued**

(In millions of dollars)

Description	Fiscal years					
	Corporations			Individuals		
	1986	1987	1988	1986	1987	1988
Veterans benefits and services:						
Exclusion of veterans disability compensation	....	....	....	1,705	1,585	1,440
Exclusion of veterans pensions	....	....	....	195	120	80
Exclusion of GI bill benefits	....	....	....	105	85	70
Exclusing of interest on state and local debt for veterans housing	....	....	....	290	295	305
Total (after interactions)	....	....	....	2,295	2,085	1,895
General government:						
Credits and deductions for political contributions	....	....	....	220	55	....
General purpose fiscal assistance:						
Exclusion of interest on public purpose State and local debt	2,010	2,235	2,330	7,160	7,875	8,040
Deductibility of nonbusiness State and local taxes other than on owner-occupied homes	....	....	....	23,965	18,235	14,845
Tax credit for corporations receiving income from doing business in United States possessions	3,155	2,855	2,415	....	....	....
Total (after interactions)	5,165	5,090	4,745	31,125	26,110	22,885
Interest:						
Deferral of interest on savings bonds	....	....	....	825	790	710

* $2.5 million or less. All estimates have been rounded to the nearest $5 million.

[1] Totals include only pre-1983 budget method.

[2] In addition, the exemption from the excise tax for alcohol fuels results in a reduction in excise tax receipts of $400 million in 1986, $340 million in 1987, and $300 million in 1988.

[3] The figures in the table indicate the tax subsidies provided by the earned income tax credit. The effect on outlays is: 1986, $1,415 million; 1987, $1,491 million; 1988, $2,910 million.

Revenue Loss Estimates for Tax Expenditures

Table G-2 shows the estimated revenue loss associated with each tax subsidy item for which an outlay equivalent estimate was provided in table G-1. As explained in the text under the heading "Measuring Tax Expenditures," revenue loss estimates do not take into account the additional resources (if any) that would be required to provide the same after-tax incentive if the expenditure program were administered as a direct outlay rather than through the tax system. As was also previously explained, these revenue loss estimates are not equivalent to estimates of the increase in Federal receipts that would accompany the repeal of tax expenditure provisions.

Table G-2. **REVENUE LOSS ESTIMATES FOR TAX EXPENDITURES BY FUNCTION**

(In millions of dollars)

Description	Fiscal years					
	Corporations			Individuals		
	1986	1987	1988	1986	1987	1988
National defense:						
Exclusion of benefits and allowances to Armed Forces personnel				2,095	2,050	1,925
International affairs:						
Exclusion of income earned abroad by United States citizens				1,490	1,555	1,630
Exclusion of income of foreign sales corporations (FSC)	945	960	915			
Inventory property sales source rules exception		320	495			
Certain nonfinancial institutions operations interest allocation rules exception		15	40			
Deferral of income from controlled foreign corporations:						
Pre-1983 budget method	390	210	70			
Post-1982 budget method						
General science, space, and technology:						
Expensing of research and development expenditures:						
Pre-1983 budget method	635	1,170	1,405	25	50	60
Post-1982 budget method						
Credit for increasing research activities	665	1,815	750	15	30	20
Suspension of the allocation of research and experimentation expenditures	260	350	140			
Energy:						
Expensing of exploration and development costs:						
Oil and gas	−1,110	−1,300	−955	600	425	455
Other fuels	35	35	35			
Excess of percentage over cost depletion:						
Oil and gas	200	165	115	905	625	410
Other fuels	235	205	140	15	15	15
Capital gains treatment of royalties on coal	10	5		75	45	
Exclusion of interest on State and local industrial development bonds for certain energy facilities	−25	−25	−25	210	215	190
Residential energy credits:						
Supply incentives				315	55	
Conservation incentives				190		

Table G–2. **REVENUE LOSS ESTIMATES FOR TAX EXPENDITURES BY FUNCTION—Continued**

(In millions of dollars)

Description	Fiscal years					
	Corporations			Individuals		
	1986	1987	1988	1986	1987	1988
Alternative, conservation and new technology credits:						
Supply incentives	265	290	120	15	10	....
Conservation incentives	*	*	*	....	....	....
Alternative fuel production credit	20	10	10	*	*	*
Alcohol fuel credit [1]	5	5	5	*	*	*
Energy credit for intercity buses	5	*	*	....	....	....
Special rules for minning reclamation reserves	35	40	40	5	5	5
Natural resources and environment:						
Expensing of exploration and development costs, nonfuel minerals	30	30	30	5	5	5
Excess of percentage over cost depletion, nonfuel minerals	300	280	220	15	15	15
Exclusion of interest on State and local IDBs for pollution control and sewage and waste disposal facilities	−305	−230	−225	1,905	1,965	1,795
Tax incentives for preservation of historic structures	150	140	135	280	305	275
Capital gains treatment of iron ore	*	*	....	15	10	....
Capital gains treatment of certain timber income	320	155	....	90	60	....
Expensing of multiperiod timber growing costs	....	100	170	....	35	115
Investment credit and seven-year amortization for reforestation expenditures	40	40	40	180	175	180
Agriculture:						
Expensing of certain capital outlays	75	65	70	425	425	460
Expensing of certain multiperiod production costs	....	*	*	....	*	5
Treatment of loans forgiven solvent farmers as if insolvent	....	....	....	10	10	10
Capital gains treatment of certain income	35	10	....	605	125	....
Special investment tax credit carryback rules for farming	....	....	....	....	....	235
Commerce and housing credit:						
Dividend exclusion	....	....	....	535	365	....
Exclusion of interest on small issue industrial development bonds	−400	−395	−265	3,175	3,195	2,730
Exemption of credit union income	195	190	175	....	....	....
Excess bad debt reserves of financial institutions	480	365	55	....	....	....
Exclusion of interest on life insurance savings	....	....	....	6,990	6,130	6,510
Deduction for special percentage of taxable income for life insurance companies	1,425	910	....	....	....	....
Deductibility of interest on consumer credit	....	....	....	17,945	12,065	5,970
Deductibility of mortgage interest on owner-occupied homes	....	....	....	30,435	24,920	20,080
Deductibility of property tax on owner-occupied homes	....	....	....	8,560	8,030	7,255
Exclusion of interest on State and local housing bonds for owner-occupied housing	510	495	430	1,540	1,570	1,365
Exclusion of interest on State and local debt for rental housing	340	335	280	900	975	815
Capital gains (other than agriculture, timber, iron ore and coal)	2,190	905	....	28,820	22,520	3,850
Deferral of capital gains on home sales	....	....	....	1,985	2,285	4,790
Exclusion of capital gains on home sales for persons age 55 and over	....	....	....	925	1,065	2,320

Table G-2. **REVENUE LOSS ESTIMATES FOR TAX EXPENDITURES BY FUNCTION—Continued**

(In millions of dollars)

Description	Fiscal years					
	Corporations			Individuals		
	1986	1987	1988	1986	1987	1988
Carryover basis of capital gains at death				4,940	5,685	12,385
Investment credit, other than ESOP's, rehabilitation of structures, energy property, and reforestation expenditures	17,305	12,260	8,350	2,750	1,935	1,260
Special investment credit carryback rules for steel companies			565			
Accelerated depreciation on rental housing:						
Pre-1983 budget method	1,605	1,570	1,235	1,105	1,300	1,160
Post-1982 budget method						
Accelerated depreciation of buildings other than rental housing:						
Pre-1983 budget method	3,525	3,505	3,110	1,515	1,680	1,690
Post-1982 budget method						
Accelerated depreciation of machinery and equipment:						
Pre-1983 budget method	30,260	25,075	23,165	8,750	7,745	7,480
Post-1982 budget method						
Safe harbor leasing rules	1,700	1,065	690			
Amortization of start-up costs	25	20	20	220	200	165
Reinvestment of dividends in public utility stock				280		
Reduced rates on the first $100,000 of corporate income:						
Pre-1983 budget method	4,655	4,645	3,910			
Post-1982 budget method						
Transportation:						
Deferral of tax on shipping companies	130	115	115			
Exclusion of interest on State and local bonds for mass commuting vehicles	−5	−5	20	50	40	30
Deduction for motor carrier operating rights	5			5	*	
Community and regional development:						
Five-year amortization for housing rehabilitation	15	15	15	25	30	30
Credit for low-income housing investments		5	25		75	295
Investment credit for rehabilitation of structures (other than historic)	165	130	100	110	95	65
Exclusion of interest on IDBs for airports, docks and sports and convention facilities	−70	−70	−70	655	710	680
Education, training, employment, and social services:						
Exclusion of scholarship and fellowship income:						
Pre-1983 budget method				705	650	535
Post-1982 budget method						
Exclusion of interest on State and local student loan bonds	80	80	70	280	290	250
Exclusion of interest on State and local debt for private nonprofit educational facilities	75	70	60	265	300	250
Parental personal exemption for students age 19 or over				1,220	2,060	2,305
Deductibility of charitable contributions (education)	480	470	440	1,160	870	815
Employer educational assistance				75	80	25
Exclusion of employer provided child care				20	30	40
Exclusion of employee meals and lodging (other than military)				850	745	685

Table G–2. **REVENUE LOSS ESTIMATES FOR TAX EXPENDITURES BY FUNCTION—Continued**

(In millions of dollars)

Description	Fiscal years					
	Corporations			Individuals		
	1986	1987	1988	1986	1987	1988
Exclusion of contributions to prepaid legal services plans				60	75	20
Investment credit for ESOPs	1,165	665	230			
Credit for child and dependent care expenses				3,170	3,455	3,615
Targeted jobs credit	430	255	405	80	45	60
Deduction for two earner married couples				6,530	4,875	
Deductibility of charitable contributions, other than education and health	595	585	545	12,025	9,005	8,430
Deductions for certain adoption expenses				*	*	
Exclusion of parsonage allowances				140	150	160
Health:						
Exclusion of employer contributions for medical insurance premiums and medical care				23,435	23,305	24,165
Deductibility of medical expenses				3,755	3,130	1,770
Exclusion of interest on State and local debt for private nonprofit health facilities	70	65	55	2,165	2,350	1,950
Deductibility of charitable contributions (health)	295	290	270	1,705	1,270	1,190
Tax credit for orphan drug research	*	*	*			
Income security:						
Exclusion of railroad retirement system benefits				450	370	250
Exclusion of workmen's compensation benefits				2,425	2,505	2,365
Exclusion of public assistance benefits:						
Pre-1983 budget method				580	495	360
Post-1982 budget method						
Exclusion of special benefits for disabled coal miners				145	135	120
Exclusion of untaxed unemployment insurance benefits				1,085	690	
Exclusion of military disability pensions				120	110	105
Net exclusion of pension contributions and earnings:						
Employer plans				48,950	45,725	43,365
Individual Retirement Accounts				14,890	13,890	9,080
Keoghs				2,135	2,070	1,500
Exclusion of other employee benefits:						
Premiums on group term life insurance				2,200	2,120	1,995
Premiums on accident and disability insurance				130	120	120
Income of trusts to finance supplementary unemployment benefits				30	30	30
Additional exemption for the blind				35	15	
Additional deduction for the blind					10	10
Additional exemption for elderly				2,750	1,135	
Additional deduction for the elderly					790	1,150
Tax credit for the elderly and disabled				105	100	85
Deductibility of casualty losses				275	230	225
Earned income credit [2]				590	540	855
Social Security:						
Exclusion of social security benefits:						
Disability insurance benefits				1,195	1,145	1,055
OASI benefits for retired workers				13,275	12,945	12,200
Benefits for dependents and survivors				3,905	3,815	3,580
Veterans benefits and services:						
Exclusion of veterans disability compensation				1,700	1,605	1,455
Exclusion of veterans pensions				195	130	85

Table G–2. **REVENUE LOSS ESTIMATES FOR TAX EXPENDITURES BY FUNCTION—Continued**

(In millions of dollars)

Description	Fiscal years					
	Corporations			Individuals		
	1986	1987	1988	1986	1987	1988
Exclusion of GI bill benefits	....	....	....	105	90	75
Exclusion of interest on State and local debt for veterans housing	75	70	60	225	220	190
General government:						
Credits and deductions for political contributions	....	....	....	260	220	....
General purpose fiscal assistance:						
Exclusion of interest on public purpose State and local debt	2,170	2,225	2,000	7,420	7,995	6,950
Deductibility of nonbusiness State and local taxes other than on owner-occupied homes	....	....	....	23,985	18,800	14,995
Tax credit for corporations receiving income from doing business in United States possessions	1,895	1,855	1,690	....	....	....
Interest:						
Deferral of interest on savings bonds	....	....	....	820	810	745

*$2.5 million or less. All estimates have been rounded to the nearest $5 million.

[1] In addition, the exemption from the excise tax for alcohol fuels results in a reduction in excise tax receipts of $400 million in 1986, $340 million in 1987, and $300 million in 1988.

[2] The figures in the table indicate the effect of the earned income tax credit on receipts. The effect on outlays is: 1986, $1,415 million; 1987, $1,491 million; 1988, $2,910 million.

SPECIAL ANALYSIS H

FEDERAL AID TO STATE AND LOCAL GOVERNMENTS [1]

State and local governments have a vital constitutional role in providing government services. They have the major role in providing domestic public services, such as public education, law enforcement, public roads, water supply, and sewage treatment. The Federal Government contributes directly toward that role both by promoting a healthy economy and by providing grants, loans, and tax subsidies to States and localities.

Federal grants help State and local governments finance programs covering most areas of domestic public spending, including income support, capital spending, and other assistance. Federal grant-in-aid outlays, estimated to be $109.9 billion in 1987, are projected to decline to $106.3 billion in 1988. This reduction reflects the administration's efforts to restrain Federal spending, which is essential to continued long-term economic growth, and to reduce Federal involvement in activities that are primarily State and local responsibilities.

The major proposals affecting grants-in-aid in the 1988 Budget include reforms, reductions, and terminations. The major reforms include:

- replacement of the trade adjustment assistance and Job Training and Partnership Act programs for dislocated workers with a greatly expanded new worker adjustment assistance program. The new program would be carefully designed to help workers who lose their jobs because of economic change to recognize quickly their situation and move on to new careers.
- a new welfare youth training and employment program that would restructure the existing summer youth employment program. The new program would allow States and localities to provide year-round skill training, summer jobs, or both for youth in families receiving support from the aid to families with dependent children (AFDC) program.
- a proposed highway block grant that would provide funds to States for urban and rural highways, including the bridges on

[1] Federal aid to State and local governments is defined as the provision of resources by the Federal Government to support a State or local program of governmental service to the public. The three primary forms of aid are grants-in-aid (including shared revenues), loans, and tax expenditures.

those systems. States could use the funds on any main public road without advance Federal approval; and

- reforms in the Federal payment for State administrative expenses associated with the medicaid, food stamps, aid to families with dependent children, and child support enforcement programs. The administration is proposing a uniform matching rate for all types of administrative costs, replacing the complicated and disparate set of matching rates now in place for various types of State overhead costs. In addition, the matching rate for AFDC, medicaid, and food stamps would be reduced for States with excessively high administrative costs per recipient.

The administration is also proposing reductions or terminations of grant programs that are unnecessary, ineffective, or an inappropriate use of Federal funds. These proposals are motivated both by the need to reduce the Federal deficit and by a fundamental conviction about the proper relationship between Federal, State, and local governments. The major reductions or terminations include:

- medicaid changes that would reduce 1988 outlays $1.3 billion from levels under existing law. In subsequent years, the program would be allowed to grow at the rate of increase in prices in the medical sector.
- large reductions for mass transit programs. The penny gas tax for mass transit activities would continue to be used to fund mass transit activities, but general tax dollars would not be used (except for the Washington, D.C. metro, which is authorized separately).
- termination of urban development action grants and economic development assistance in order to reduce direct Federal intervention in the economic decisions of firms and individuals; and
- a phased termination of the community services block grant to allow grantees time to solicit other sources of Federal, State, local, and private funding.

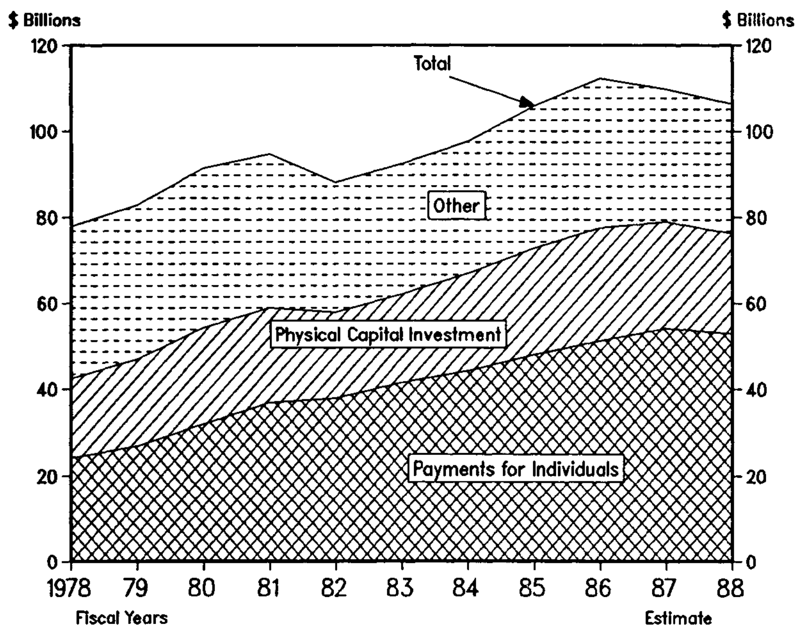
The accompanying chart shows trends in outlays in major grant categories from 1978 to 1988. Grant outlays for payments for individuals are estimated to be 50 percent of total grants by 1988; for physical capital investment, 22 percent; and for all other grants, largely for education, training, and social services, 28 percent.

In addition to grants-in-aid, Federal direct lending and loan guarantees to State and local governments are another source of Federal aid. Federal loans are used by States and localities for many purposes, including land and water resource development and education. In 1988, the Federal Government is expected to disburse $515 million in loans to State and local governments, compared to

$668 million in 1987. New guaranteed loans are estimated to be $99 million in 1988, compared to $191 million in 1987.

The two major State and local tax expenditures are the deductibility of most State and local taxes and the exclusion of interest on State and local securities from Federal taxation. Some State and local tax expenditures were changed significantly in the Tax Reform Act of 1986. Federal aid to State and local governments through tax expenditures is estimated to be $36.1 billion in 1988.

Federal Grants to State and Local Governments



HIGHLIGHTS OF THE FEDERAL AID PROGRAM

This section provides an overview of the Federal aid program proposed for 1988. Shown first are major differences between actual grant outlays in 1986 and estimated amounts for 1987 and 1988. This presentation is followed by a more detailed description of proposals for specific grant programs and a discussion of proposed levels of Federal aid through loans and tax expenditures.

Table H-1 shows changes in grant outlays between 1986 and 1987 and between 1987 and 1988. These changes are divided into three categories: payments for individuals, grants for physical capital investment, and all other grants.

Between 1986 and 1987, the largest estimated outlay increase is for medicaid, which increases $1.7 billion. The largest decrease is $5.0 billion for the elimination of general revenue sharing.

Between 1987 and 1988, the largest estimated increase is $0.4 billion for housing assistance. Proposed decreases occur in many areas, the largest being $0.8 billion for family support payments, which includes aid to families with dependent children and the child support enforcement program.

Table H-1. **FEDERAL GRANT-IN-AID CHANGES, 1986–88**

(In billions of dollars)

	Outlays
Total grants, 1986 actual	112.4
Changes:	
Payments for individuals:	
Medicaid	1.7
Food and nutrition assistance	0.6
Family support payments	0.7
Other	−0.2
Subtotal, payments for individuals, 1986–87 change	2.8
Physical capital investment:	
Highway programs	−1.5
Sewage treatment plants	−0.5
Mass transit	0.5
Other	0.2
Subtotal, capital, 1986–87 change	−1.4
Other programs:	
General revenue sharing	−5.0
Elementary and secondary education	−0.5
Housing	0.9
Other	0.8
Subtotal, other programs, 1986–87 change	−3.9
Total grants, 1987 estimate	109.9
Changes:	
Payments for individuals:	
Housing assistance	0.4
Family support payments	−0.8
Food and nutrition assistance	−0.5
Low-income home energy assistance	−0.5
Other	0.2
Subtotal, payments for individuals, 1987–88 change	−1.3
Physical capital investment:	
Highway programs	0.2
Sewage treatment plants	−0.3
Community development block grants	−0.2
Mass transit	−0.7
Other	−0.4
Subtotal, capital, 1987–88 change	−1.4
Other programs, 1987–88 change	−0.8
Total grants, 1988 estimate	106.3

Energy, Natural Resources, Environment, and Agriculture.—State and local *energy conservation grants* administered by the Department of Energy are used to weatherize school buildings, hospitals, and the homes of low-income individuals. Grants are also available to help States develop energy conservation programs. The administration proposes to rescind a portion of the funds for 1987 and terminate funding for these programs in 1988. These activities are more properly the responsibility of the States and can be financed by the $2.8 billion States have received in the past year as a result of the settlement of petroleum overcharge cases.

Grants to States for *land acquisition* and development of outdoor recreation lands, and for State *historic preservation* efforts are also proposed for elimination in 1988, with rescissions proposed for 1987. These needs can be met through State, local, and private resources and the positive effect of Federal tax incentives on private investment in historic buildings.

The budget authority requested for grants for the *abandoned mine reclamation fund* in 1988 is $151 million, $10 million less than the 1987 level. Approximately 225 projects in 22 States will be financed by the 1988 request.

Outlays for *sport fish restoration* grants are estimated to increase from $121 million in 1987 to $153 million in 1988, using increased funds from motorboat fuel taxes, excise taxes, and customs duties added by the Deficit Reduction Act of 1984.

The Environmental Protection Agency *construction grants program* was created to help State and local governments build municipal wastewater treatment systems. The original objective of this program—to reduce the pollution from municipal waste—has largely been met with the assistance that has been provided since 1972. In order to complete the Federal role, the administration proposes $12 billion in budget authority through 1993. After authorization to phase out the program by 1993 has been enacted, the administration will request $2.0 billion in budget authority for 1988. Outlays are estimated to be $2.3 billion in 1988, largely from prior year commitments.

The *hazardous substance superfund* pays for the cleanup of abandoned hazardous waste sites and chemical spills. Budget authority of $297 million has been requested in 1988 for site specific cooperative agreements with States. This funding level, which is $32 million above the 1987 level, should finance the cleanup of 21 sites in 1988.

The *Extension Service* makes formula and project grants to States to provide out-of-school education in agriculture and other subjects at State and local levels. The administration proposes to terminate the project grants to States, which are used to support such programs as urban gardening, pest management, support for rural development centers, and food and nutrition education. Funding for the formula grant would continue. Proposed budget authority for Extension Service grants for 1988 is $263 million, a $69 million reduction from the 1987 amount, but slightly more than the amount for formula grants in 1987.

Coastal zone management State grants were created in 1972 to encourage and assist States in dealing with increasing and competing demands for the use of the Nation's coastal areas. Now that most States have federally-approved management plans that cover approximately 90 percent of the U.S. coastline, the administration believes the program's purpose has been achieved and no further Federal funding is necessary or appropriate. More than $500 million has been provided to coastal States since the beginning of the program. The administration proposes to rescind unobligated balances of 1987 appropriations ($37 million) and terminate the program in 1988.

Similarly, the *sea grant* program was initiated to develop a network of colleges and universities with marine education programs and to provide outreach to communities and individuals through marine advisors that now total 300. Twenty-one colleges and eight institutions have established marine science programs under sea grant auspices that cover all coastal States and Puerto Rico. Fifteen States make direct allocations to the sea grant programs for ongoing funding of local and regionally oriented research projects and marine services. The Federal objective has been accomplished. The administration proposes to rescind unobligated balances of 1987 appropriations ($22 million) and terminate the program in 1988.

Transportation.—The Federal Government assists States and localities with their transportation programs by providing aid for highways, bridges, mass transit, airports, and other projects. The administration is requesting $16.0 billion in budget authority for these programs in 1988, a $2.0 billion reduction from the 1987 total.

The Federal-aid highway program helps fund the interstate highway system, other primary highways, bridges, and rural and urban highways. The administration is proposing to reauthorize the highway programs for 1987-90 at $13.2 billion of budget authority per year, $1.2 billion below the 1986 authorized level. At this lower amount, planned highway and safety obligations supported by the highway trust fund would equal the average annual anticipated highway user fee receipts from the public.

The proposed reauthorization includes several new proposals. Specifically, funding for the categorical interstate construction, interstate rehabilitation and primary highway programs would be replaced by a combined interstate/primary program of $8.2 billion annually. States would have the discretion to use these funds for either construction or repair of the 43,000-mile interstate highway system or for the 308,400-mile primary system. The primary system consists of connected main roads important to interstate and regional travel. In contrast, rural and urban roads are primarily the responsibility of State and local governments, which must decide their own priorities and expenditures for construction, maintenance and rehabilitation. To help States meet these needs, the administration proposes to consolidate into a block grant the existing trust fund resources for urban and secondary highway systems, including bridges on those systems. States would have the discretion to use the funds on any main public road without advance Federal project approval.

The administration proposes budget authority of $120 million in 1988 for two *highway safety grant* programs, the same level as for 1987. These grants supplement other State highway safety programs.

The administration seeks a 4-year reauthorization (1987-1990) that would provide two fundamental changes in *mass transit* subsidies beginning in 1988. First, mass transit funding (except for Washington Metro) would be limited to receipts provided by the one cent per gallon of the gasoline tax dedicated to mass transit activities. Second, these subsidies would be distributed by formula to States and large urban areas for their use on local transit projects. Proposed 1988 mass transit budget authority from the trust fund is $1.4 billion.

The administration is also proposing no funding in 1988 or later years for discretionary grants to build new or expand current transit systems. In the past, these subsidies have promoted the construction of local transit systems that often have been unnecessary, too costly, and underutilized.

In addition to the $1.4 billion from trust funds, the administration proposes a $130 million construction grant from general funds for the Washington, D.C. metrorail system.

Grants-in-aid for *airports* are proposed to be funded at $1.0 billion in budget authority in 1988, the same as for 1987. Three important changes are proposed. First, commercial airports that can be self-financing would be allowed to withdraw from the Federal program and assess their own fees to finance capital improvements. Second, 22 percent of the funds would be allocated to States to administer for general aviation, reliever, and small commercial service airports. Third, discretionary grant funds would be targeted to projects that would increase national airport capacity and improve safety. These proposed changes would provide increased flexibility to large airports and allow States to meet their own needs.

Community and Regional Development.—The *community development block grant program* (CDBG) provides flexible community and economic development support to cities, counties, Indian tribes, and U.S. territories. The administration proposes to rescind $375 million of 1987 budget authority, with total proposed budget authority of $2.6 billion for 1987 and $2.5 billion for 1988. Although this will reduce the total resources available for this program, the administration will propose legislation to target CDBG resources to the most needy communities.

The administration proposes to terminate the *urban development action grants* program in 1988 and rescind $238 million of the 1987 appropriation. This proposal is consistent with the Government-wide effort to reduce local economic development subsidies and reduce excessive Federal intervention in the economic decisions of firms and individuals. Cities may use CDBG resources for economic development projects.

In 1983, the administration proposed and Congress enacted, the *rental rehabilitation grant program* to help States and localities rehabilitate properties for low-income renters. This program was intended for communities that do not have enough standard quality low- and moderate-income housing to support a rental voucher program. The administration is proposing to rescind $125 million of 1987 budget authority and continue the program at $95 million in 1987 and $75 million in 1988—an amount adequate to meet this program's objectives.

Congress enacted a second grant program in 1983 to subsidize the construction or substantial rehabilitation of rental housing in low- and moderate-income neighborhoods with shortages of rental housing. The *rental development grant program* is proposed to be terminated in 1987. All $100 million of 1987 budget authority and $10 million of earlier budget authority is proposed for rescission and no new budget authority is proposed for 1988. New housing construction is an expensive means of housing the poor compared to approaches that utilize existing housing. Moreover, this program is difficult to justify with the high vacancy rates for housing and the poor targeting of funds to areas with real need.

The administration is not requesting funds in 1988 for the *economic development assistance programs* administered by the Economic Development Administration (EDA). The budget also proposes to rescind some unobligated funds in 1987 and use the remainder to close the agency. There is no evidence that categorical EDA project grants create net employment gains for the Nation. Instead, federally-targeted aid for businesses merely distorts market incentives. Funds for State and local community and economic development are available in 1988 through the community development block grant program.

Programs administered by the *Appalachian Regional Commission* (ARC) are intended to promote economic development of the

13-State Appalachian region. Both the Commission and its programs are proposed to be terminated in 1988. The administration also proposes to rescind uncommitted funds. This proposal reflects the administration's policy to rely on the private sector to provide the major stimulus for economic development. Moreover, ARC highway funds duplicate other Federal highway programs, and ARC development programs assist rural districts that are no worse off than rural communities elsewhere, and are therefore not deserving of special assistance.

Education.—The administration's policies for assisting education activities of State and local governments continue the Nation's tradition that primary responsibility for education lies with the family, State and local governments, and private institutions. Federal aid should primarily provide supplementary aid for persons with disabilities and for the educationally and economically disadvantaged. For elementary, secondary, and vocational education the administration is requesting $7.1 billion in budget authority, a reduction of $0.4 billion from the proposed 1987 amount.

Major education grants for students with special needs include *compensatory education for the disadvantaged, education for the handicapped, vocational and adult education, bilingual education*, and *Indian education*. The 1988 budget authority request for these activities is $5.8 billion, $0.2 billion below the amount proposed for 1987. For the major program, compensatory education for the disadvantaged, the administration is proposing $4.1 billion in budget authority for 1988, an increase of $0.2 billion above the 1987 enacted level. A legislative proposal would improve targeting of funds to schools with the highest concentrations of poor children, and would offer parents of eligible children an option to purchase education services from other public or private schools. The administration proposes to end Federal funding for vocational education. Research has shown that the Federal investment in vocational education has only small and transitory benefits for recipients; vocational education is now funded by at least ten State and local dollars for every Federal dollar.

Budget authority requested for the *State education block grant* for 1988 is $500 million, the same as enacted for 1987. This block grant provides States and localities with resources that can be used for a wide variety of educational purposes.

Impact aid payments compensate school districts whose enrollments and available revenues are deemed to have been adversely affected by Federal activities. The major category of aid is for districts with children who both live on and whose parents work on Federal property. No funds are proposed for the current authority to provide funds to school districts with children who *either* live on *or* whose parents work on Federal property. In general, the presence of these children imposes little or no burden on most districts. Budget authority of $548 million is requested in 1988 for districts with children who live and whose parents work on Federal property, about the same as the 1987 amount.

Training and Employment.—Budget authority proposed for *basic State block grants* under the Job Training Partnership Act of 1982 (JTPA) is $1.8 billion in 1988, about the same as the 1987 enacted level. States have considerable discretion in using these funds to prepare youth, welfare recipients, and other unskilled adults for employment.

The *summer youth employment* program finances minimum-wage public sector jobs for youth between the ages of 14 and 21. There is little evidence that simply providing jobs during the summer has benefited those youth most in need of employment skills. The administration therefore proposes to replace the current summer program with a more flexible program of jobs and training directed to youth on welfare, which is described below. The administration is proposing $650 million for the jobs program for the summer of 1988, which includes a $100 million rescission. This $650 million is slightly more than the funds appropriated for the summer of 1987.

Legislation will be proposed for a new *welfare youth training and employment* program to replace the existing summer youth employment program. The new program would allow States and local areas to establish a comprehensive program of services for youth in families receiving support from the aid for families with dependent children (AFDC) program. States and localities could operate a year-round program of remedial education, basic skills training, and related support; a subsidized summer jobs program as they do now; or a mixture of both programs. Budget authority of $800 million in 1988 is proposed for this program, which will be coordinated with other work and training initiatives for assisting the welfare population, described below in the "other income security" section.

For dislocated workers, the administration proposes to replace the two existing programs with an entirely new *worker adjustment assistance program*. This new program would be available to all dislocated workers, whether they are unemployed due to increased imports, have been permanently laid off, have lost their farms, or are long-term unemployment insurance recipients. Services, which could include counseling, job search assistance, basic education, and job skill training, would be provided in a two-tiered approach, with services that lead to quick adjustment provided first. The administration is proposing $980 million in budget authority in 1988.

No budget authority is requested in 1988 for the *work incentive (WIN) program*. The job services provided by this program would be provided more effectively by the AFDC work and training proposal (described in the "other income security" section below) and the new welfare youth training and employment program described above.

Grant outlays for the *State employment service* are estimated to be $843 million in 1988, $72 million less than the 1987 amount, as the new worker adjustment assistance program begins providing substantial job services now financed with these grants. Legislation will be proposed to decentralize authority, financing, and responsibility for administering State employment services and unemployment insurance programs in the States.

Social Services.—Budget authority requested for the *social services block grant* is $2.7 billion for 1988, the same as was enacted for 1987. Child day care, foster care, child protective service, preparation and delivery of meals, and legal services are some examples of social services offered by the States. In addition, States may transfer up to 10% of their social services allotment to block grants that support health services, health promotion and disease prevention, or low-income home energy assistance.

The administration proposes to phase out the *community services block grant program* beginning in 1988. This will give local grantees time to solicit other sources of Federal, State, local, and private funding.

Grants for *vocational rehabilitation services* help physically and mentally disabled persons become gainfully employed and live more independently. The administration is proposing $1.3 billion of budget authority for 1988 for this program, slightly more than the amount proposed for 1987. The increase offsets inflation from 1987 to 1988.

In 1988, budget authority of $682 million is requested for foster care and adoption assistance. These *family social services* support State efforts to reunite children with their families or to place them promptly in adoptive homes. The administration is proposing modifications to control the rapidly growing State administrative costs. Maintenance payments to 110,000 foster care children and 39,000 adoption assistance families would not be reduced.

Grants for *human development services* supplement State, local, and nonprofit efforts to improve the quality of life for low-income, neglected, abused, or homeless children, and for elderly people and other special groups. The largest program for children is Head Start, which helps local community groups provide child development programs for low-income preschool children. For 1988 the administration proposes a generic appropriation of $2.2 billion for these social services activities. Under a generic appropriation, the Department of Health and Human Services would be able to use its program expertise to emphasize high priority programs, such as

Head Start, and take advantage of emerging opportunities to serve needy poplulations better.

Health.—The *medicaid* program continues to be the largest grant-in-aid. This program supports State and local efforts to provide health services to an estimated 23.8 million low-income residents. Almost half of the spending is to help finance the costs of long-term institutional care for the low-income elderly and the mentally retarded. For 1988, medicaid outlays are estimated to be $26.9 billion, after savings of $1.3 billion from legislative proposals to reduce costs.

Most of the savings would result from proposals to:

- put a reasonable growth limit on Federal assistance to States for their medicaid programs. This proposal would reduce Federal expenditures by $1.0 billion in 1988 and, for later years, limit increases in Federal aid to the rate of inflation in medical prices;
- limit Federal aid for State administrative costs to 50 percent of those costs; and
- further reduce the matching rate for States with excessively high administrative costs per recipient.

Another proposal, which would not result in savings, would give States new incentives to enroll medicaid beneficiaries in health maintenance organizations (HMO's) or with other providers who are paid a monthly fee and are responsible for all of a person's health care. This proposal, known as capitation, would replace the current fee-for-service reimbursements for enrolled beneficiaries.

Budget authority of $1.2 billion is requested in 1988 for the *health block grants*, $0.1 billion more than for 1987. The block grants include those for maternal and child health; preventive health and health services; and alcohol, drug abuse, and mental health. The administration is proposing a new family planning block grant to give States greater flexibility in delivering voluntary family planning services.

An increase from $15 million in 1987 to $20 million in 1988 is also proposed for State and local demonstrations of community-based mental health care sponsored by the Alcohol, Drug Abuse, and Mental Health Administration. This additional funding would be provided to complete demonstration projects targeted on mental health services for the homeless mentally ill.

Administration of Unemployment Compensation.—Grants to States for the administration of the unemployment compensation program, which provides income to eligible unemployed workers, are financed by a Federal tax on employers. Outlays for this grant are estimated to be $1.7 billion in 1988, $0.1 billion above the 1987 level. The increase will allow for increases in costs and to improve State quality control efforts. Legislation will be proposed to decentralize authority, financing, and responsibility for administering State unemployment insurance and employment service programs.

Housing Assistance.—Housing vouchers are the cornerstone of the administration's housing policy. They are targeted to very low-income households, can be used in most privately-owned rental units that meet certain housing quality standards, and are less costly than other housing subsidies. Moreover, they give tenants greater freedom to choose where they wish to live.

Outlays for the grant portion of the *subsidized housing program* are estimated to be $5.2 billion in 1988, $0.3 billion more than in 1987. Grant outlays under this program include those for public and Indian housing. Also included are the vouchers, existing housing, moderate rehabilitation, and State-sponsored new construction programs funded under Section 8 of the Housing Act of 1937. The administration is proposing grants for vouchers for 79,000 additional housing units and grants for construction of 1,000 Indian housing units to add to an estimated 4.3 million households served by the Department of Housing and Urban Development (HUD). Approximately 20–25 percent of the 79,000 vouchers would be provided for nonmetropolitan areas.

In addition, the administration proposes 20,000 housing vouchers to be provided by the Farmers Home Administration (FmHA) in rural areas and 1,200 vouchers to assist families displaced due to prepayment of rural rental housing loans. Both the HUD nonmetropolitan vouchers and the FmHA vouchers would replace the units formerly provided by the FmHA rural housing construction subsidy loan and grant programs proposed for termination in the 1988 Budget. Because it is uncertain how many of the FmHA vouchers will go to public housing authorities, the FmHA vouchers are not classified as grants to State or local governments.

Budget authority of $1.4 billion is requested for *payments for the operation of low-income housing*. These payments are used to subsidize operating costs for more than 1.4 million low-rent public and Indian housing units. This request assumes no growth in personnel and related expenses, but allows for inflation adjustments for utilities and other nonpersonnel expenses that are generally beyond the ability of housing authorities to control.

The Consolidated Omnibus Budget Reconciliation Act of 1985 changed the treatement of loans in the low-rent public housing loan fund. Beginning in 1986 these "loans" to local housing authorities are forgiven if the funds are used as specified. The payments are therefore not loans but grants and are now classified in the budget as grants-in-aid. Outlays for these grants were $1.0

billion in 1986, and are estimated to be $1.9 billion in 1987 and $1.6 billion in 1988.

The administration is proposing increases for several programs for the homeless. In addition to the demonstration projects for the homeless mentally ill described above in the health section, in 1987 the Department of Housing and Urban Development (HUD) received $15 million in budget authority for two new *shelter programs*: $10 million for the emergency shelter grants program and $5 million for the transitional housing demonstration program. In addition, the Federal Emergency Management Agency (FEMA) continues to administer the *emergency food and shelter program*, which was funded at $70 million in 1987. These three programs assist homeless persons by providing funds for food, shelter, and supportive services. The administration's 1988 budget requests $80 million for FEMA's emergency food and shelter program and $5 million for a second year of HUD's transitional housing demonstration program. In addition, HUD has made available approximately $100 million worth of Section 8 rental subsidies for the homeless.

Food and Nutrition Assistance.—Food stamps help low income families maintain a nutritious diet. Benefits are paid directly to individuals by the Federal Government; food stamp administrative expenses are shared between the States and a grant from the Federal Government. The budget proposes to bring food stamps into closer conformity with medicaid and aid to families with dependent children by holding States liable for the full dollar value of the benefits issued in error above the legislatively mandated tolerance level (5 percent). To improve Federal collection of State error liabilities, the budget proposes to begin withholding each State's estimated liabilities from their Federal administrative grants during 1988. Other reforms affecting State administrative expenses are described at the beginning of this Special Analysis. Outlays for the Federal share of State *administrative expenses for the food stamp program* are estimated to be $1.1 billion in 1988.

In place of the regular food stamp program, the Government of Puerto Rico receives a *nutrition assistance* block grant. Outlays for this grant are estimated to be $0.8 billion in 1988.

Child nutrition programs subsidize institutions for meals served to students in schools, child care facilities, and other institutional settings. The administration proposes to improve targeting of Federal funds to the needy by maintaining institutional subsidies for meals served to students whose family incomes are below 185 percent of the poverty level but discontinue subsidies to students with family incomes above that level. Under this proposal, nearly 13 million children would still receive federally subsidized meals in 1988. Budget authority proposed for the program in 1988, including food donations from the Section 32 program, is $3.8 billion, including $0.8 billion in savings from legislative proposals.

The special supplemental food program for *women, infants, and children* (WIC) provides nutritious food supplements and nutrition education to more than 3 million low-income women, infants, and children. WIC is designed to prevent health problems associated with inadequate diets during critical stages of child development. The budget authority request of $1.7 billion for 1988 would maintain monthly participation levels somewhat above 3 million.

The *Commodity Credit Corporation* (CCC) donates surplus food such as cheese, butter and nonfat dry milk to needy families, charitable institutions, and schools. CCC donated commodities valued at $1.3 billion are expected to be distributed through State and local governments in 1988. (These funds are classified as grants in the agriculture function in the budget.)

Other Income Security.—*Family support payments to States* include the aid to families with dependent children (AFDC) program and the child support enforcement (CSE) program. AFDC helps State and local governments finance their cash assistance payments to needy families. The administration proposes legislation to achieve selected reforms of AFDC. Under a new AFDC work and training proposal, teenage recipients will be encouraged to remain in or return to school, and older recipients will participate in a variety of employment and training activities designed to improve their employment status. This reform, and the welfare youth training and employment program previously described, would replace the unsuccessful work incentive (WIN) program, for which the Congress provided only nine months of financing in 1987. Other reforms would prohibit unmarried minor mothers from leaving their parents' home solely to qualify for AFDC, and would eliminate payments to employable AFDC parents whose youngest child is age 16 or older.

The child support enforcement program finances most State and local administrative expenses for establishing paternity and for collecting support from legally liable absent parents. These collections offset State and Federal AFDC costs. Under the administration's proposal, States would be required to establish mandatory child support guidelines to help ensure that single-parent families receive adequate support from parents who are absent from the home.

Proposed budget authority for 1988 for the AFDC and CSE programs combined is $9.8 billion, including a legislative savings proposal for $0.5 billion.

The Federal Government subsidizes States for all of the initial resettlement costs of welfare, health, employment, English language training, and other services for *refugees and entrants*. The administration is proposing to reduce the number of months for which it pays 100 percent of the normal State share of AFDC and medicaid. Benefits to the individuals would not be reduced because States would then provide their normal share of the costs. The administration also plans to reduce the period for which refugees may receive assistance above and beyond that available to U.S. citizens. Budget authority of $245 million is requested in 1988 for refugee assistance, $83 million below the 1987 level.

For *low-income home energy assistance*, $1.2 billion in budget authority is proposed for 1988, $0.6 billion below the 1987 requested level. This program is a block grant to help States make payments to individuals, fuel vendors, or public housing operators for the fuel bills of low-income households. This reduction recognizes the hundreds of millions of dollars in oil overcharge settlements available to States for these purposes.

Administration of Justice.—For the three major *justice assistance* programs, juvenile justice, State and local assistance, and the new anti-drug abuse grant authorized in 1986, the administration is proposing no new budget authority for 1988. These programs are primarily the responsibility State and local governments.

The administration will continue to support the *victims of crime* program in accordance with the Comprehensive Crime Control Act of 1984. Outlays are estimated to be $55 million in 1988.

General Purpose Fiscal Assistance.—In 1986 new authorizing legislation for the *general revenue sharing* program was not enacted. According to law, the only 1987 outlays will be to distribute the remainder of funds already appropriated in prior years and otherwise still available, and to satisfy all legitimate claims.

The Federal Government collects receipts for the sale of timber and leasing of minerals on Federal lands and returns a portion of the receipts to States and localities. The administration proposes to share *natural resource receipts* with States and counties after the costs associated with management of the resources are deducted. This conversion to sharing receipts on a net rather than gross basis reduces natural resource payments in 1988 by $353 million from current services levels.

The District of Columbia's operating budget is financed in part by an annual reimbursement for the net cost of the Federal presence. The administration requests $527 million in budget authority for the *Federal payment to the District of Columbia* in 1988, a reduction of $53 million from the 1987 level. The reduction is primarily because the administration is proposing that Federal agencies be billed directly by the District for water and sewer charges. These amounts are therefore not included in Federal payment to the District.

Additional information on these and other grant programs is in Part 5 of the 1988 Budget. For a detailed list of all grant programs and proposed budget authority and outlays, see Table H-11.

Loans.—Another form of Federal aid to State and local governments is assistance in obtaining credit, either directly through loans and advances, or indirectly through loan guarantees. The Federal Government provides credit assistance to States, localities, and Indian tribes on more favorable terms than private lenders. Direct loans and loan guarantees are used to finance rural and community development, land acquisition, and a variety of other activities.

Direct loan disbursements (excluding repayments) are estimated to be $515 million in 1988, compared to $668 million in 1987.

A Federal loan guarantee occurs when a government agency enters into a formal commitment to use government funds to repay a lender upon default by the borrower. New loan guarantees to State and local governments are estimated to be $99 million in 1988, compared to $191 million in 1987.

More information on Federal credit activities is available in table H–12 and in Special Analysis F.

Tax expenditures.—Federal aid to State and local governments is also provided through tax expenditures. Tax expenditures are one of the means by which the Federal Government carries out public policy objectives; in many cases they can be considered alternatives to direct spending programs. To compare direct Federal spending with assistance provided through tax expenditures, estimates for tax expenditures are generally shown as outlay equivalents; that is, the level of budget outlays required to provide the same amount of after-tax benefits is the tax expenditure. A detailed discussion of the measurement and definition of tax expenditures and a complete list of revenue loss and outlay equivalent estimates for specific tax expenditure items is contained in Special Analysis G.

The two major categories of tax expenditures that provide aid to State and local governments are the deductibility of most State and local taxes and the exclusion of interest on State and local securities from Federal taxation. Individuals can claim nonbusiness sales, income, and property tax payments to State and local governments (other than payments already taken as business deductions) as itemized deductions on their Federal tax returns. This permits States and localities to raise a dollar of revenue with less than a dollar of net cost to their citizens. Beginning in 1987, the Tax Reform Act of 1986 disallows the deduction for sales taxes.

Interest on virtually all State and local government securities is tax exempt. As a result, State and local governments can sell their debt at lower interest rates than would be possible if such interest were taxable. The exclusion of interest on public purpose State and local debt subsidizes the financing of traditional public projects, such as toll roads, sewer systems, and schools. However, as shown in table H-2, State and local jurisdictions also provide the benefits of tax-exempt financing to a wide variety of private and quasi-public activities, such as pollution control, housing and small businesses. The growth of private purpose tax-exempt bonds and other issues pertaining to tax-exempt credit are discussed in more detail in Special Analysis F.

Table H-2. **TAX EXPENDITURES AIDING STATE AND LOCAL GOVERNMENTS**

(Outlay equivalents; in millions of dollars)

Description	Fiscal year		
	1986	1987	1988
Deductibility of:			
Property taxes on owner-occupied homes	8,595	7,955	7,205
Nonbusiness State and local taxes other than on owner-occupied homes	23,965	18,235	14,485
Exclusion of interest on:			
Public purpose State and Local debt	9,170	10,110	10,370
IDBs for certain energy facilities	180	200	205
IDBs for pollution control and sewage and waste disposal facilities	1,455	1,660	1,930
Small-issue IDBs	2,470	2,635	2,805
Owner-occupied mortgage revenue bonds	1,900	2,010	2,035
State and local debt for rental housing	1,275	1,335	1,320
Mass commuting vehicle IDBs	20	20	55
IDBs for airports, docks and sports and convention facilities	595	685	785
State and local student loan bonds	285	310	315
State and local debt for private nonprofit educational facilities	260	280	285
State and local debt for private nonprofit health facilities	2,105	2,250	2,250
State and local debt for veterans housing	290	295	305
Total (after interactions)[1]	42,710	38,970	36,075

[1] The estimate of total tax expenditures reflects interactive effects among the individual items. Therefore the individual items cannot be added to obtain a total.

To curb the rapid growth of private purpose tax-exempt bonds, recent legislation has placed restrictions on their use. The Mortgage Subsidy Bond Tax Act of 1980 imposed a number of restrictions on tax-exempt mortgage revenue bonds (MRBs) for owner-occupied housing as well as multifamily rental housing bonds, including limitations on the volume issued in each State. The Deficit Reduction Act of 1984 (DEFRA) extended these limitations to December 31, 1987. The Tax Reform Act of 1986 (TRA) included mortgage revenue bonds under a new unified volume cap which also covers student loan bonds and industrial development bonds (IDBs), as noted below. DEFRA also placed restrictions on qualified veteran's MRBs. The issuance of these bonds is limited to five preexisting State programs in amounts based on previous volume levels. Future issuance will be limited to veterans who served in active duty before 1977.

The Tax Equity and Fiscal Responsibility Act of 1982 required that industrial development bonds (IDBs) be approved by an elected public official after a public hearing and that assets of certain IDB-financed projects placed in service after 1982 be depreciated using straight-line rather than accelerated depreciation. The 1982 Act also eliminated the tax exemption for small issue IDBs issued after 1986. DEFRA extended the expiration date to December 1988 and the TRA extended it one more year to December 1989 for small issue IDBs that are issued exclusively to finance manufacturing facilities.

DEFRA also placed limits on the total volume of private purpose industrial revenue and student loan bonds that could be issued within each State. The maximum amount was limited to the greater of $150 per capita or $200 million per year. As mentioned earlier, the TRA combines the prior law volume cap for single family mortgage revenue bonds and multifamily rental housing bonds with the cap for IDBs and student loans. The cap is set at the greater of $75 per capita or $250 million for each State, through 1987. Subsequently, it is the greater of $50 per capita or $150 million.

Federal Grants-in-Aid by Function, Agency, and Region

Distribution of grants by function.—Under the Congressional Budget Act of 1974, the Congress reviews the budget and sets targets by function. Consequently, the functional classification of the budget has become important not only for analysis but also for congressional control.

Table H–3. **FEDERAL GRANT-IN-AID OUTLAYS BY FUNCTION**

(In billions of dollars)

Function	Actual 1986	Estimate					
		1987	1988	1989	1990	1991	1992
National defense	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Energy	0.5	0.4	0.3	0.3	0.2	0.3	0.3
Natural resources and environment	4.3	3.8	3.4	3.2	3.2	3.2	3.0
Agriculture	1.9	2.0	1.9	1.5	1.2	1.0	1.0
Commerce and housing credit	*	*	*	....	....	....	....
Transportation	18.4	17.5	17.2	18.3	17.7	17.0	17.3
Community and regional development	4.9	4.9	4.2	3.5	3.2	3.0	2.9
Education, training, employment, and social services	19.0	18.6	19.2	19.9	20.1	20.1	19.5
Health	26.8	28.7	28.7	29.9	31.4	32.9	34.4
Income security	29.1	31.0	29.2	27.6	28.8	29.4	30.0
Veterans benefits and services	0.1	0.1	0.1	0.1	0.1	0.2	0.2
Administration of justice	0.1	0.3	0.3	0.2	0.1	0.1	0.1
General government	0.2	0.2	0.1	0.1	0.1	0.1	0.1
General purpose fiscal assistance	7.0	2.2	1.5	1.6	1.6	1.7	1.7
Total outlays	112.4	109.9	106.3	106.5	107.9	109.2	110.6

*$50 million or less.

Table H-3 shows a functional distribution of Federal grant-in-aid outlays.[2] (Consistent with the emphasis now being placed on longer range budget planning, Table H-3 and other tables in this Special Analysis show estimates through 1992.) The functional composition of grant outlays has changed significantly over the years, as shown in table H-4. The health function has increased from 3 percent of Federal aid in 1960 to an estimated 27 percent in 1988. Transportation has declined from 43 percent in 1960 to an estimated 16 percent in 1988. Other changes occurred between 1960 and 1988 in education, training, employment, and social services programs, which increase from 7 percent in 1960 to an estimated 18 percent in 1988. General purpose fiscal assistance also increased with the addition of general revenue sharing, from 2 percent in 1960 to 9 percent in 1980. In 1987, outlays for this function are expected to drop to 2 percent of total grants, due primarily to the termination of the general revenue sharing program.

Table H-4. **PERCENTAGE DISTRIBUTION OF FEDERAL GRANT-IN-AID OUTLAYS BY FUNCTION**

	Actual				Estimate					
	1960	1970	1980	1986	1987	1988	1989	1990	1991	1992
Natural resources and environment	2	2	6	4	3	3	3	3	3	3
Agriculture	3	3	1	2	2	2	1	1	1	1
Transportation	43	19	14	16	16	16	17	16	16	16
Community and regional development	2	7	7	4	4	4	3	3	3	3
Education, training, employment, and social services	7	27	24	17	17	18	19	19	18	18
Health	3	16	17	24	26	27	28	29	30	31
Income security	38	24	20	26	28	28	26	27	27	27
General purpose fiscal assistance	2	2	9	6	2	1	1	1	2	2
Other	*	1	1	1	1	1	1	1	1	1
Total	100	100	100	100	100	100	100	100	100	100

*0.5% or less.

Distribution of grants by agency.—Table H-5 shows grant outlays by agency. The Department of Health and Human Services will provide 44 percent of total estimated grant-in-aid outlays in 1988, far more than any other agency.

Distribution of grants by region.—Most grant funds are distributed among States or localities by formulas, with elements in the formula that reflect program objectives. For example, the distribution of most highway funds among States is affected by the number of miles of highways in the State; the distribution of education grants is affected by the number of school children meeting certain criteria. Two of the largest grants, medicaid and aid to families with dependent children, are open-ended grants, whereby States determine the program level and the Federal Government reim-

[2] Table H-11 contains functional data and programmatic detail within each function for both budget authority and outlays.

Table H–5. **FEDERAL GRANT-IN-AID OUTLAYS BY AGENCY**

(In billions of dollars)

Agency	Actual 1986	Estimate 1987	Estimate 1988
Funds Appropriated to the President	0.3	0.3	0.2
Department of Agriculture	10.4	11.3	9.8
Department of Commerce	0.4	0.4	0.2
Department of Education	8.8	8.5	8.6
Department of Energy	0.3	0.2	0.1
Department of Health and Human Services	45.0	47.4	46.3
Department of Housing and Urban Development	11.4	12.3	12.0
Department of the Interior	1.3	1.4	1.3
Department of Justice	0.1	0.3	0.3
Department of Labor	5.7	5.5	5.9
Department of Transportation	18.3	17.5	17.1
Department of the Treasury	5.4	0.4	0.3
Environmental Protection Agency	3.4	3.0	2.7
Other	1.5	1.6	1.5
Total outlays	112.4	109.9	106.3

burses the States for a portion of their total costs. As a result of these and other factors, the distribution of grants differs among regions, as shown in Table H–6.

Table H–6. **DISTRIBUTION OF GRANTS BY REGION, SELECTED FISCAL YEARS**

	Federal Region	1986[1] total grants	Dollars per capita 1976	Dollars per capita 1986[2]	Average annual percent increase, 1976–86
I.	Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island	6.6	298	518	5.5
II.	New York, New Jersey, Puerto Rico, Virgin Islands	18.3	329	635	6.6
III.	Virginia, Pennsylvania, Delaware, Maryland, West Virginia, District of Columbia	12.6	290	497	5.4
IV.	Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Alabama, Mississippi, Florida	16.7	243	391	4.8
V.	Illinois, Indiana, Michigan, Ohio, Wisconsin, Minnesota	20.7	240	449	6.3
VI.	Arkansas, Louisiana, Oklahoma, New Mexico, Texas	10.7	238	377	4.6
VII.	Iowa, Kansas, Missouri, Nebraska	4.7	226	393	5.6
VIII.	Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming	4.0	301	526	5.6
IX.	Arizona, California, Nevada, Hawaii, other territories	13.8	269	423	4.5
X.	Idaho, Oregon, Washington, Alaska	4.4	323	502	4.4
	United States	**112.4**	**268**	**459**	**5.4**

[1] Preliminary estimate, in billions of dollars.
[2] See "Federal Expenditures by State," Bureau of the Census, for additional information concerning State distribution of Federal grants and other Federal spending.

The highest per capita aid in 1986 went to Region II, which includes New York, New Jersey, Puerto Rico, and the Virgin Islands. The lowest per capita aid in 1986 went to Regions IV, VI, and VII, generally covering the South and the Plains States.

HISTORICAL PERSPECTIVES

In recent decades, Federal aid to State and local governments has become a major factor in the financing of certain government functions. The rudiments of the present system date back more than 120 years to the Civil War. The Morrill Act, passed in 1862, established the land grant colleges and instituted certain federally required standards, as is characteristic of the present grant-in-aid system. Federal aid was later initiated for agriculture, highways, vocational education and rehabilitation, forestry, and public health. In the depression years, Federal aid was extended to meet income security and other social welfare needs.

Table H–7. **HISTORICAL TREND OF FEDERAL GRANT-IN-AID OUTLAYS**

(Fiscal years; dollar amounts in billions)

	Total grants-in-aid	Federal grants as a percent of			
		Federal outlays [1]		State and local expenditures [3]	Gross National Product
		Total	Domestic programs [2]		
Five-year intervals:					
1950	$2.3	5.3%	11.6%	10.4%	0.8%
1955	3.2	4.7	17.2	10.1	0.8
1960	7.0	7.6	20.6	14.6	1.4
1965	10.9	9.2	20.3	15.2	1.6
1970	24.1	12.3	25.3	19.2	2.4
1975	49.8	15.0	23.1	22.7	3.3
Annually:					
1980	91.5	15.5	23.3	25.8	3.4
1981	94.8	14.0	21.6	24.6	3.2
1982	88.2	11.8	19.0	21.6	2.8
1983	92.5	11.4	18.6	21.3	2.8
1984	97.6	11.5	19.6	21.1	2.6
1985	105.9	11.2	19.3	21.0	2.7
1986	112.4	11.4	19.8	20.6	2.7
1987 estimate	109.9	10.8	18.9	NA	2.5
1988 estimate	106.3	10.4	18.6	NA	2.2
1989 estimate	106.5	10.0	17.8	NA	2.1
1990 estimate	107.9	9.7	17.4	NA	2.0
1991 estimate	109.2	9.5	17.0	NA	1.9
1992 estimate	110.6	9.4	16.6	NA	1.8

[1] Includes off-budget outlays; all grants are on-budget.
[2] Excludes outlays for national defense, international affairs, and net interest.
[3] As defined in the national income and product accounts.
NA = Not available.
Note.—For additional detail, see the *Historical Tables* volume of the *Budget of the United States Government, Fiscal Year 1988.*

However, Federal grants did not become a significant factor in Government expenditures until after World War II. As shown in table H–7, Federal grants to State and local governments were $2 billion in 1950, and by 1965 they had risen to $11 billion. In 1981 they increased to nearly $95 billion, an average annual increase of 14.2 percent since 1965. In 1988 Federal grants are estimated to be $106.3 billion, 10.4 percent of total Federal outlays and 18.6 percent of domestic Federal outlays.

Table H–7 also shows grants-in-aid as a percent of State and local expenditures and as a percent of gross national product (GNP). Grants as a percent of State and local expenditures increased from 10.4 percent in 1950 to 25.8 percent in 1980, declining to 20.6 percent in 1986. Grants increased as a percent of GNP from 0.8 percent in 1950 to 3.4 percent in 1980, and are projected to decline to 1.8 percent by 1992.

Table H–8 shows the composition of grant-in-aid outlays for selected years since 1950 according to the categories of payments for individuals, physical capital investment, and other purposes. Almost half of estimated 1988 grants are to States and localities as payments for individuals.[3] Among the larger of these programs are medicaid, family support payments (AFDC), housing assistance, and nutrition programs.

Table H–8. **COMPOSITION OF GRANT-IN-AID OUTLAYS**

(Fiscal years; dollar amounts in billions)

	Total grants-in-aid	Composition of grants-in-aid			Share of State and local capital expenditures financed by—	
		Grants for payments for individuals [1]	Grants for physical capital investment [2]	Other	Grants-in-aid	Own source revenues
Five-year intervals:						
1950	2.3	1.3	0.5	0.5	8.4%	91.6%
1955	3.2	1.6	0.8	0.8	8.3	91.7
1960	7.0	2.5	3.3	1.2	23.9	76.1
1965	10.9	3.7	5.0	2.2	24.8	75.2
1970	24.1	8.6	7.0	8.4	24.6	75.4
1975	49.8	16.4	10.9	22.5	25.7	74.3
Annually:						
1980	91.5	31.9	22.5	37.1	36.4	63.6
1981	94.8	36.9	22.1	35.7	35.9	64.1
1982	88.2	37.9	20.1	30.2	34.0	66.0
1983	92.5	41.6	20.5	30.4	33.7	66.3
1984	97.6	44.3	22.7	30.6	34.9	65.1
1985	105.9	48.1	24.8	33.0	33.7	66.3
1986	112.4	51.4	26.2	34.7	31.3	68.7
1987 estimate	109.9	54.2	24.8	30.8	NA	NA
1988 estimate	106.3	52.9	23.4	30.0	NA	NA

[1] For an identification of accounts in this category, see Table H–11, including its footnotes.
[2] Excludes capital grants that are included as payments for individuals.
NA=Not available.

Table H–8 also shows the share of State and local capital expenditures financed by Federal grants or by revenues from State and local own sources. The Federal share increased from 8.3 percent in 1955 to 23.9 percent in 1960 largely because of the initiation of Federal trust fund financing for the interstate highway system. The share increased from 24.6 percent in 1970 to 36.4 percent in 1980, increasing by almost half in ten years. In contrast, this

[3] Payments for individuals are defined as Federal outlays providing benefits in cash or in-kind that constitute income transfers to individuals or families.

percentage declined to 31.3 percent in 1986, largely because State and local capital spending financed by their own revenues has increased significantly. The major capital investment programs are for highways, mass transit, community development block grants, and sewage treatment systems.

Grants for capital investment are estimated to be $23.4 billion in 1988, 22 percent of total grants-in-aid.

Grants Management

The increase in grant expenditures since World War II was accompanied by an increase in the number of grants designated for specific purposes. This increase took place especially in the 1960's and early 1970's. These grants usually contained Federal legislative and regulatory mandates, required matching funds from the recipient governments, and gave little discretion in their use to State and local officials. They came to be known as categorical grants, with complex administrative requirements to ensure that their purposes were met.

To reverse this trend and to devolve authority, broad-based grants have been emphasized in recent years. In addition, many mandatory administrative or procedural requirements associated with grant programs have been simplified or eliminated. Regulatory reforms and management improvements have increased the efficiency of the intergovernmental grant-in-aid system and have strengthened the authority of State and local elected officials over Federal financing and development activities in their jurisdictions.

General purpose and broad-based grants.—General-purpose aid gives State and local governments almost complete discretion in determining their use. Broad-based aid, which includes block grants, gives State and local governments considerable discretion within a broadly defined program area. Table H-9 shows general-purpose and broad-based grants as a percent of total grants for selected years from 1972 to 1990.

General-purpose aid increased dramatically with the introduction of the general revenue sharing program, from less than 2 percent of all grants in 1972 to more than 14 percent in 1975, but declined to 6.5 percent in 1985. The general revenue sharing program was terminated in 1986. The remaining programs in this category are expected to comprise 1.6 percent of total grants-in-aid in 1988.

Under the current administration, broad-based aid has increased as a percent of total Federal aid. Based on proposals in the 1982 Budget, Congress enacted nine block grants that consolidated 57 grant programs. In 1982, Congress enacted the Job Training Partnership Act, which replaced several expiring Comprehensive Employment and Training Act programs with a block grant to the States.

In this budget the administration is proposing new block grants for highways and for family planning services. Broad-based aid is estimated to increase to 13.2 percent of total grants-in-aid in 1988.

Table H–9. **OUTLAYS FOR GENERAL-PURPOSE, BROAD-BASED, AND OTHER GRANTS**

(Dollar amounts in billions)

	Actual				Estimate			
	1972	1975	1980	1986	1987	1988	1989	1990
General-purpose grants:								
General revenue sharing	....	6.1	6.8	5.1	0.1	....	....	....
Other general purpose fiscal assistance and TVA [1]	0.5	0.9	1.8	2.1	2.4	1.7	1.8	1.9
Subtotal, general-purpose grants	0.5	7.0	8.6	7.2	2.4	1.7	1.8	1.9
Broad-based:								
Highway block grant	....	....	....	....	0.1	1.6	2.1	2.0
Community development	....	*	3.9	3.3	3.3	3.0	2.7	2.6
Health block grants	0.1	0.1	0.1	1.1	1.1	1.1	1.2	1.2
State education block grants	....	....	....	0.4	0.5	0.6	0.5	0.5
Employment and training	....	1.3	2.1	1.9	1.8	1.8	1.8	1.8
Social services block grant	1.9	2.0	2.8	2.7	2.7	2.7	2.7	2.7
Low-income home energy assistance	....	....	....	2.0	1.8	1.3	1.2	1.2
Other	0.8	1.1	1.4	1.9	2.1	2.0	1.8	1.6
Subtotal, broad-based grants	2.9	4.6	10.3	13.4	13.4	14.1	14.1	13.6
Other grants	31.0	38.2	72.5	91.8	94.1	90.5	90.6	92.4
Total	34.4	49.8	91.5	112.4	109.9	106.3	106.5	107.9
ADDENDUM: PERCENT OF TOTAL								
General-purpose grants	1.6%	14.1%	9.4%	6.4%	2.2%	1.6%	1.7%	1.7%
Broad-based grants	8.3%	9.2%	11.3%	11.9%	12.2%	13.2%	13.2%	12.6%
Other grants	90.1%	76.7%	79.3%	81.7%	85.6%	85.2%	85.1%	85.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

*$50 million, on or less.

[1] For detail, see grants in the general purpose fiscal assistance function, Table, H–11. Amounts in Table H–9 above include shared revenues from the Tennessee Valley Authority, shown in the energy function.

In 1986 there were approximately 340 different grant programs. Most of the spending is concentrated in relatively few—more than 85 percent of estimated obligations in 1986 were concentrated in only 25 programs.

Most general-purpose and broad-based grants reduce or eliminate the requirement that recipients match Federal funds with their own. Despite the increase in these grants, matching requirements for all grants as a whole have increased. In 1980, State and local governments were estimated to provide approximately $.37 of required matching funds for each $1 of Federal aid; the State and local share in 1986 was about $.50 for each Federal dollar. The increase is because of the significant growth in programs such as medicaid that require a larger than average matching share.

Federalism.—The President's success in restoring governmental authority and establishing regulatory flexibility to State and local governments has been substantial. Last year the Domestic Policy Council's Working Group on Federalism submitted a Statement of Federalism Principles to the President for his signature. On April 8, 1986, the President signed the Statement which serves to clarify the relationship between Federal, State, and local governments. The Federalism Working Group is currently considering alternative ways to carry out these principles throughout the Government. The Federalism Working Group has also recommended to the Domestic Policy Council that "crossover sanctions", which apply to one grant program in order to influence State policy in another area, be evaluated.

Regulatory relief.—Regulatory relief is another area where the administration is seeking to give more flexibility and authority to State and local governments. The administration's regulatory policy guidelines include provisions that state:

- Federal regulations should not preempt State laws or regulations, except to guarantee rights of national citizenship or to avoid significant burdens on interstate commerce.
- Regulations establishing terms or conditions of Federal grants, contracts, or financial assistance should be limited to the minimum necessary to achieve the purposes for which the funds were authorized and appropriated.

The structural changes legislated to convert categorical programs into block grants were accompanied by dramatic regulatory relief that reduced red tape and gave States and localities more flexibility in the use of the funds. Administration initiatives continue to provide State and local governments with regulatory relief for individual grant programs, maintain the regulatory relief provided for the new block grants, and reform selected crosscutting requirements, using "common" rules to carry out Federal regulations.

OMB continued to lead a Presidential task force to make grants management more business-like and revise OMB Circular A–102, "Uniform Requirements for Grants to State and Local Governments." A–102 was identified as a target for regulatory relief by the Presidential Task Force on Regulatory Relief. Two products were developed: (1) a revised and shortened OMB circular, providing guidance to agencies on business-like management practices, and (2) a single, "common" agency rule, specifying terms and conditions of awards to grantees, to eliminate redundant and inconsistent administrative requirements among the 26 agencies.

Management Improvements.—In 1986, the administration carried out a number of efforts to improve management of the grant-in-aid system. The major accomplishments included the following:

- New emphasis was placed on efforts to curb fraud, waste, and abuse. The President signed Executive Order 12549, "Debarment and Suspension" on February 18, 1986, directing over 20 agencies to participate in a government-wide system of debarment and suspension for nonprocurement programs and activities (grants, loans, etc.). OMB and an interagency task force developed procedural guidelines to ensure consistency in agency implementation, prescribing which programs and activities are covered by the Order, government-wide criteria, and minimum due process procedures. Proposed OMB guidelines were issued in February, 1986; final guidelines are expected in early 1987.
- In February, 1986, pursuant to a Presidential memorandum, 17 agencies issued a single, "common" final regulation simplifying uniform relocation assistance policies. The common rule recognizes State and local competence, deletes regulatory planning requirements, and changes the reporting frequency, which had been annual in most cases, to no more than every three years.
- A cash management seminar promoting the new cash management policies developed by a joint State and Federal task force was held in 1986. Several States expressed interest in one of the optional funding techniques. OMB and Treasury have prepared proposed amendments to the Intergovernmental Cooperation Act to permit full implementation.

Other Sources of Federal Aid Information

The grant-in-aid series in the budget provides a comprehensive picture of Federal grants-in-aid, which are programs financed but not directly administered by the Federal Government. The Census series (published in *Governmental Finances*) and the national income and product accounts (NIPA) series (published in Special Analysis B and in the *Survey of Current Business*) are parts of a broader statistical concept encompassing the entire economy, and as a consequence grants-in-aid are defined somewhat differently than in the budget. Both series omit the following items that the budget includes:

—Federal aid to the Governments of Puerto Rico and U.S. territories;

—certain payments in-kind, primarily commodities purchased by the Department of Agriculture and donated to the school lunch and other nutrition programs; and

—payments to private, nonprofit entities (such as nonprofit hospitals) that operate under State auspices or within a State plan.

One major group of payments excluded in the budget definition of grants but included in the Census and NIPA series is payments for research conducted by public universities. The budget series excludes these payments because they are considered to be a purchase of services for the Federal Government rather than aid for State or local programs. Because both Census and the NIPA series focus on total cash payments to State and local governments, they count these as grants. A major item included only in the Census definition is unemployment compensation for Federal employees, ex-servicemen, and temporary extended benefits. One major kind of outlay included in the budget and Census definitions but excluded from the NIPA series is grants to subsidize the operation of public enterprises, mainly housing and transportation facilities. These are counted as subsidies by the Federal Government in the NIPA rather than as grants. Table H–10 shows these and other minor differences among the three series, but the differences are largely offsetting and the three series exhibit similar patterns.

Table H–10. **THREE MEASURES OF FEDERAL GRANTS-IN-AID TO STATE AND LOCAL GOVERNMENTS, 1982–85**

(In billions of dollars)

	1982	1983	1984	1985
Budget (Special Analysis H)	88.2	92.5	97.6	105.9
Less principal exclusions:				
Agricultural commodities	−1.1	−2.0	−1.8	−2.5
Geographical exclusions	−1.8	−2.5	−2.6	−2.7
Plus payments for research	3.4	4.2	4.6	5.1
Federal unemployment benefits and related	0.4	0.2	0.4	0.4
All other (net)	−3.1	−3.9	0.7	1.0
Federal payments (Census)	86.0	88.5	99.0	107.2
Less:				
Low-rent public housing	−4.8	−5.5	−5.6	−6.2
Federal unemployment benefits and related	−0.4	−0.2	−0.4	−0.4
All other (net)	2.6	2.9	−2.3	−2.9
Grants-in-aid (national income and product accounts)	83.4	85.7	90.7	97.7

In addition to these data sources, information on the distribution of Federal funds to State and local governments can be found in several other documents.

—*Budget Information for the States* (BIS) provides estimates of State funding allocations for the largest formula grant programs for the past, present and budget year. These programs comprise approximately 80 percent of total Federal aid to State and local governments. The document is prepared by the Office of Management and Budget soon after the Budget is released.

—*Federal Expenditures by State* is a report prepared by the Bureau of the Census that shows Federal spending by State for the most recently completed fiscal year. This document includes the outlay data on Federal grants to State and local governments that previously appeared in the Department of the Treasury publication, *Federal Aid to States.*

—The *Consolidated Federal Funds Report* (CFFR) is two annual documents that show the distribution of Federal spending by county areas and by local governmental jurisdictions. It is released by the Bureau of the Census in the Spring.

—The *Catalog of Federal Domestic Assistance* is prepared by the General Services Administration with data collected by the Office of Management and Budget and is available from the Government Printing Office. The basic edition of the *Catalog* is usually published in June and an update is generally published in December. It contains a detailed listing of grant-in-aid and other assistance programs; discussions of eligibility criteria, application procedures, and estimated obligations; and related information. This is a primary reference source for communities wishing to apply for grants-in-aid.

—The *Federal Register* is published daily by the Government Printing Office and has current information on agencies that are accepting applications for specific programs. These notices also provide information on eligibility criteria and application procedures.

—The *Federal Assistance Awards Data System* (FAADS) provides computerized information about current grant funding. Data on all direct assistance awards are provided quarterly to the States and to the Congress.

The State and Local Government Sector of the National Income and Product Accounts [4]

The national income and product accounts (NIPA) provide a comprehensive statistical description of the U.S. economy that includes State and local government receipts and expenditures. These data measure the relationship between the State and local governments as a sector of the economy and other sectors.

There are three major differences between NIPA data and a government's own budgetary accounting for receipts and expenditures. First, financial transactions and the purchase and sale of land and other existing assets are excluded from NIPA data but are generally included in budgetary data. Second, a large number of transactions in the NIPA accounts are recorded on an accrual basis, while many governments show transactions on a cash basis.

[4] Special Analysis B provides general information on the Federal sector of the national income and product accounts.

Third, NIPA data aggregate total State and local transactions, whereas many governments separate their general fund from special funds. As a result of these differences, NIPA totals are not the same as an aggregate of these governments' financial budgets. However, the NIPA data do provide timely estimates of total State and local fiscal transactions not otherwise available and if used with care can provide helpful financial indicators.

NIPA State and local sector.—The following chart shows State and local operating account surpluses and deficits as a percent of receipts, excluding the social insurance funds (primarily pensions). The social insurance funds have been excluded because their surpluses are for future pension obligations and are not available for carrying out the general responsibilities of these governments. It is reasonable for the operating account to be in deficit because it includes capital expenditures, often financed through borrowing.

The peaks and troughs in the operating account are largely the result of:

—changes in economic activity, which affect primarily receipts;

—decisions regarding debt-financed capital spending; and

—changes in Federal aid.

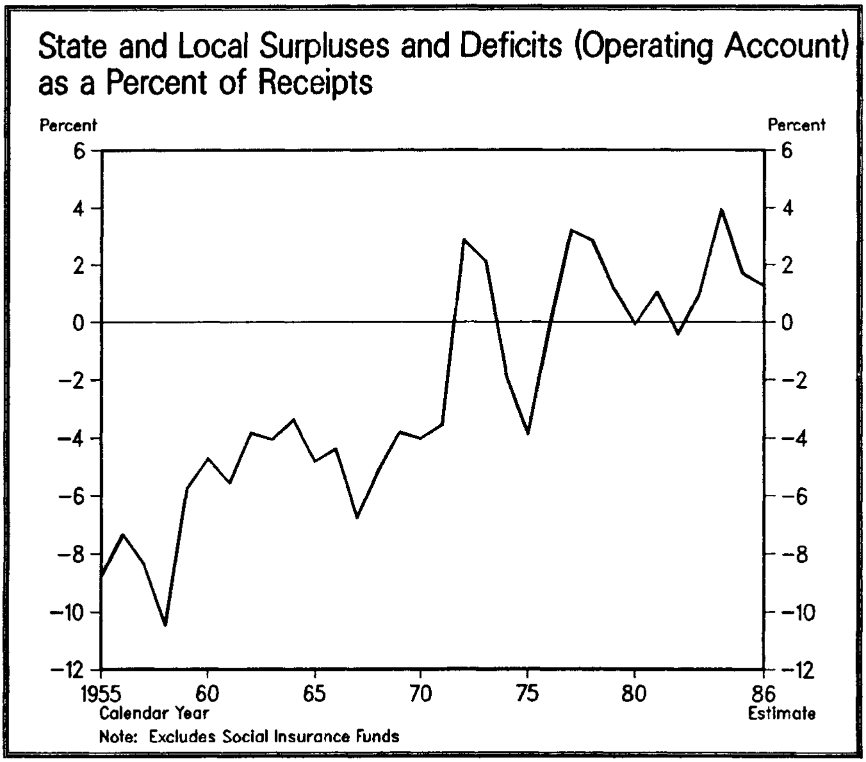
The operating account was in deficit every year from 1955 to 1971. Unlike this earlier period, during the 1970's it was generally in surplus. In part, this change reflected the growth of Federal grants (rather than State and local borrowing) to finance new infrastructure.

—The surpluses in the early 1970's were largely the result of the initiation of general revenue sharing and strong economic growth.

—The low point in 1975 was largely the result of the recession.

—The surpluses in the latter 1970's were largely the result of the economic recovery, increases in anti-recession Federal grants, reductions in debt-financed capital spending, and general restraints in government spending exemplified by the passage of Proposition 13 in California in 1978.

The recession brought the account into deficit in 1980 and 1982, albeit quite small ones relative to the 1955–71 period. As a result of the recession, States and localities reduced expenditures and increased taxes. These actions along with national economic growth over the past four years have helped return the account to surplus for 1983–1986.



Detailed Federal Aid Tables

The following two tables present detailed Federal aid data for 1986, 1987, and 1988. Table H–11, "Federal Grants to State and Local Governments—Budget Authority and Outlays," provides detailed budget authority and outlay data for grants-in-aid. Table H–12, "Credit Assistance to State and Local Governments," provides information on direct and guaranteed loans to State and local governments.

Table H-11. **FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—BUDGET AUTHORITY AND OUTLAYS**

(In millions of dollars)

Function, agency and program	BUDGET AUTHORITY			OUTLAYS		
	1986 actual	1987 estimate	1988 estimate	1986 actual	1987 estimate	1988 estimate
NATIONAL DEFENSE:						
Department of Defense–Military:						
National Guard centers construction	95	90	100	95	90	100
Other		7			7	
Federal Emergency Management Agency:						
Emergency management planning and assistance	79	78	77	81	77	66
Total, national defense	**175**	**175**	**177**	**177**	**174**	**166**
ENERGY:						
Department of Energy:						
Energy conservation	263	14	6	311	215	58
Department of Housing and Urban Development:						
Assistance for solar and conservation improvements		1		32	13	*
Tennessee Valley Authority:						
Tennessee Valley Authority fund				196	202	214
Total, energy	**263**	**15**	**6**	**538**	**431**	**273**
NATURAL RESOURCES AND ENVIRONMENT:						
Department of Agriculture:						
Watershed and flood prevention operations	172	16	4	169	101	60
Resource conservation and development	8	2	*	10	7	5
State and private forestry	25	29	3	25	29	3
Forest research				8	7	11
Department of Commerce:						
Operations research and facilities	139	85	54	139	129	31
Department of the Interior:						
Abandoned mine reclamation fund	149	161	151	130	140	135
Regulation and technology	35	45	45	34	45	44
Land acquisition	46			90	73	56
Urban park and recreation fund				7	7	4
Historic preservation fund	24	9		25	22	10
Resource management	5	1		6	2	*
Construction	2			3	1	1
Sport fish restoration	122	141	174	39	121	153
Miscellaneous permanent appropriations	121	110	114	152	113	106
Environmental Protection Agency:						
Sewage treatment system construction grants	1,774	2,000	2,000	3,109	2,599	2,320
Abatement, control, and compliance	271	275	296	260	285	282
Hazardous substance superfund	32	266	297	49	74	136
Leaking underground storage tank trust fund		16			2	6
Total, natural resources and environment	**2,926**	**3,155**	**3,138**	**4,255**	**3,757**	**3,362**
AGRICULTURE:						
Department of Agriculture:						
Food donations (Commodity Credit Corporation)	1,281	1,400	1,279	1,281	1,400	1,279
Temporary emergency food assistance program	50	21		50	25	14
Extension Service	328	332	263	340	332	274
Cooperative State Research Service	285	308	240	260	285	299

Table H–11. **FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—BUDGET AUTHORITY AND OUTLAYS—Continued**

(In millions of dollars)

Function, agency and program	BUDGET AUTHORITY 1986 actual	BUDGET AUTHORITY 1987 estimate	BUDGET AUTHORITY 1988 estimate	OUTLAYS 1986 actual	OUTLAYS 1987 estimate	OUTLAYS 1988 estimate
Payments to States and possessions (AMS)	1	1	....	1	2	....
Total, agriculture	**1,945**	**2,063**	**1,782**	**1,932**	**2,044**	**1,866**
COMMERCE AND HOUSING CREDIT:						
Department of Agriculture:						
Miscellaneous expiring appropriations	....	....	....	—*	....	....
Department of Commerce:						
Enterprise development and opportunity	1	1	....	2	1	1
Total, commerce and housing credit	**1**	**1**	....	**2**	**1**	**1**
TRANSPORTATION:						
Department of Transportation:						
Federal-aid highways (trust fund)	14,465	13,242	13,242	13,785	12,319	12,533
Highway traffic safety grants	126	110	110	136	128	128
Highway-related safety grants	9	10	10	11	9	11
Motor carrier safety grants	16	66	50	14	27	47
Other highway programs	38	80	....	164	120	117
Formula mass transit grants	2,058	2,000	1,374	1,652	1,996	1,884
Discretionary grants - transit	1,053	1,002	....	633	898	808
Interstate transfer grants - transit	191	200	....	389	360	174
Research, training, and human resources	6	6	....	8	7	6
Washington metro	217	201	130	84	196	200
Miscellaneous expired accounts	....	....	....	533	450	250
Federal Railroad Administration	16	10	....	22	45	15
Grants-in-aid for airports	973	1,017	1,017	853	889	950
Boat safety	48	45	30	23	39	15
Research and special programs	4	4	....	4	4	1
Pipeline safety	....	....	5	....	....	5
Washington Metropolitan Area Transit Authority:						
Interest payments	52	52	52	56	57	57
Total, transportation	**19,273**	**18,046**	**16,019**	**18,366**	**17,544**	**17,198**
COMMUNITY AND REGIONAL DEVELOPMENT:						
Funds Appropriated to the President:						
Disaster relief	297	102	106	288	266	191
Department of Agriculture:						
Rural water and waste disposal grants	109	30	....	178	167	121
Rural community fire protection grants	3	1	....	3	1	1
Rural development loan fund	....	....	....	....	14	....
Miscellaneous expiring appropriations	....	....	....	1	1	....
Department of Commerce:						
Economic development assistance programs	191	28	....	253	201	163
Other programs	....	....	....	2	3	1
Department of the Interior:						
Bureau of Indian Affairs	11	17	23	11	17	21
Department of Housing and Urban Development:						
Community development block grants	2,990	2,625	2,510	3,326	3,292	3,047
Urban development action grants	316	20	....	461	428	355
Rental housing development and rehabilitation	144	95	75	142	322	282
Other community development	....	....	....	13	6	−73

Table H–11. **FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—BUDGET AUTHORITY AND OUTLAYS—Continued**

(In millions of dollars)

Function, agency and program	BUDGET AUTHORITY			OUTLAYS		
	1986 actual	1987 estimate	1988 estimate	1986 actual	1987 estimate	1988 estimate
Federal Emergency Management Agency:						
Emergency management planning and assistance	10	6	2	10	9	5
National insurance development fund	10	....	....	2	....	....
Appalachian Regional Commission:						
Appalachian regional development programs	112	70	....	154	135	115
Neighborhood Reinvestment Corporation:						
Neighborhood Reinvestment Corporation	18	19	19	18	19	19
Total, community and regional development	**4,211**	**3,012**	**2,735**	**4,861**	**4,881**	**4,249**
EDUCATION, TRAINING, EMPLOYMENT, AND SOCIAL SERVICES:						
Department of Commerce:						
Public telecommunications facilities	23	1	....	18	24	13
Miscellaneous appropriations	....	....	....	*	*	....
Department of Defense--Civil:						
Payment to the Henry M. Jackson Foundation	....	10	....	....	10	....
Department of Health and Human Services, except Social Security:						
Social services block grant	2,584	2,700	2,700	2,671	2,661	2,697
Community services	352	368	310	350	368	328
Interim assistance to States for immigration	....	....	928	....	....	299
Human development services	1,827	1,981	2,210	1,831	1,912	2,158
Family social services	746	978	682	794	908	763
Work incentives	203	103	....	227	110	11
Department of the Interior:						
Operation of Indian programs	22	23	23	22	23	23
Department of Labor:						
Training and employment services	2,680	2,634	3,693	3,019	2,885	3,209
Federal-State employment service	928	840	843	957	915	843
Community service employment for older Americans	69	72	72	71	70	72
Department of Education:						
Compensatory education for the disadvantaged	3,525	3,938	4,144	3,392	3,097	3,946
Impact aid	676	699	548	678	760	576
Special programs	626	809	722	575	615	820
Bilingual education	98	104	104	52	112	102
Immigrant education	29	....	....	46	21	7
Indian education	61	60	60	59	48	60
Education for the handicapped	1,205	1,302	1,352	1,596	1,239	1,165
Rehabilitation services and handicapped research	1,191	1,234	1,278	1,198	1,264	1,265
Payments to institutions for the handicapped	5	6	6	3	10	6
Vocational and adult education	898	546	128	1,008	1,035	516
Student financial assistance [1]	73	....	....	82	60	2
Higher education	10	8	8	*	9	8
Higher education facilities loans and insurance	....	....	....	6	....	....
Libraries	115	98	....	98	186	79
Community Services Administration:						
Community services programs	....	....	....	−2	−2	−1
Corporation for Public Broadcasting:						
Public broadcasting fund	160	200	258	160	200	170

Table H-11. **FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—BUDGET AUTHORITY AND OUTLAYS—Continued**

(In millions of dollars)

Function, agency and program	BUDGET AUTHORITY			OUTLAYS		
	1986 actual	1987 estimate	1988 estimate	1986 actual	1987 estimate	1988 estimate
National Endowment for the Arts:						
National Endowment for the Arts	31	33	28	36	30	32
Institute of Museum Services:						
Institute of Museum Services	5	5	5	6	6	5
Total, education, training, employment, and social services	**18,139**	**18,753**	**20,101**	**18,953**	**18,573**	**19,172**
HEALTH:						
Department of Agriculture:						
Food Safety and Inspection Service	34	35		33	35	
Department of Health and Human Services, except Social Security:						
Medicaid [1]	24,644	26,640	26,864	24,995	26,700	26,864
Public health service management			155			63
Health resources and services [1]	1,045	1,068	930	1,078	1,079	997
Disease control, research and training	177	214	216	164	175	203
Alcohol, drug abuse, and mental health [1]	490	697	522	494	640	541
Department of Labor:						
Occupational Safety and Health Administration	55	59	61	54	58	61
Mine Safety and Health Administration	5	5	5	5	5	5
Total, health	**26,449**	**28,719**	**28,753**	**26,823**	**28,693**	**28,733**
INCOME SECURITY:						
Department of Agriculture:						
Child nutrition programs (incl. Sect. 32) [1]	4,083	4,375	3,850	4,014	4,322	3,895
Food stamp program administration [1]	947	1,056	1,090	968	1,128	1,085
Nutrition assistance for Puerto Rico [1]	820	853	825	824	849	826
Women, infants, and children programs [1]	1,578	1,661	1,685	1,577	1,700	1,684
Commodity supplemental food program [1]	37	41	35	36	42	35
Special milk program [1]	11	18		15	19	2
Cash and commodities for selected groups [1]	194	194	193	183	211	192
Rural housing preservation grants [1]	19	5			20	4
Rural housing for domestic farm labor [1]	10	2		17	10	9
Mutual and self-help housing [1]	8			7	6	5
Department of Health and Human Services, except Social Security:						
Family support payments to States (AFDC and CSE) [1]	9,899	10,414	9,776	9,877	10,606	9,776
Program administration	15	18	3	6	8	10
Payments to States from receipts for child support	*	*		*	*	*
Low income home energy assistance [1]	2,008	1,822	1,237	2,046	1,838	1,291
Refugee and entrant assistance [1]	391	328	245	422	366	279
Department of Labor:						
Unemployment trust fund - administration	1,598	1,599	1,700	1,570	1,599	1,700
Department of Housing and Urban Development:						
Subsidized housing program [1]	3,693	3,969	3,920	5,221	4,925	5,213
Shelter programs [1]		15	5		8	4
Payments for operation of low income housing [1]	1,159	1,435	1,377	1,181	1,344	1,489

Table H-11. **FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—BUDGET AUTHORITY AND OUTLAYS—Continued**

(In millions of dollars)

Function, agency and program	BUDGET AUTHORITY 1986 actual	BUDGET AUTHORITY 1987 estimate	BUDGET AUTHORITY 1988 estimate	OUTLAYS 1986 actual	OUTLAYS 1987 estimate	OUTLAYS 1988 estimate
Low-rent public housing (forgiven loans)	895	1,829	1,552	1,012	1,909	1,644
Congregate services program [1]	3	3	....	4	6	6
Federal Emergency Management Agency:						
Emergency food and shelter [1]	70	70	80	89	70	80
Total, income security	**27,437**	**29,709**	**27,573**	**29,070**	**30,986**	**29,229**
VETERANS BENEFITS AND SERVICES:						
Veterans Administration:						
Medical care [1]	65	68	73	65	68	73
Grants for constructing State care facilities [1]	21	42	42	17	30	34
Other veterans	3	....	6	9	5	6
Total, veterans benefits and services	**89**	**110**	**121**	**90**	**103**	**112**
ADMINISTRATION OF JUSTICE:						
Department of Justice:						
Justice assistance	125	358	26	89	186	241
Crime victims fund	59	63	70	11	65	55
National Institute of Corrections	6	3	3	7	6	4
Revolving fund	....	....	....	—*	—*	*
Department of the Treasury:						
Payments to the Government of Puerto Rico	....	8	....	....	8	....
Department of Housing and Urban Development:						
Fair housing assistance	6	6	10	5	8	14
Equal Employment Opportunity Commission:						
Equal Employment Opportunity Commission	19	20	24	21	20	24
Other Temporary Commissions:						
State Justice Institute: salaries and expenses	....	7	....	....	6	1
Total, administration of justice	**215**	**464**	**133**	**133**	**299**	**339**
GENERAL GOVERNMENT:						
Department of the Interior:						
Administration of territories	74	73	59	77	77	56
Trust Territory of the Pacific Islands	76	67	15	93	85	18
Total, general government	**151**	**140**	**74**	**171**	**162**	**74**
GENERAL PURPOSE FISCAL ASSISTANCE:						
Department of Agriculture:						
Forest Service permanent appropriations	685	274	26	399	560	26
Department of Defense--Civil:						
Corps of Engineers permanent appropriations	4	8	6	7	6	6
Department of the Interior:						
Payments in lieu of taxes	100	105	105	100	105	105
Payments to States - mineral leasing receipts	423	435	391	423	435	391
Bureau of Land Management permanent appropriations	83	76	50	19	76	50
National wildlife refuge fund	11	13	13	12	11	12
Payments to the U.S. territories	80	65	70	78	67	70

Table H–11. **FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—BUDGET AUTHORITY AND OUTLAYS—Continued**

(In millions of dollars)

Function, agency and program	BUDGET AUTHORITY			OUTLAYS		
	1986 actual	1987 estimate	1988 estimate	1986 actual	1987 estimate	1988 estimate
Department of the Treasury:						
General revenue sharing	4,185	....	....	5,114	76	....
Internal revenue collections for Puerto Rico	205	205	205	205	205	205
Miscellaneous permanent appropriations	97	108	111	100	108	111
Department of Energy:						
Payments to States under the Federal Power Act	1	1	1	*	1	1
District of Columbia:						
Federal payment to the District of Columbia	530	580	527	530	580	527
Total, general purpose fiscal assistance	**6,403**	**1,869**	**1,505**	**6,988**	**2,231**	**1,504**
Total, grants-in-aid	**107,676**	**106,231**	**102,118**	**112,357**	**109,879**	**106,278**

*$500 thousand or less.

[1] Programs included in the 'grants for payments to individuals' category shown in Table H-8.

Table H–12. **CREDIT ASSISTANCE TO STATE AND LOCAL GOVERNMENTS** [1]

(In millions of dollars)

Function, agency and program		1986 actual	1987 estimate	1988 estimate
Direct Loans				
Energy, natural resources and environment:				
Department of the Interior:				
Bureau of Reclamation loan program	Loan disbursements	47	38	32
	Net loans	*38*	*28*	*32*
	Outstandings	**480**	**507**	**181**
Drought emergency loan fund	Loan disbursements			
	Net loans	*–1*	*–1*	*–1*
	Outstandings	**14**	**13**	**12**
Environmental Protection Agency:				
Construction grants	Loan disbursements	3	1	
	Net loans	*3*	*–11*	*–1*
	Outstandings	**14**	**3**	**2**
Abatement, control, and compliance	Loan disbursements	22	49	–5
	Net loans	*22*	*48*	*–8*
	Outstandings	**24**	**72**	**64**
Total, energy, natural resources and environment	Loan disbursements	72	88	27
	Net loans	*62*	*64*	*23*
	Outstandings	**532**	**596**	**260**
Commerce and housing credit:				
Department of Agriculture:				
Rural housing insurance fund	Loan disbursements	25	25	20
	Net loans	*13*	*15*	*10*
	Outstandings	**381**	**396**	**406**
Transportation:				
Department of Transportation:				
Federal-aid highways (trust fund)	Loan disbursements	1	*	*
	Net loans	*1*	*	*
	Outstandings	**76**	**77**	**77**
Right-of-way revolving fund	Loan disbursements	48	48	48
	Outstandings	**131**	**131**	**131**
Total, transportation	Loan disbursements	49	48	48
	Net loans	*1*	*	*
	Outstandings	**207**	**208**	**208**
Community and regional development:				
Department of Agriculture:				
Rural development insurance fund	Loan disbursements	453	383	371
	Net loans	*249*	*–1,659*	*–3,881*
	Outstandings	**7,957**	**6,298**	**2,417**
Department of Commerce:				
Coastal energy impact fund	Loan disbursements	5	8	
	Net loans	*2*	*4*	*–3*
	Outstandings	**96**	**100**	**97**
Department of Interior:				
BIA revolving fund for loans	Loan disbursements	7	13	
	Net loans	*2*	*8*	

Table H–12. **CREDIT ASSISTANCE TO STATE AND LOCAL GOVERNMENTS [1]—Continued**

(In millions of dollars)

Function, agency and program		1986 actual	1987 estimate	1988 estimate
	Outstandings	**53**	**61**	**61**
Department of Housing and Urban Development:				
Community development	Loan disbursements	89	66	29
	Net loans	*11*	*−8*	*−51*
	Outstandings	**300**	**292**	**241**
FHA revolving fund (liquidating programs)	*Net loans*	*−26*	*−38*	*−218*
	Outstandings	**359**	**322**	**104**
Urban renewal programs	*Net loans*	*	*−1*	
	Outstandings	**1**		
Total, community and regional development	Loan disbursements	554	470	400
	Net loans	*239*	*−1,693*	*−4,153*
	Outstandings	**8,766**	**7,074**	**2,921**
Education, training, employment, and social services:				
Department of Education:				
College housing loans	Loan disbursements	7	21	20
	Net loans	*−23*	*−323*	*−293*
	Outstandings	**717**	**395**	**102**
Higher education facilities loan and insurance fund	*Net loans*	*−6*	*−6*	*−51*
	Outstandings	**109**	**104**	**52**
Student loans and other	Loan disbursements	16	16	
	Net loans	*6*	*−16*	*−75*
	Outstandings	**169**	**153**	**78**
Total education, training, employment, and social services	Loan disbursements	23	37	20
	Net loans	*−22*	*−344*	*−420*
	Outstandings	**995**	**651**	**232**
Health:				
Department of Health and Human Services:				
Medical facilities guarantee and loan fund	*Net loans*	*−1*	*−1*	*−1*
	Outstandings	**15**	**14**	**13**
General purpose fiscal assistance:				
Other independent agencies:				
Loans to the District of Columbia	*Net loans*	*−564*	*−293*	*−30*
	Outstandings	**1,008**	**715**	**685**
Grand total, direct loans	New loans	723	668	515
	Net loans	*−271*	*−2,251*	*−4,571*
	Outstandings	**11,905**	**9,653**	**4,724**

Table H–12. **CREDIT ASSISTANCE TO STATE AND LOCAL GOVERNMENTS** [1]**—Continued**

(In millions of dollars)

Function, agency and program		1986 actual	1987 estimate	1988 estimate
Guaranteed Loans				
Community and regional development:				
Department of Agriculture:				
Rural development insurance fund	*Net loans*	*−14*	*−10*	*−243*
	Outstandings	**393**	**383**	**141**
Department of Housing and Urban Development:				
Revolving fund (liquidating programs)	New guaranteed loans		14	
	Net loans		*2*	*
	Outstandings		**2**	**2**
Urban renewal programs	*Net loans*	*−1*	*−14*	
	Outstandings	**14**		
Community development grants	New guaranteed loans		147	84
	Net loans		*147*	*64*
	Outstanding		**147**	**211**
Department of Interior:				
Indian loans	New guaranteed loans	50	30	15
	Net loans	*46*	*26*	*10*
	Outstanding	**292**	**117**	**128**
Total, community and regional development	New guaranteed loans	50	191	99
	Net loans	*31*	*151*	*−168*
	Outstandings	**498**	**650**	**481**
Income security:				
Department of Housing and Urban Development:				
Low-rent public housing	*Net loans*	*−275*	*−312*	*−339*
	Outstandings	**8,612**	**8,300**	**7,961**
Grand total, guaranteed loans	New guaranteed loans	50	191	99
	Net loans	*−244*	*−161*	*−508*
	Outstandings	**9,110**	**8,950**	**8,442**

* $500 thousand or less.

[1] Only direct loans are included in budget outlays. New direct loan disbursements less loan repayments, sales, etc., are net loans, which are counted in the budget as outlays. Guaranteed loans are non-Federal loans guaranteed by the Federal Government. For a discussion of credit in the budget, see Special Analysis, F, "Federal Credit Programs"

SPECIAL ANALYSIS I

CIVILIAN EMPLOYMENT IN THE EXECUTIVE BRANCH

The Administration reduced nondefense employment by nearly 91,000 from 1981 to 1986. The Administration is committed to continuing to restrain the size of the Federal workforce to the minimum necessary to carry out essential functions efficiently. This analysis discusses the mechanisms used to control civilian employment in the Executive Branch and the resulting employment ceilings. It also deals with personnel compensation and benefits and compares the Federal workforce with other government employment, as well as with overall civilian employment in the United States.

Full-Time Equivalent of Total Federal Civilian Employment in the Executive Branch

Total employment of civilian agencies in the executive branch is controlled on a full-time equivalent (FTE), or workyear, basis. Postal Service employment by law is not subject to Presidential control, and section 904 of the 1982 Defense Authorization Act (Public Law 97-986) exempts the Department of Defense from full-time equivalent employment controls.

Table I-1 is a tabulation of full-time equivalent employment estimates for the major departments and agencies of the executive branch. Generally, the estimates for 1987, 1988, and 1989 constitute upper limits on agency FTE employment.

The 1987 through 1989 totals for "Civilian Agency Employment" contain adjustments to reflect the fact that actual nondefense employment tends to fall short of assigned employment ceilings. The average shortfall for the period 1982-1986 is about two percent, with a range of 3.38 to 1.16 percent. For 1987, a shortfall of 2 percent is projected; this decreases to 1.75 percent in 1988 and to 1.50 percent in 1989.

Significant Changes in Full-Time Equivalent Employment

Nondefense employment is expected to increase by about 8,100 from 1987 to 1988 and to then decrease by about 2,800 from 1988 to 1989.

Many agencies show decreases, in Table I-1, from the 1987 estimates to the corresponding estimates for 1988:

Table I-1. **FULL-TIME EQUIVALENT OF FEDERAL CIVILIAN EMPLOYMENT** [1]

	Fiscal year				
	1986 actual [2]	1987 estimate	1988 estimate	1989 estimate	difference 1987-88
Agriculture	102,997	106,393	99,085	98,894	−7,308
Commerce	32,321	33,849	41,049	43,577	7,200
Defense—civil functions	28,511	28,348	28,347	28,347	−1
Education	4,526	4,500	4,500	4,500	....
Energy	16,193	16,100	15,950	15,850	−150
Health and Human Services	128,105	124,745	119,099	114,208	−5,646
Housing and Urban Development	11,720	12,535	12,438	11,428	−97
Interior	70,657	71,350	70,400	70,400	−950
Justice	63,307	69,463	76,920	77,782	7,457
Labor	17,931	18,339	18,060	17,997	−279
State	25,261	26,147	26,658	26,803	511
Transportation	60,375	60,480	59,868	57,404	−612
Treasury	130,845	136,807	146,188	148,574	9,381
Environmental Protection Agency	12,931	14,165	14,323	14,263	158
National Aeronautics and Space Administration	21,660	21,800	22,425	22,425	625
Veterans Administration	220,642	221,227	216,709	215,218	−4,518
Other:					
Agency for International Development	4,675	4,825	4,825	4,825	....
General Services Administration	22,745	22,281	21,677	20,877	−604
Nuclear Regulatory Commission	3,445	3,369	3,250	3,180	−119
Office of Personnel Management	5,306	5,419	5,195	5,005	−224
Panama Canal Commission	8,336	8,550	8,665	8,665	115
Small Business Administration	4,054	4,115	4,227	4,050	112
Tennessee Valley Authority	27,613	29,500	29,500	29,500	....
United States Information Agency	8,981	9,120	9,020	9,020	−100
Miscellaneous	39,652	43,529	44,049	43,981	520
Estimated nondefense lapse	....	−21,939	−19,292	−16,452	2,647
Civilian agency employment	**1,072,789**	**1,075,017**	**1,083,135**	**1,080,321**	**8,118**
Defense—military functions [3]	1,041,352	1,039,000	1,037,000	1,036,000	−2,000
Subtotal	2,114,141	2,114,017	2,120,135	2,116,321	6,118
Postal Service Employment [4]	739,574	764,590	794,000	824,000	29,410
Total, Executive Branch	2,853,715	2,878,607	2,914,135	2,940,321	35,528

[1] Excludes developmental positions under the Worker-Trainee Opportunity Program (WTOP) as well as certain statutory exemptions.
[2] Data are estimated for portions of Defense—civil functions as well as for the Federal Reserve System, Board of Governors and the International Trade Commission.
[3] Section 904 of the 1982 Defense Authorization Act (Public Law 97-86) exempts the Department of Defense from full-time equivalent employment controls. Data shown are estimated.
[4] Includes the Postal Rate Commission.

- Department of Agriculture (−7,308). The decrease is due to significant funding reductions in several major areas. The 1988 Budget proposes to privatize programs now operated by the Federal Crop Insurance Corporation. The Farmers Home Administration will shift most of its lending from direct to privately originated guaranteed loans. With private banks originating and servicing the loans, Federal employment will be reduced. Similarly, the Federal role in conservation and extension activities would be reduced and staffing levels adjusted. The Forest Service is also slated for reductions, consistent with implementation of management efficiencies.

- Department of Health and Human Services (−5,646). Most of this reduction results from increased productivity in the Social Security Administration, which is continuing an ongoing investment of nearly $ 1 billion in its automated systems. Another major reduction results from the transfer of Saint Elizabeth's Hospital to the District of Columbia, beginning in fiscal year 1988. The Hospital's staff of more than 1,000 will no longer be Federal employees. Modest reductions also result from phasing down staff connected with the Health Professions program and other efficiencies, e.g., the consolidation of six separate program staffs into the Family Support Administration.
- Veterans Administration (−4,518). This reduction reflects anticipated productivity increases in all areas, together with savings in medical care staffing that result largely from the expectation that fewer non-service disabled veterans with higher incomes will be served. Staffing for the care of all service-disabled and low and moderate income non-service disabled veterans who are expected to apply will continue to be provided. These decreases are partially offset by increases for additional medical staff to be used for modernized medical facilities.
- Department of the Interior (−950). This net decrease is due to reductions in the Bureau of Reclamation planning program, productivity improvements, and program reductions distributed across the entire Department.
- Department of Transportation (−612). This reduction is due to program and activity terminations, most predominantly the transfer of Washington National and Dulles airports' control to the control of a regional authority, and to general efficiency gains throughout the Department. The decrease is offset in part by staffing increases for air traffic controllers, aviation security personnel, and Coast Guard support personnel and a staffing increase related to the Department's assumption of certain Interstate Commerce Commission activities once the ICC is phased out.
- General Services Administration (−604). GSA's reduction is due primarily to planned improvements in the agency's organization and also to contracting out under the guidelines of OMB Circular No. A-76.
- Department of Labor (−279). This decrease reflects increased productivity together with reductions in overhead and support staff.
- Office of Personnel Management (−224). OPM's decrease in FTE's results primarily from scheduled OMB Circular No. A-76 and productivity savings.

- Department of Energy (−150). Employment will continue to decline due to implementation of management improvements and reductions in regulatory activities and in short-term research and development activities. This decline is consistent with the administration's policy of primary reliance on the market place to achieve energy goals.
- Nuclear Regulatory Commission (−119). This reduction is due to reorganization of the regulatory and inspection functions and consolidation of the headquarters staff into one building.
- United States Information Agency (−100). This decrease results from increased automation and productivity improvements and from other reductions.

Some agencies show increases:

- Department of the Treasury (9,381). Treasury's FTE increase is attributable primarily to staffing increases within the Internal Revenue Service. In particular:
  —nearly 8,000 positions to improve tax law enforcement and increase tax revenues collected;
  —about 1,100 positions for automated data processing, some of which will have direct effects on increased revenues; and
  —approximately 1,000 additional staff to implement the Tax Reform Act of 1986.

  Within the IRS and other Treasury bureaus, productivity increases and other reductions result in a net Treasury increase of 9,381.
- Department of Justice (7,457). This increase reflects implementation of immigration reform legislation, the expansion of the U.S. trustees program nationwide, the opening of new Federal prisons, and increases in high priority programs in the Federal Bureau of Investigation and the legal divisions.
- Department of Commerce (7,200). This increase is attributable primarily to the mandated quinquennial censuses of agriculture and economics in 1988, as well as the buildup required for testing and other preparation for the 1990 decennial census of population and housing in the United States and territories.
- National Aeronautics and Space Administration (625). This increase augments NASA's management oversight capability to meet the challenges faced in restoring the Space Shuttle to safe routine flight and to conduct effectively the Space Station program. Additional staffing is also provided for the safety, reliability and quality assurance program, and for internal auditing.
- Department of State (511). This increase is primarily for continuation of the multiyear program to improve the security of

United States employees and facilities at diplomatic missions overseas.

- Environmental Protection Agency. (158) These increases are primarily to implement the Superfund Amendments and Reauthorization Act of 1986. They will accompany increased activities in site cleanup and will strengthen the Superfund enforcement process.
- Panama Canal Commission (115). An increase is required to meet the higher workload associated with the higher traffic projected to transit the Canal in 1988.
- Small Business Administration (112). This increase reflects the transfer of 142 FTE's from the Department of Commerce to the Small Business Administration for minority business development activities formerly conducted by the Minority Business Development Agency, less FTE reductions expected to be achieved through contracting out activities currently conducted by Federal employees.

End-of-Year Employment Levels

Between January 1981, when this administration took office, and September 30, 1986, nondefense total employment fell from 1,232,181 to 1,122,302; a decrease of 109,879 employees. Total Federal civilian employment in the executive branch was 2,150,155 at the end of 1986, excluding Postal Service and special category employees.

Table I–2 shows Government-wide Federal civilian employment as of the end of fiscal years 1984, 1985, and 1986. Postal Service employment (including the Postal Rate Commission) is also shown, together with data for the legislative and judicial branches and for active duty military personnel.

Full-time permanent employment accounted for nearly 88 percent of executive branch employment (excluding the Postal Service) at the end of fiscal year 1986. The remainder is made up of part-time employees, intermittent employees (those employed on an irregular basis) and full-time temporary employees (generally, in positions occupied for less than one year).

Table I–2. **TOTAL FEDERAL EMPLOYMENT END-OF-YEAR**

Description	Actual, as of September 30		
	1984	1985	1986
Civilian employment in the executive branch:			
Full-time permanent	1,881,590	1,898,980	1,885,139
Other than full-time permanent	265,085	286,933	265,016
DOD—Military functions (total employment)	(1,004,529)	(1,043,240)	(1,027,853)
Non-DOD (total employment)	(1,142,146)	(1,142,673)	(1,122,302)
Subtotal	2,146,675	2,185,913	2,150,155
Postal Service:			
Full-time permanent	560,952	587,132	607,725
Other than full-time permanent	121,764	162,952	183,294
Subtotal	682,716	750,084	791,019
Special categories [1]	24,522	27,546	25,558
Subtotal, executive branch civilian employment	2,853,913	2,963,543	2,966,732
Military personnel on active duty: [2]			
Department of Defense	2,138,157	2,151,032	2,169,112
Department of Transportation (Coast Guard)	39,560	38,487	37,284
Subtotal, military personnel	2,177,717	2,189,519	2,206,396
Total, executive branch employment	**5,031,630**	**5,153,062**	**5,173,128**
Legislative and judicial personnel: [3]			
Full-time permanent	32,097	32,644	33,115
Other than full-time permanent	23,982	24,345	22,341
Subtotal, legislative and judicial branches	56,079	56,989	55,456
Grand total	**5,087,709**	**5,210,051**	**5,228,584**

[1] Developmental positions under the Worker-Trainee Opportunity Program; disadvantaged summer and part-time workers under such Office of Personnel Management programs as Summer Aids, stay in school, and junior fellowship; and certain statutory exemptions.
[2] Excludes reserve components.
[3] Excludes members and officers of Congress.

Personnel Compensation and Benefits

Direct compensation of the current Federal work force includes base pay, merit pay, cash incentive and performance awards, meritorious and distinguished executive awards, premium pay for overtime, Sunday and holiday pay, differentials for night work and overseas duty, and flight and other hazardous duty pay. In addition, it includes uniform allowances (when paid in cash), cost-of-living and overseas quarters allowances.

In the case of military personnel, compensation includes basic pay, special and incentive pay (including enlistment and reenlistment bonuses), and allowances for clothing, housing, and subsistence.

Related compensation in the form of personnel benefits for current personnel consists primarily of the Government's share (as employer) of health insurance, life insurance, old-age survivors' disability and health insurance, and payments to the Department of Defense's DOD Military Retirement Fund and the Civil Service Retirement and Disability Fund to finance future retirement benefits.

Table I–3. **COMPENSATION AND BENEFITS FOR CURRENT PERSONNEL**

(In millions of dollars)

Description	1986 actual	1987 est.	1988 est.
Civilian personnel costs:			
Executive branch:			
Direct compensation	58,475	60,299	61,085
Personnel benefits [1]	12,894	14,132	16,709
DOD—Military functions, civilian personnel:			
Direct compensation	(26,741)	(27,099)	(27,655)
Personnel benefits	(3,340)	(3,777)	(4,903)
Subtotal	71,369	74,431	77,794
Postal Service:			
Direct compensation	20,901	22,161	23,504
Personnel benefits	3,805	4,423	6,496
Subtotal	24,706	26,584	30,000
Legislative and judiciary: [2]			
Direct compensation	1,132	1,232	1,320
Personnel benefits	139	175	245
Subtotal	1,271	1,407	1,565
Allowance for civilian pay raise [3]			1,160
Total, civilian personnel costs	97,346	102,422	110,519
Military personnel costs: [4]			
Direct compensation	46,016	48,067	49,342
Personnel benefits	22,642	23,098	23,871
Subtotal	68,658	71,165	73,213
Allowance for military pay raise [5]			2,056
Total, military personnel costs	68,658	71,165	75,269
Grand total, personnel costs [3]	166,004	173,587	185,788
ADDENDUM			
Retired pay for former personnel:			
Civilian personnel	23,729	24,756	24,634
Military personnel	17,946	18,358	19,316
Total	41,676	43,114	43,951

[1] In addition to the employing agency's contributions to the costs of life and health insurance, retirement, and Medicare Hospital Insurance, this amount includes transfers from general revenues to amortize the effects of general pay increases on Federal retirement systems, for employees in the legislative and judicial branches as well as employees (nonPostal) in the executive branch. The transfers amounted to $4,407 million in 1986 and are estimated to be $4,556 million in 1987 and $4,720 million in 1988.

[2] Excludes members and officers of Congress.

[3] Assumes a 2 percent pay raise, effective January 1988.

[4] Excludes reserve components.

[5] Comprised of allowances for a 4 percent pay increase effective January, 1988 for military personnel as follows: for the Department of Defense, $2,008 million; for the Coast Guard, $48 million.

The 1988 Budget includes proposals that are designed individually and as a whole to gain control over the Government's expenditures as an employer. For 1988, the Administration will propose:

- reform of the Civil Service Retirement System to bring costs more into line with those of the recently enacted Federal Employees Retirement System (FERS);
- changing the formula used to determine the Government's contribution to enrollees' health premiums to a program-wide weighted average that reflects the premiums of all plans and enrollee distribution among the plans; and
- elimination of the current system of virtually automatic within-grade pay increases based primarily on longevity. This reform would substitute a new system that will permit managers to make meaningful pay distinctions based on performance, either through one-time pay increases or permanent salary raises.

Additional details on these proposals can be found under the income security, health, and allowances functions in Part 5 of the *Budget of the United States Government, 1988—Supplement.*

The budget assumes a 4 percent military pay increase and a 2 percent increase in pay for Federal white- and blue-collar workers in January 1988. The final decision on the pay adjustment for white-collar workers will be made in late summer, as the law provides, after Presidential review of the recommendations of the President's Pay Agent, the Federal Employees Pay Council, and the Advisory Committee on Federal Pay, and after a review of prevailing economic conditions.

As required by law, the Commission on Executive, Legislative, and Judicial Salaries has submitted recommendations to the President on salaries for senators, representatives, Federal judges, cabinet officers and other agency heads, and certain other officials in the executive, legislative and judicial branches. The statute requires the President to set forth, in the budget next submitted by him after receipt of the report of the Commission, his recommendations for adjustment of these salaries. The President has included his recommendations as a part of his January 5, 1987 budget transmittal.

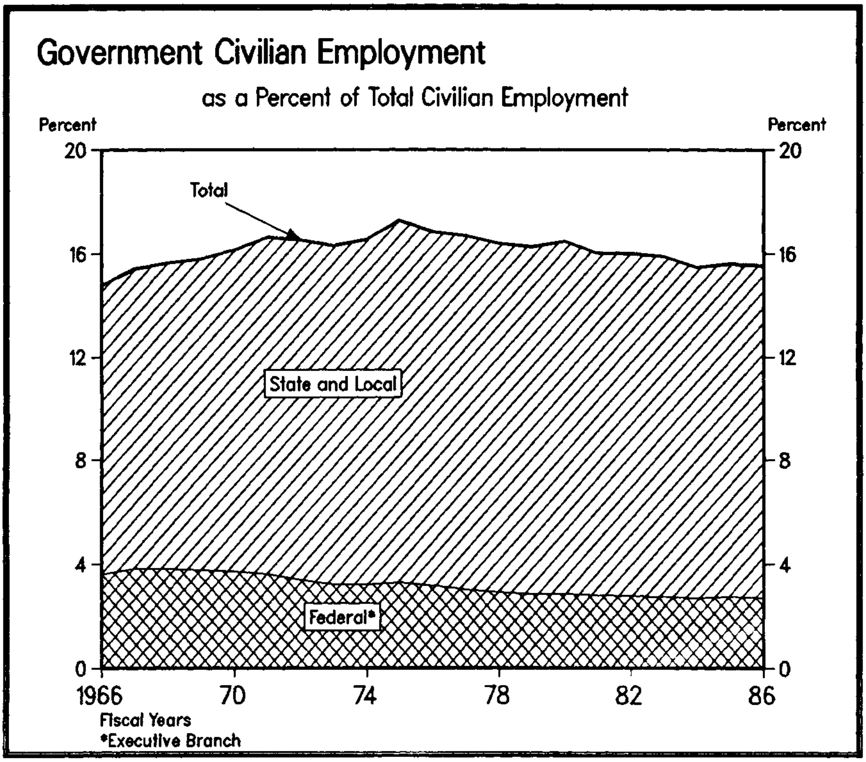
As indicated in table I-3, obligations for executive branch civilian personnel compensation and benefits in 1988 are projected to reach nearly $77.8 billion, excluding the Postal Service.

Government Employment and Labor Force Comparisons

As shown on the following chart, Government employment—Federal, State, and local—comprised about 15.5 percent of the total employed civilian labor force in 1986.

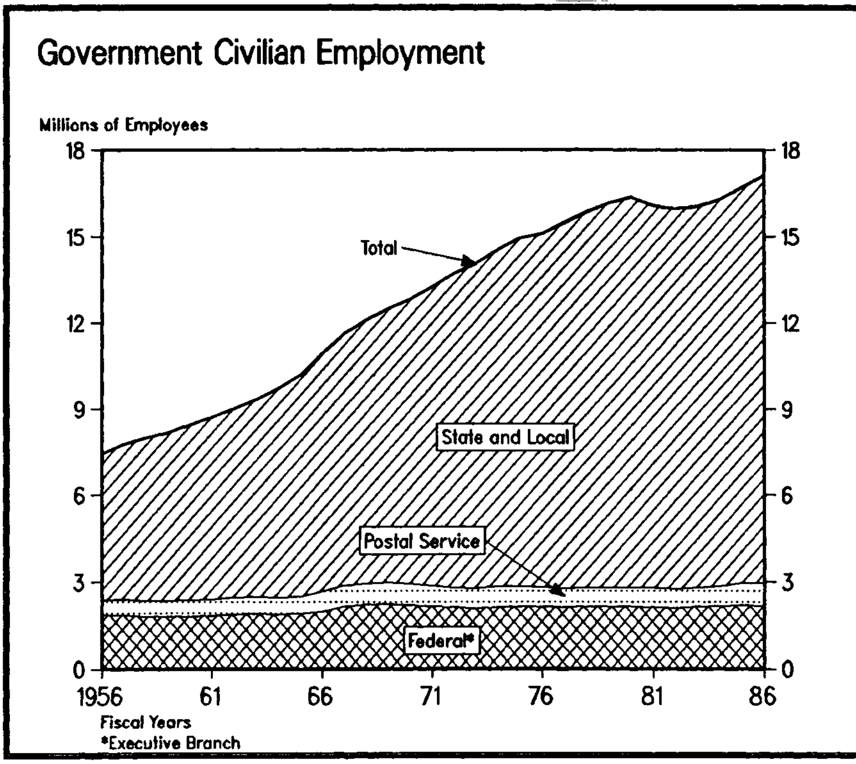
Within this segment, Federal civilian employment in the executive branch accounts for 2.69 percent of the total employed civilian labor force in 1986, down from a high of 3.82 percent in 1968.

The portion of the total employed civilian labor force attributable to State and local government has grown from 11.2 percent in 1966 to 12.8 percent in 1986.



GOVERNMENT EMPLOYMENT AND POPULATION COMPARISONS

As illustrated in the following chart and in table I–4, the Federal share of total government employment has declined significantly over the last three decades, from 31.9 percent in 1956 to 17.3 percent in 1986. Employment for all government had been rising steadily due to increases in State and local government. In 1981 it began to decline but in 1983 this trend reversed and State and local government is again increasing.



The ratio of Federal civilian employment to the total U.S. population was 12.3 per thousand in 1986. As is evident in table I-4, the main reason for the decrease in this ratio from 1985 is a large increase in the total U.S. population relative to a small increase in executive branch employment. The latter is due to a large increase in the Postal Service, offset in part by decreases elsewhere in the executive branch (see table I-2).

Table I–4. **GOVERNMENT EMPLOYMENT AND POPULATION, 1956–86**

Fiscal year	Government employment				Population	
	Federal executive branch [1] (thousands)	State and local governments (thousands)	All governmental units (thousands)	Federal as percent of all governmental units	Total United States (thousands)	Federal employment per 1,000 population
1956	2,372	5,064	7,436	31.9	168,903	14.0
1957	2,391	5,380	7,771	30.8	171,984	13.9
1958	2,355	5,630	7,985	29.5	174,882	13.5
1959	2,355	5,806	8,161	28.8	177,830	13.2
1960 [2]	2,371	6,073	8,444	28.1	180,671	13.1
1961 [2]	2,407	6,295	8,702	27.7	183,691	13.1
1962	2,485	6,533	9,018	27.6	186,538	13.3
1963 [3]	2,490	6,834	9,324	26.7	189,242	13.2
1964 [3]	2,469	7,236	9,705	25.4	191,889	12.9
1965	2,496	7,683	10,179	24.5	194,303	12.8
1966	2,664	8,259	10,923	24.4	196,560	13.6
1967	2,877	8,730	11,607	24.8	198,712	14.5
1968	2,951	9,141	12,092	24.4	200,706	14.7
1969 [4]	2,980	9,496	12,476	23.9	202,677	14.7
1970 [2]	2,944	9,869	12,813	23.0	205,052	14.4
1971 [2]	2,883	10,372	13,255	21.8	207,661	13.9
1972	2,823	10,896	13,719	20.6	209,896	13.4
1973	2,775	11,286	14,061	19.7	211,909	13.1
1974	2,847	11,713	14,560	19.6	213,854	13.3
1975	2,848	12,114	14,962	19.0	215,973	13.2
1976	2,832	12,282	15,114	18.7	218,035	13.0
1977 [5]	2,789	12,704	15,493	18.0	220,904	12.6
1978	2,820	13,050	15,870	17.8	223,278	12.6
1979	2,823	13,359	16,182	17.4	225,779	12.5
1980 [2]	2,821	13,542	16,363	17.2	[6] 228,468	12.3
1981 [2]	2,806	13,274	16,080	17.5	[6] 230,848	12.2
1982	2,768	13,207	15,975	17.3	[6] 233,184	11.9
1983	2,819	13,453	16,272	17.3	[6] 235,439	12.0
1984	2,854	13,504	16,358	17.4	[6] 237,669	12.0
1985	2,964	13,865	16,829	17.6	[6] 239,929	12.4
1986	2,967	14,155	17,122	17.3	[6] 242,115	12.3

[1] Covers total end-of-year civilian employment of full-time permanent, temporary, part-time, and intermittent employees in the executive branch, including the Postal Service, and, beginning in 1970, includes various disadvantaged youth and worker-trainee programs.
[2] Includes temporary employees for the decennial census.
[3] Excludes 7,411 project employees in 1963 and 406 project employees in 1964 for the public works acceleration program.
[4] On Jan. 1, 1969, 42,000 civilian technicians of the Army and Air Force National Guard converted by law from State to Federal employment status. They are included in the Federal employment figures in this table starting with 1969.
[5] Data for 1956 through 1976 are as of June 30; for 1977 through 1986, as of Sept. 30.
[6] U.S. population data for 1980–1986 are the latest available from the Census Bureau.

SPECIAL ANALYSIS J

RESEARCH AND DEVELOPMENT

This analysis covers the funding of research and development across all agencies with R&D programs of $10 million or more. It consists of two sections. The first highlights the R&D policies and trends in the 1988 budget. The second describes in more detail the R&D programs of 12 agencies whose R&D obligations individually exceed $150 million. These agencies fund over 99 percent of total Federal R&D.

PART I. HIGHLIGHTS

In 1988, total Federal obligations for research and development, including R&D facilities, are estimated at $66.7 billion, an increase of over $7 billion or 12 percent above the 1987 estimated level of $59.5 billion as shown in table J-1. Support for the conduct of basic research, included within this total, is estimated to increase by about 4 percent, from $8.8 billion in 1987 to $9.1 billion in 1988.

The Federal Government supports research and development:

- to meet the direct needs of the Federal Government where the supporting agencies are also the principal users of the results of the R&D. Examples include R&D for national security and research to support regulatory activities; and
- to assist in meeting broad national needs, particularly where the private sector lacks sufficient incentives for adequate investment to assure long-term economic growth and continued improvement in the quality of life for all citizens. Examples of such R&D include Federal investments in basic research across all fields of science and engineering, and agricultural and health-related R&D.

The ability of the Nation to meet global competition, to provide for the national security, and to improve the quality of life for all citizens depends in part on national investments in science and technology. For 1988, the budget provides increased support for R&D to meet key national needs. The budget also provides increased support for basic research, particularly at universities, to help generate the new knowledge necessary for continued technological innovation and to help assure the future availability of high-quality scientists and engineers. Interdisciplinary basic research will receive special emphasis, since research at the junction of disciplines can lead to the creation of important new fields of science. The Federal government will also increase efforts to help encourage the transfer to the private sector of technology and new knowledge created in Federal laboratories.

Even in a constrained fiscal climate, the 1988 budget reflects a continued high priority for R&D that is appropriate for Federal support. It provides significant increases for:

- the R&D programs of the Department of Defense;
- the R&D programs of the National Aeronautics and Space Administration; and
- selected basic research activities across the government, particularly basic research support by the National Science Foundation and the Department of Energy.

At the same time, the 1988 budget continues to propose reductions in programs that are not an appropriate Federal responsibility and which should be left to the states or the private sector for needed investments. These include large reductions across the energy technology programs of the Department of Energy, as well as elimination of selected programs of the Department of Commerce (e.g., the Sea Grant program), and certain research activities of the Department of Interior (e.g., the Mineral Institutes program).

Table J–1. **TOTAL FEDERAL FUNDING FOR CONDUCT OF R&D AND RELATED FACILITIES**

(In billions of dollars)

	Obligations			Outlays		
	1986 actual	1987 estimate	1988 estimate	1986 actual	1987 estimate	1988 estimate
Conduct of R&D	52.6	57.6	64.8	51.6	54.6	59.1
R&D facilities	1.6	1.9	2.0	1.6	1.8	1.9
Total	**54.2**	**59.5**	**66.7**	**53.1**	**56.3**	**61.0**

CONDUCT OF RESEARCH AND DEVELOPMENT

The budget for 1988 includes nearly $65 billion in obligations for the conduct of R&D, an increase of $7 billion or 12 percent over 1987. Highlights of the proposed programs of the seven major R&D agencies, which account for 97 percent of the obligations for the conduct of R&D by the Federal Government, are presented below.

- **Department of Defense** (DOD).—Obligations for the conduct of R&D by DOD are estimated at $44.1 billion for 1988, an increase of $6.5 billion or about 17 percent above 1987. The increased funds proposed for R&D allow growth for several important programs, including the Strategic Defense Initiative, the Advanced Tactical Fighter and the Small Intercontinental Ballistic Missile. There is also an increase for the joint

NASA-DOD program to explore technologies for a future transatmospheric vehicle (National Aerospace Plane).

- **Department of Energy** (DOE).—Obligations for the conduct of R&D by the Department of Energy are estimated to be $5.0 billion, an increase of $215 million over 1987. Increases are proposed to strengthen the Nuclear Weapons R&D program, to enhance support for long-term energy research, and to maintain a strong national basic research effort in High Energy and Nuclear Physics. Support for the energy technology programs will remain at nearly the same levels as in 1987. Obligations for Energy Programs will increase by $14 million over 1987 to $1,862 million in 1988. Funding for the National Defense Program will increase by over 6 percent to $2,531 million. High Energy and Nuclear Physics R&D will increase from $575 million in 1987 to $623 million in 1988. Included in this total are funds for the first full year of operation of 3 newly completed accelerator facilities: the Stanford Linear Collider in California, the Tevatron Collider at Fermi National Laboratory in Illinois, and Tandem/Alternating Gradient Synchrotron at Brookhaven National Laboratory in New York.
- **Department of Health and Human Services** (HHS).—HHS R&D activities in 1988 will continue to be funded at stable and sustainable levels. In 1988, the National Institutes of Health (NIH) will support about 19,100 research project grants, about 560 research centers, and about 10,900 research trainees. In addition, the budget proposes funding for the full, multi-year costs of grant commitments incurred in 1988. This would eliminate annual uncertainties over the level and timing of allotments for grantees and ensure proper review of the full cost of funding additional grants. In 1988, total HHS obligations will approach $6.3 billion.
- **National Aeronautics and Space Administration** (NASA).—NASA obligations for the conduct of R&D are estimated at about $4.5 billion in 1988, an increase of $313 million over 1987. This increase is necessary primarily to continue development of the Space Station and to provide for two new initiatives, the Global Geospace Science program (GGS) and the Civil Space Technology Initiative (CSTI). GGS will expand international cooperative efforts to investigate the interaction of the Sun with the Earth's environment, and CSTI will explore a variety of generic space technologies important to continued U.S. leadership in space. For other science and applications programs, the budget continues support for major flight projects such as the Space Telescope, the Galileo mis-

sion to Jupiter, the Upper Atmosphere Research Satellite (UARS), and the Ocean Topography Mission (TOPEX).

- **National Science Foundation** (NSF).—Obligations for research supported by NSF are expected to increase by about $238 million, or about 17 percent—to $1.7 billion in 1988. The budget principally provides enhanced support for basic research across a wide spectrum of high-priority scientific and engineering disciplines, including materials sciences, computational science and engineering, and biotechnology. Increases will also be provided for instrumentation and graduate student support. The budget also provides for significant new efforts in improving research and education at the undergraduate level, and for the initiation of a new activity, Basic Science and Technology Centers. These new centers, modeled after the Engineering Research Centers, are intended to foster and strengthen multidisciplinary research in the basic physical and life sciences.
- **Department of Agriculture** (USDA).—Obligations for the conduct of R&D are estimated at $961 million for 1988, a decrease of about 2 percent from the 1987 level of $978 million. Within the USDA total, the Cooperative State Research Service will provide $238 million for research and development, primarily conducted by colleges and universities. The Agricultural Research Service expects to obligate $527 million, an increase of $37 million over 1987, with emphasis on basic research in plant germplasm, biotechnology, new agricultural products, and the improvement of commodity exports. The Forest Service will continue its research on land management planning and forest inventory.
- **Department of Commerce** (DOC).—Obligations for R&D undertaken by DOC decrease by $63 million from 1987 to $333 million in 1988. The proposed reductions reflect the Administration's continued efforts to reduce funding for programs that are more appropriately the responsibility of the private sector and state or local governments. Programs proposed for elimination include the Sea Grant and National Undersea Research Programs of the National Oceanic and Atmospheric Administration (NOAA), and reductions are proposed in the fire and building research programs at the National Bureau of Standards (NBS). Increases are proposed for NBS in areas of growing importance, such as optical fiber systems. The budget also provides for an increase in construction funding for the Cold Neutron Research Facility at NBS.

Table J-2 summarizes Federal support for the conduct of R&D by agency.

Table J–2. **CONDUCT OF RESEARCH AND DEVELOPMENT BY MAJOR DEPARTMENTS AND AGENCIES**

(In millions of dollars)

Department or agency	Obligations			Outlays		
	1986 actual	1987 estimate	1988 estimate	1986 actual	1987 estimate	1988 estimate
Defense-Military functions	34,205	37,533	44,080	33,292	35,153	39,112
Health and Human Services	5,661	6,353	6,294	5,504	6,012	6,187
(National Institutes of Health)	(5,004)	(5,519)	(5,573)	(4,845)	(5,211)	(5,458)
Energy	4,708	4,801	5,016	4,705	4,819	4,863
National Aeronautics and Space Administration	3,420	4,185	4,498	3,432	3,711	4,159
National Science Foundation	1,336	1,441	1,680	1,392	1,390	1,604
Agriculture	925	978	961	914	952	999
Transportation	387	308	290	430	390	306
Interior	378	366	364	386	373	370
Environmental Protection Agency	317	329	346	307	333	352
Commerce	394	397	333	373	375	314
Agency for International Development	211	217	233	195	300	171
Veterans Administration	188	211	214	183	214	209
All other [1]	483	514	463	464	525	463
Total	**52,612**	**57,631**	**64,771**	**51,576**	**54,548**	**59,108**

[1] Includes the Departments of Education, Justice, Labor, Housing and Urban Development and Treasury, the Tennessee Valley Authority, the Smithsonian Institution, the Corps of Engineers, and the Nuclear Regulatory Agency.

CONDUCT OF BASIC RESEARCH

The 1988 budget continues the already strong emphasis that this Administration has placed on enhancing support for basic research across all scientific and engineering disciplines. Even in a fiscally austere environment, support for basic research, especially at universities, is an important factor in generating new knowledge to ensure continued technological innovation. It is an essential investment in the nation's future. The Federal Government has traditionally assumed a key role in support of basic research because the private sector has insufficient incentives to invest in such research.

Funding for basic research is included within the overall Federal support for the conduct of R&D. In 1988, obligations for the conduct of basic research are estimated at $9.1 billion, an increase of $312 million, or almost 4 percent above the level for 1987.

Support for basic research at universities serves the dual role of providing new knowledge and helping to ensure the future availability of high-caliber scientists and engineers. Both of these are key elements in the long-term ability of the nation to compete in global markets. University-based researchers receive about half of the total Federal obligations for basic research. Federal support for R&D at universities and colleges, more than two-thirds of which is basic research, is estimated to increase by over 5 percent in 1988 to a total of almost $7.7 billion. This would represent an increase of 18 percent over the period 1986 to 1988.

Table J-3 summarizes Federal support for the conduct of basic research by agency.

Table J-3. **CONDUCT OF BASIC RESEARCH BY MAJOR DEPARTMENTS AND AGENCIES**

(In millions of dollars) [1]

Department or agency	Obligations			Outlays		
	1986 actual	1987 estimate	1988 estimate	1986 actual	1987 estimate	1988 estimate
Agencies supporting primarily physical sciences and engineering: [2]						
National Science Foundation	1,259	1,359	1,585	1,313	1,310	1,513
Defense—Military functions	921	858	907	845	844	811
Energy	964	1,084	1,133	947	1,087	1,143
National Aeronautics and Space Administration	917	1,069	1,016	932	983	1,002
Interior	129	123	115	135	129	118
Commerce	26	24	24	27	23	24
Other Agencies [3]	10	10	9	11	11	10
Subtotal	4,227	4,527	4,788	4,210	4,387	4,620
Agencies supporting primarily life and other sciences: [4]						
Health and Human Services	3,335	3,663	3,712	3,234	3,475	3,579
(National Institutes of Health)	(3,118)	(3,360)	(3,442)	(3,013)	(3,185)	(3,308)
Agriculture	431	454	454	419	440	474
Smithsonian Institution	63	73	78	59	67	72
Environmental Protection Agency	39	38	39	36	39	40
Veterans Administration	15	16	16	15	15	16
Education	11	12	11	8	15	11
Other Agencies [5]	17	16	13	14	15	15
Subtotal	3,909	4,271	4,322	3,786	4,067	4,207
Total	**8,137**	**8,798**	**9,110**	**7,996**	**8,454**	**8,827**

[1] Amounts reported in this table are included in totals for conduct of R&D.
[2] Includes mathematics and computer sciences.
[3] Includes the Corps of Engineers, the Tennessee Valley Authority, and the Department of Transportation.
[4] Includes psychology and social sciences.
[5] Includes the Departments of Labor, Justice, and Treasury, and the Agency for International Development.

R&D FACILITIES

In 1988, within the total for support for R&D facilities, funding is provided for major scientific instrumentation, including the specialized research facilities at national laboratories and university centers, e.g., particle accelerators, telescopes, and advanced computers. Such specialized facilities are critical to advancing the frontiers of science in a number of scientific disciplines. Funds for R&D facilities are also used for construction or renovation of general purpose laboratories and research support facilities.

In 1988, obligations for R&D facilities are expected to total nearly $2.0 billion, an increase of $57 million from 1987. The budget provides for construction of several major new projects in DOE, including the 1-2 GeV synchrotron source at Lawrence Berkeley Laboratory, the Accumulator Booster Ring at the Brookhaven Alternating Gradient Synchrotron, and a new 3 GeV injector for the SPEAR storage ring at the Stanford Synchrotron Radiation Laboratory.

Table J–4 summarizes Federal support for R&D facilities and capital equipment.

Table J–4. **RESEARCH AND DEVELOPMENT FACILITIES BY MAJOR DEPARTMENTS AND AGENCIES**

(In millions of dollars)

Department or agency	Obligations			Outlays		
	1986 actual	1987 estimate	1988 estimate	1986 actual	1987 estimate	1988 estimate
Energy	750	744	848	784	820	793
Defense—Military functions	301	525	502	284	398	409
National Aeronautics and Space Administration	276	325	420	299	294	384
Agriculture	79	93	25	50	68	77
National Science Foundation	68	80	94	72	78	90
Health and Human Services	41	58	6	33	38	29
(National Institutes of Health)	(32)	(56)	(5)	(22)	(33)	(26)
All other [1]	48	88	76	46	67	73
Total	**1,563**	**1,914**	**1,972**	**1,567**	**1,762**	**1,854**

[1] Includes the Departments of Transportation, Commerce, Education, Interior, Justice, and Treasury, Veterans Administration, Tennessee Valley Authority, Agency for International Development, and the Smithsonian Institution.

ARCTIC RESEARCH

Two complementary policy documents currently govern U.S. Arctic research policy. The Arctic Research and Policy Act of 1984 (Public Law 98–373) requires an ". . . integrated, coherent, and multiagency request . . ." for research in the Arctic as part of the President's annual budget request to Congress. National Security Decision Directive 90 (NSDD 90, April 14, 1983) identifies four basic elements of U.S. Arctic Policy:

- protection of essential security interests in the Arctic region, including the adjacent seas and airspace;
- support for sound, rational development in the Arctic region, while minimizing adverse effects on the environment;
- promotion of scientific research in fields which contribute knowledge about the Arctic, or which are most advantageously studied in the Arctic; and
- promotion of mutually beneficial international cooperation in the Arctic to achieve the above objectives.

In response to these directives, the Interagency Arctic Research Policy Committee (established by Public Law 98–373) has compiled a detailed listing of agency programs in Arctic research, including budgetary estimates, and has grouped them into three major categories of national concern:

- national security;
- rational development with minimal environmental or adverse social impact; and

- research on Arctic phenomena and on science best studied in the Arctic (the Arctic as a natural laboratory).

The Act also directs that the Interagency Committee, ". . . in consultation with the [Arctic Research] Commission, the Governor of the State of Alaska, the residents of the Arctic, the private sector, and public interest groups, shall prepare a comprehensive 5-year plan for the overall Federal effort in Arctic research . . ." Over the past year, the Interagency Committee, with advice and assistance from the Arctic Research Commission, has developed a draft 5-year plan for Federal Arctic Research, including recommendations for necessary programs.

The Arctic Research and Policy Act requires public participation in the development of recommendations for the 5-year Arctic Research Plan. This requirement has been fulfilled through:

- extensive participation by the scientific community and others in the report by the National Research Council entitled, *National Issues and Research Priorities in the Arctic*;
- presentation of statements from the public before the Interagency Committee; and
- hearings of the Arctic Research Commission.

The Interagency Committee also held a Consultative Workshop in Alaska in November of 1986. Respresentatives from the groups named in the Act attended the Workshop and agreed to consensus recommendations. It is anticipated that the proposed 5-year Plan will be submitted to the President for transmittal to the Congress prior to the July 31, 1987 deadline established by the Act.

Table J–5 provides a summary of Federal support for Arctic research integrated by major category. These estimates are subsumed within agency totals for the conduct of research and development.

Table J–5. **FEDERAL SUPPORT FOR ARCTIC RESEARCH** [1]

(Obligations in thousands of dollars)

Category	1986 actual	1987 estimate	1988 estimate
National security	26,125	26,278	26,300
Rational development	32,176	32,774	31,334
Natural laboratory	23,613	27,295	30,590
Total	**81,914**	**86,369**	**88,224**

[1] Includes the Departments of Defense, Energy, Health and Human Services, Interior, Commerce, and Transportation, the National Science Foundation, the National Aeronautics and Space Administration, the Environmental Protection Agency, and the Smithsonian Institution.

Part II. Agency R&D Programs

Presented below are summaries of the R&D activities of the 12 agencies whose R&D obligations individually exceed $150 million.

DEPARTMENT OF DEFENSE

DOD research and development ranges from support of basic research, primarily in the physical sciences, to full scale development of hardware and its testing and evaluation. The primary purpose of DOD R&D is to provide new strategic and tactical weapons and supporting systems to improve the Nation's defense. Obligations for DOD research and development, including R&D facilities, total $44.6 billion, about 67 percent of total Federal funding for research and development in 1988.

In 1988, DOD obligations for the conduct of R&D will increase by $6.5 billion, or 17 percent above the 1987 level, to $44.1 billion. DOD funding of technology base programs (basic and applied research) will increase from about $3.2 billion in 1987 to about $3.3 billion in 1988. Funding for R&D facilities will decrease by $23 million from 1987 to a total of $502 million in 1988.

By mission category, major R&D efforts for 1988 include:

—*Technology Base and Advanced Technology Development.*—These programs constitute the research end of the spectrum of programs that comprise Research and Development, Test and Evaluation. The programs are intended to provide choices for future system development and to help avoid technological surprise.

The Strategic Defense Initiative, a program to investigate the feasibility of defense against ballistic missiles, will increase to $5.3 billion (including $0.1 billion for facilities) in 1988. Other areas emphasized include the joint NASA-DOD National Aerospace Plane program, materials research, and environmental research important to the military mission. There is also continued emphasis on electronics, including the Very High Speed Integrated Circuits and Millimeter Wave Monolithic Integrated Circuits programs.

—*Strategic Programs.*—Major programs for 1988 include the MILSTAR communications satellite program, the Small Intercontinental Ballistic Missile (Small ICBM), a short range air-launched attack missile, a rail garrison mobile basing mode for the Peacekeeper ICBM and the Advanced Technology Bomber. Development of the Trident II submarine-launched ballistic missile and the Peacekeeper missile near completion.

—*Tactical Programs.*—These programs support the development of systems to increase the capability of U.S. general purpose and theater nuclear forces, and to develop the capability to project forces rapidly anywhere in the world where the vital interests of the United States are threatened. In 1988 these programs include:

- in the Army, development of new munitions for its M1-A1 tank, a new family of trucks and forward area air defenses. Work on the LHX light helicopter will continue.
- in the Navy, development of the Seawolf attack submarine, and the Sealance, a new sub-launched, anti-submarine, stand-off weapon. Other major programs include the V-22 Osprey tilt-rotor aircraft, start of the Advanced Air-to-Air Missile, and continuations of upgrades to the F-14 fighter and A-6 attack airplanes. Several efforts are being continued to improve fleet air defenses.
- in the Air Force, continuing development of the Joint STARS radar, the Advanced Tactical Fighter aircraft, the C-17 transport aircraft, and various electronic warfare programs, including the Airborne Self Protection Jammer. Work on smart munitions and the interdiction version of the F-15 fighter also progresses.

—*Intelligence and Communications, Program Management and Support.*—R&D supported by these programs is directed toward improvements in defense intelligence systems, command control and communications programs, and test and evaluation capabilities. Work will continue in such areas as the use of technology to reduce manufacturing costs and to extend the life and capability of existing defense systems.

Table J-6 provides the details of the Department of Defense military R&D funding.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

NASA invests in R&D programs to provide for a permanent U.S. presence in space with a future space station; to support the Shuttle-based Space Transportation System; to advance knowledge of the Earth, the near-earth environment, the solar system and the universe; and to support long-term research and technology advancement. It also supports long-term research and selected systems technology projects in aeronautics.

R&D accounts for over 50 percent of the total budget for NASA. The balance of the NASA budget includes funding primarily for Shuttle production and operations, tracking and data acquisition activities, and related institutional support.

In 1988, NASA obligations for R&D including facilities for the agency will be approximately $4.9 billion, a net increase of $408 million, or 9 percent, over 1987. Within this total, funds are available to complete projects currently under development, to augment major research and technology programs, and to initiate a major new flight project in space science and applications. Within the total funding for R&D, basic research obligations in 1988 are estimated at $1.0 billion, a decrease of $53 million from 1987.

Table J-6. **DEPARTMENT OF DEFENSE—MILITARY RESEARCH AND DEVELOPMENT**

(In millions of dollars)

Type of activity	1986 actual	1987 estimate	1988 estimate
OBLIGATIONS			
Conduct of R&D:			
Research, development, test and evaluation:			
Technology base	3,207	3,177	3,345
Advanced technology development	4,046	5,091	7,284
Strategic programs	7,419	8,095	9,767
Tactical programs	10,109	11,383	13,529
Intelligence and communications	4,442	4,799	5,191
Program management and support	3,936	3,902	3,889
Other appropriations	1,178	1,252	1,034
Total conduct of R&D [1]	34,205	37,533	44,080
Total conduct of basic research, included above	(921)	(858)	(907)
R&D facilities	301	525	502
Total obligations	**34,506**	**38,058**	**44,582**
OUTLAYS			
Conduct of R&D	33,292	35,153	39,112
R&D facilities	284	398	409
Total outlays	**33,576**	**35,551**	**39,521**

[1] Includes funds for Operational Systems Development of $8,970 million in 1986, $9,879 million in 1987 and $9,881 million in 1988.

Space Station and Space transportation.—Obligations for Space Station R&D are estimated to increase from $374 million in 1987 to $663 million in 1988. This increase is consistent with funding needed to pursue design, definition, and development of the space station for planned initial operating capability in the mid-1990's.

The space station is intended to enhance the nation's science and applications programs, to help develop advanced technologies potentially useful to the economy, and to encourage greater commercial use of space.

For Space Transportation the 1988 budget provides for sustained support for the Space Shuttle program to achieve routine and reliable access to space for all planned users, and for continued investments to further improve the safety and reliability of the Shuttle fleet. Other major continuing activities will include planning for the use of Spacelab; further development of the tethered satellite program, a Shuttle-based science program conducted in cooperation with the Italian government; and development of an Orbital Maneuvering Vehicle for future near-Earth orbital transfers.

Space science and applications.—Obligations for space science and applications are estimated in 1988 at $1.5 billion, a decrease of $144 million below the 1987 level due in large part to project rephasing to meet the new Shuttle flight schedule. The funding provided will allow initiation of a major new flight project, continued support of ongoing flight projects, and the analysis of scientific data being sent back to Earth from spacecraft now in space.

The 1988 budget continues support for space science research to enhance understanding of the Sun, the planets, and the universe; space-related research on the Earth's climate, resources, surface and atmosphere; research to advance knowledge in materials science and materials processing through low gravity experiments in space; and continuing long-term basic technology work for satellite communications.

The major new flight project proposed for initiation in 1988 is the Global Geospace Science (GGS) mission. The GGS mission will obtain coordinated measurements of the interaction of the Earth's magnetic field and the solar wind. GGS is the United States' contribution to an international solar terrestrial physics program, which includes spacecraft from the Japanese and European space agencies.

Continuing development efforts for ongoing major flight projects yet to be launched include:

- the Space Telescope, planned for launch in 1989, which is expected to serve as a major astronomy facility for a 10- to 15-year period;
- the Gamma Ray Observatory, planned for launch in 1990, which will enhance basic research in high energy astrophysics, providing new knowledge about objects in deep space;
- Spacelab astronomy experiments, which will be conducted on the Shuttle with the goal of improving our understanding of the Earth's vicinity, the Sun and the universe;
- the Magellan project, planned for launch in 1989, to map the planet Venus;
- the Mars Observer Mission, a major space science project planned for launch in the early 1990's, to continue the scientific exploration of the planet Mars;
- the Galileo orbiter and probe mission to Jupiter, now planned for launch in 1989, to carry out long-term studies of the planet, its satellites, and its magnetosphere;
- the Upper Atmosphere Research Satellite (UARS) spacecraft, to be launched in 1991, to investigate the chemical composition of the Earth's stratosphere and mesophere;
- the Scatterometer project, a research instrument to measure global wind patterns on the surface of the oceans. This instrument will be flown in 1990; and
- the Ocean Topography Experiment (TOPEX) scheduled for a 1991 launch as part of a collaborative mission with France.

Continued support will be provided in 1988 for several spacecraft already in flight including:

- two Voyager spacecraft, launched in 1977, which have successfully encountered Jupiter and Saturn; Voyager 2 encountered Uranus in January 1986 and is scheduled to fly by Neptune in 1989; and
- a number of smaller, Explorer-class scientific satellites launched in prior years.

The budget also provides for continuing research and technology work in areas such as space-related life science research; near-Earth experiments using balloons and sounding rockets; research in geodynamics, ocean processes, and atmospheric dynamics; Shuttle-based science and applications experiments; and preparations for the future launch of planned missions. Continuing efforts to improve satellite communications technology will be refocused towards generic and longer-term technology-based efforts, in recognition of the responsibility of the private sector to pursue relatively near-term satellite communications technologies.

Commercial Programs.—These programs include the Technology Utilization program which promotes the dissemination of new developments in aerospace technology to industrial sectors other than aerospace, and the Commercial Use of Space program which encourages increased private sector awareness, participation and investment in space technologies.

Transatmospheric research and technology.—In 1988, funding will increase as planned to continue research and advanced technology leading to a transatmospheric flight research vehicle demonstration in the early 1990's. This program is jointly supported with DOD to investigate the technologies necessary for a National Aerospace Plane.

Aeronautical research and technology.—Obligations for aeronautical research and technology are estimated to decrease slightly from $315 million to $306 million in the 1988 budget. Ongoing research in fundamental aeronautical disciplines such as materials and structures, propulsion and selected systems technology projects will be continued.

Agency-wide support activities.—Obligations for agency-wide support activities will total $1.4 billion in 1987, a 13 percent increase above the 1987 level. These programs include primarily R&D-related NASA civil service and administrative costs; tracking and data acquisition system improvements; safety, reliability and quality assurance; and R&D addressing fundamental space technology problems and opportunities common to a wide spectrum of space programs.

The 1988 budget proposes $70 million to begin a new program within Space Research and Technology, the Civil Space Technology Initiative (CSTI). This effort will support research in a wide variety of technology areas including space-based propulsion, automation and robotics and control of large structures, which are crucial to the nation's ability to provide efficient, reliable access to space. CSTI will involve researchers from all sectors, industry, universities and the Federal government, and represents a combination of augmentations to ongoing efforts as well as totally new activities.

Table J-7 provides the details of NASA's R&D funding.

Table J-7. **NATIONAL AERONAUTICS AND SPACE ADMINISTRATION—RESEARCH AND DEVELOPMENT**

(In millions of dollars)

Type of activity	1986 actual	1987 estimate	1988 estimate
OBLIGATIONS			
Conduct of R&D:			
Space station	173	374	663
Space transportation systems capability	357	562	551
Space science and applications	1,473	1,599	1,455
Commercial programs	21	49	53
Transatmospheric research and technology	....	43	65
Aeronautical research and technology	292	315	306
Agency-wide support activities:			
Space research and technology	149	182	238
Safety, reliability and quality assurance	7	9	16
Tracking and data acquisition	15	18	18
Research and program management	933	1,034	1,134
Total conduct of R&D	3,420	4,185	4,498
Total conduct of basic research, included above	(917)	(1,069)	(1,016)
R&D facilities	276	325	420
Total obligations	**3,696**	**4,510**	**4,918**
OUTLAYS			
Conduct of R&D	3,432	3,711	4,159
R&D facilities	299	294	384
Total outlays	**3,731**	**4,005**	**4,543**

DEPARTMENT OF ENERGY

The R&D programs of the Department of Energy include: a *National Defense Program* related to the development and testing of nuclear weapons; a *General Science Program* of basic research in high energy physics and nuclear sciences; and an *Energy Program* focused on longer-term R&D in support of energy technology development. Table J-8 provides summary information on the funding of these programs.

Obligations for the conduct of R&D by the Department are estimated to total $5.0 billion in 1988, an increase of $215 million from 1987. Obligations in 1988 for R&D facilities, including the construction or upgrading of general purpose laboratories and other research support facilities, will amount to $848 million.

Obligations for the conduct of basic research, included in the total for the conduct of R&D, are estimated to be $1,133 million in 1988, an increase of $50 million over 1987. Within the basic research total, funds are provided to continue or initiate a number of major projects, in both the energy program and the general science program, that will enhance the nation's capability in basic research and help contribute to global competitiveness.

The *National Defense Program* supports the continued research, development and testing of nuclear weapons. It also supports the development of improved naval propulsion reactors, technologies for monitoring nuclear weapons treaties, and methods for safeguarding nuclear materials. In addition, R&D efforts will continue in developing methods for the safe storage and disposal of radioactive wastes resulting from weapons production. Obligations for the conduct of R&D by the national defense program will increase from $2.4 billion in 1987 to $2.5 billion in 1988. Increased funding for conduct of R&D supports new and ongoing Department of Defense requirements including isotope separation techniques, increased weapons testing, and increased research in the basic physics of nuclear weapons. Increases in the advanced weapons concepts activities, which support the Strategic Defense Initiative (SDI), will focus on investigations of Nuclear Directed Energy Weapons (NDEW) to assess the Soviet NDEW capability to threaten either a nuclear or non-nuclear strategic defense system. SDI funding will increased from $349 million in 1987 to $481 million in 1988.

The *General Science Program* supports basic research in high energy and nuclear physics. A proposed increase of $48 million, to $623 million, in 1988 for the conduct of basic research will enhance support for experimental efforts to understand the basic constituents of matter and energy and the forces that govern their interaction. Obligations for R&D facilities will also increase $47 million to $189 million.

The 1988 budget request will provide for:

- increased utilization of existing accelerator facilities, including the first full year of operation of the Stanford Linear Collider at SLAC; the Tandem/Alternating Gradient Synchrotron at Brookhaven National Laboratory and Tevatron I at Fermilab;
- continued construction of the Central Computing Facility project at Fermilab, the Accumulator/Booster Ring upgrade at the Brookhaven Alternating Gradient Synchrotron and the advanced nuclear physics electron accelerator facility at Newport News, Virginia; and
- continued support for advanced accelerator and detector research and development activities related to next-generation high energy and nuclear physics accelerators.

The *Energy Program* funds basic science and engineering research underlying both nuclear and non-nuclear technologies, R&D to support development of specific energy technologies, and research on the environmental and human health effects of energy production technologies. Energy program obligations for the conduct of R&D will increase by $14 million over the 1987 level to $1,862 million in 1988. This increase consists of increases for basic supporting research and the clean coal technology program, offset by proposed reductions in support for nearer-term non-nuclear energy technology programs. Obligations for R&D facilities in this program will be $169 million, nearly the same as in 1987.

In the *basic energy sciences,* funding is proposed at a level of $479 million in 1988, an increase of $32 million over 1987, for the conduct of research in such fields as nuclear science, chemistry, engineering, materials science, applied mathematics, biology, and the geosciences. The program provides the fundamental scientific and technical base for future advances in both nuclear and non-nuclear technology development. In addition, the program provides support for the operation of several major national facilities that are used by researchers from industry, universities and national laboratories. These include the National Synchrotron Light Source (NSLS) at the Brookhaven National Laboratory, the Intense Pulsed Neutron Source (IPNS) facility at Argonne National Laboratory, and the Combustion Research Facility at Sandia National Laboratory.

The 1988 budget continues to provide support for construction of the Center for Advanced Materials and the 1–2 GeV synchrotron at at Lawrence Berkeley Laboratory and the experimental detection halls at the Los Alamos Neutron Scattering Center. In addition, construction of a 3 GeV injector for the SPEAR Storage Ring at Stanford will be initiated to provide the Stanford Synchrotron Radiation Laboratory with an independent light source.

Funds in 1988 are also provided for an additional Class VII computer to handle the backlog of computational needs of all the basic research programs of DOE and for R&D activities related to advanced synchrotron and neutron facilities required for future state-of-the-art engineering and science research. Funds to maintain operations of existing research facilities at the 1987 level are also included in the 1988 Budget.

A major expansion in the *Energy Program* for 1988 involves the *clean coal technology* program. The goal of this program is to demonstrate technologies to burn coal more cleanly. The Department solicits proposals from the private sector for 50 percent cost-shared commercial-scale demonstrations of clean coal technologies. Typical examples of such technologies include: advanced coal cleaning techniques, alternate combustion technologies, preparation of clean coal-based fuels, and post-combustion cleanup systems. The demonstrations are targeted closely to the recommendations of the U.S. and Canadian Special Envoys' Report on Acid Rain. Obligations for the program in 1988 will be $351 million, an increase of $292 million over 1987.

The 1988 budget will continue the redirection of the on-going non-nuclear R&D programs to limit federal support to longer-term generic research and place greater reliance on the private sector for support of nearer-term technology development. To increase the involvement of the private sector in the direction and management of industry-based R&D programs, $17 million will be available in 1988 to support DOE participation in cooperative R&D ventures in broad areas of generic technology development. Obligations for the conduct of R&D in the technology base programs of the *fossil, solar/renewables* and *conservation* programs are expected to be $283 million in 1988, a decrease of about $213 million from 1987.

Funding proposed for the conduct of *fossil* related R&D and associated facilities will be $162 million in 1988, a decrease of $100 million from 1987. The 1988 budget is focused on research to improve technologies for utilizing coal and for extracting oil and gas from unconventional sources. Support in the technology base program continues to be provided in such areas as the chemistry of coal conversion, environmental controls, and combustion research.

Research in support of *solar and other renewable energy* technologies, proposed at a level of $103 million, will emphasize longer term, technology base R&D in areas such as photovoltaics, solar thermal energy, biofuels, wind and geothermal energy, electrical energy systems, and energy storage. The total request in 1988 for the *energy conservation* R&D program is $75 million and includes research in buildings and community systems, industry, and transportation.

The 1988 budget continues to provide for a broad program of research in nuclear *fission* and *fusion* energy technologies. Total obligations for these R&D programs will be about $680 million in 1988, approximately the same as the 1987 level. Conduct of R&D will total approximately $600 million, and funding for related facilities will be $79 million.

In the *fission* program, obligations of $334 million are estimated for the conduct of R&D in 1988, the same level as in 1987. Total obligations for R&D facilities in 1988 will be $42 million. The nuclear fission R&D program will continue to shift efforts from the advanced civilian reactor program toward R&D on reactor concepts that can meet space and military nuclear power requirements. The restructured program, while serving national security interests, will also maintain a technical and industrial base for any future deployment of advanced nuclear technologies in the commercial sector. The fission R&D program will also seek to resolve technical issues associated with the technology of nuclear waste storage and consequent environmental impacts.

In the *magnetic fusion* program, funding of $346 million is proposed for the conduct of R&D, the same level as in 1987. In 1988, the fusion program will focus on the development of the toroidal magnetic confinement system by supporting the continued operation of Princeton's large tokamak test reactor (TFTR), of GA Technologies' Doublet-III-D machine, and of the Oak Ridge National Laboratory's ATF torsatron. Fabrication of three smaller toroidal devices also will continue in 1988: a reversed field pinch machine (RFP) at Los Alamos, a compact toroid called a field reversed configuration (FRC) experiment, and a high field high density tokamak (Alcator C-MOD) at Massachusetts Institute of Technology (MIT). Two new toroidal experiments will be initiated in 1988, the construction of a Compact Ignition Tokamak (CIT) which is designed to prove a plasma can ignite and burn, and a novel heating experiment using a free election laser which could make steady state tokamak operation possible. Other research that supports the President's Geneva Initiative on expanded cooperation with the Soviets in fusion research will also continue in 1988.

Finally, the *energy program* supports R&D to better understand the biological and environmental effects of energy production and use. The level of funding for the *biological and environmental* research program will be $218 million in 1988, an increase of $23 million or 12 percent above 1987. The biological program emphasizes the health effects of radiation, the use of radiation in medical diagnosis and therapy, and generic biological research related to radiation and other cellular traumas. A new initiative in 1988 will be the beginning phase of a study to "map the human genome". Results from this research hold the promise for enabling the structure and function of genes to be decoded and for detecting changes in human DNA caused by exposure to toxic pollutants. The environmental program supports research in areas related to energy technologies, such as atmospheric processes involved in acid rain formation and deposition and carbon dioxide-induced climatic effects. A major thrust in 1988 will be an expanded program of radon research. Recent information indicates that potential exposures to radon gas in residential structures, and the number of people so exposed, may be substantial. The main themes of the preliminary stages of this new program will be investigations of sources and health effects of radon and a survey of factors affecting possible methods of mitigating radon levels in indoor environments. Funding in 1988 for radon-related, acid rain-related, and carbon dioxide-related research is nearly $34 million, an increase of 47 percent over 1987.

Table J-8 provides the details of funding for the Department of Energy.

Table J-8. **DEPARTMENT OF ENERGY**

(In millions of dollars)

Type of activity	1986 actual	1987 estimate	1988 estimate
OBLIGATIONS			
Conduct of R&D:			
National defense program	2,248	2,378	2,531
General science program	517	575	623
Energy program	1,943	1,848	1,862
Total conduct of R&D	4,708	4,801	5,016
Total conduct of basic research, included above	(964)	(1,084)	(1,133)
R&D facilities	750	744	848
Total obligations	**5,459**	**5,545**	**5,864**
OUTLAYS			
Conduct of R&D	4,705	4,819	4,863
R&D facilities	784	820	793
Total outlays	**5,489**	**5,639**	**5,656**

DEPARTMENT OF HEALTH AND HUMAN SERVICES

The Department of Health and Human Services will obligate a total of $6.3 billion in 1988 for the conduct of R&D. Within this total, funding for basic research is estimated to be $3.7 billion. Direct obligations for R&D facilities will total $6 million in 1988, with Federal overhead payments providing additional funds which can be used to replace or modernize existing R&D facilities.

Health.—About 90 percent of the Department's funds for the conduct of R&D will be obligated by the National Institutes of Health for biomedical research to advance the nation's capabilities for the prevention, diagnosis, and treatment of disease. Several other agencies within the Department—the Alcohol, Drug Abuse, and Mental Health Administration, the Food and Drug Administration, the Centers for Disease Control, the Health Resources and Services Administration, the Health Care Financing Administration, and the Office of the Assistant Secretary for Health—also support health-related research.

The *National Institutes of Health (NIH)* consist of 12 separate Institutes which will obligate $5.6 billion in 1988 for the conduct of R&D, a slight increase over 1987. NIH will fund about 19,100 research project grants, about 560 centers, and about 10,900 research trainees in 1988. Continued emphasis will be given to support of basic research in 1988. About 60 percent, or $3.4 billion, of NIH's proposed R&D budget will support basic research.

Among the continuing R&D activities to be supported by NIH are:

- continuation of research and cooperative clinical trials on the Acquired Immune Deficiency Syndrome (AIDS); and
- clinical research with emphasis on medical intervention in the disease process, including prototype development and refinement of products, techniques, processes, methods, and practices.

The *Alcohol, Drug Abuse and Mental Health Administration (ADAMHA)* conducts studies on the causes, prevention and treatment of alcohol and drug abuse and on mental disease and neurological disorders, with emphasis on improving knowledge of effective prevention of these public health problems.

The 1988 budget continues to emphasize research into drug abuse, and stabilizes ADAMHA's extramural research programs in biomedical, behavioral and clinical areas by supporting about 1,600 research project grants per year. Of the $569 million in 1987 obligations, about $30 million will be available through 1988 for drug abuse research. ADAMHA will obligate $491 million in 1988.

The *Food and Drug Administration* supports research relevant to its mission of regulating food, drugs, biologics, medical devices and radiological products. In 1988, obligations for these activities are estimated at $87 million.

The *Centers for Disease Control* support studies on the epidemiology and control of communicable diseases and on health promotion and disease prevention. In 1988, obligations for these activities are estimated at $56 million.

Other Health Related Agencies within the Department support research in areas such as the efficacy and cost-effectiveness of emerging health care technologies; the effect of increased numbers of physicians on access to care and health care costs; and, survey methods and techniques for analysis of health statistics. This support is provided through programs of the Health Resources and Services Administration, the Office of the Assistant Secretary for Health and the Health Care Financing Administration.

Human services.—Most of the 1988 funding for human services R&D activities administered by HHS is included in the $2.2 billion generic appropriation request for the Office of Human Development Services. Depending on Congressional priorities within this level of effort, the proposed budget could support a variety of development and social services research on the Head Start program, the elderly, child abuse and neglect, day care systems, family and community support systems, and foster care and adoption assistance.

Table J–9 provides details of the R&D funding of the Department of Health and Human Services.

Table J–9. **DEPARTMENT OF HEALTH AND HUMAN SERVICES—RESEARCH AND DEVELOPMENT**

(In millions of dollars)

Type of activity and organizational units	1986 actual	1987 estimate	1988 estimate
OBLIGATIONS			
Conduct of R&D:			
Health:			
National Institutes of Health	5,004	5,519	5,573
Alcohol, Drug Abuse, and Mental Health Administration	396	569	491
Food and Drug Administration	79	84	87
Centers for Disease Control	52	59	56
Health Care Financing Administration	30	28	36
Office of the Assistant Secretary for Health	18	23	23
Health Resources and Services Administration	8	9	9
Subtotal, Health	5,588	6,290	6,274
Human Services:			
Social Security Administration	6	12	12
Family Support Administration	3	3	3
Office of Human Development Services [1]	58	41	....
Departmental Management	6	6	5
Subtotal, Human Services	73	63	20
Total conduct of R&D	5,661	6,353	6,294
Total conduct of basic research, included above	(3,335)	(3,663)	(3,712)
R&D facilities	41	58	6
Total obligations	**5,702**	**6,411**	**6,300**
OUTLAYS			
Conduct of R&D	5,504	6,012	6,187
R&D facilities	33	38	29
Total outlays	**5,536**	**6,051**	**6,216**

[1] No 1988 detail available; awaiting Congressionally-defined priorities within the requested level of effort.

NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) supports primarily basic research in all disciplines through grants to scientists and engineers in academic institutions. NSF support is particularly important because it complements the R&D programs of other agencies and assists in balancing Federal support for promising research across all fields of science and engineering.

The 1988 NSF budget provides $1.7 billion in obligations for the conduct of R&D, an increase of $238 million or about 17 percent above 1987. Within this total, support for basic research will also increase by about 17 percent.

For 1988, emphasis will be placed on three major themes:

- *Education and Human Resources* ($273 million, a 50 percent increase over 1987): will provide increased support for the NSF Graduate Fellowship Program (200 additional Fellows, for a total of about 760 new awards) and for the Presidential

Young Investigators program (200 new awards, for a total of about 900 new awards). A major increase for undergraduate programs will provide important new opportunities for faculty enhancement, and student research participation as well as providing for much needed instrumentation. There will also be a significant enhancement of support to encourage the participation of underrepresented groups in scientific and engineering research.

- *Basic Science and Technology Centers and Groups* ($529 million, an 18 percent increase over 1987): will provide increases for ongoing efforts such as the Engineering Research Centers (ERCs) and the Advanced Scientific Computing Centers (ASCs), as well as the initiation in 1988 of a new program, Basic Science and Technology Centers. This new program will expand the concept of the ERCs to fields of science such as biology, materials science, and computer and information sciences. Like the ERCs, these new centers will be university-based, multidisciplinary, will incorporate strong involvement by the private sector and state and local governments, and will provide important opportunities to train future scientists and engineers. It is expected that perhaps as many as 15 such centers will be started in 1988. In addition to the centers, a number of research areas, including global geosciences and biotechnology, will be the focus for research by a number of coordinated groups.
- *Strengthened Disciplinary Programs and Facilities* ($1.1 billion, an increase of 10 percent over 1987): will provide for a continued steady improvement of NSF's traditional broad support for high-quality research programs and specialized research facilities across a wide spectrum of disciplines. A high priority will be given to increasing grant sizes and enhancement of support for emerging fields of high scientific opportunity (e.g., storm-scale meteorology, cognitive sciences, parallel processing). In addition, specialized research facilities including the Very Long Baseline Array radio-telescope (VLBA), the Cornell Electron Storage Ring (CESR), the National Center for Atmospheric Research (NCAR) and the national astronomy centers will receive priority attention. The FY 1988 budget also provides funds for the U.S. Antarctic Program (USAP) to lease a new icebreaker to support research as well as operations in the Antarctic. The USAP is managed by NSF and is the principal expression of U.S. presence on the Antarctic continent.

DEPARTMENT OF AGRICULTURE

The Department of Agriculture supports research and development in several disciplines related to agriculture and forestry to ensure the continued high productivity of U.S. agricultural and forest lands.

Obligations of the Department for the conduct of research and development are expected to total $961 million in 1988, compared to the $978 million in 1987. Of the total, $454 million will support basic agricultural research, maintaining the 1987 estimated level. The Department's 1988 Budget for research and development is highlighted below by major bureau.

The *Agricultural Research Service* expects to obligate $527 million in 1988 to conduct basic and applied research in plant and animal productivity; commodity conversion and delivery; soil and water conservation; and integration of systems. This is an increase of $37 million in obligations over 1987. In 1988, increased emphasis will be placed on basic research in plant germplasm and biotechnology to improve the profitability and competitiveness of U.S. agriculture. Research will also be directed at reducing fat in consumer meats.

The *Cooperative State Research Service (CSRS)* estimates that $238 million will be obligated in 1988. CSRS supports research on agriculture and forestry through grants to land-grant colleges. Also, within CSRS, the Competitive Research Grants program funds basic research in biotechnology, plant and animal science, pest science, and human nutrition.

The *Forest Service* estimates that $122 million will be obligated for research and development in 1988. This represents a decrease from the $126 million obligated in 1987. The long-range goal of forestry research is to provide the information needed to manage and protect forest and range land resources, and to gain maximum economic and social benefits from their use.

Other Departmental programs will obligate approximately $75 million for R&D in 1988, covering a broad spectrum of research activities, such as research in agricultural economics, international agricultural cooperation, and statistical reporting.

DEPARTMENT OF COMMERCE

The Department of Commerce undertakes research primarily in ocean science and engineering, meteorology and weather forecasting, and in the maintenance of measurement standards to support science and industry.

Obligations for the conduct of R&D by the Department in 1988 are estimated at $333 million, a decrease of $63 million from 1987. This reflects reduced levels of support by the National Oceanic and Atmospheric Administration for applied research, that is more appropriately the responsibility of state and local governments or the private sector.

National Oceanic and Atmospheric Administration (NOAA).—NOAA obligations for the conduct of research and development will decrease from $277 million in 1987 to $215 million in 1988 as a result of greater reliance on support from the private sector and state and local governments, and elimination of lower priority research in such programs as Seafloor Spreading Center Research, National Undersea Research Program, National Sea Grant College Program, and some programs of the National Marine Fisheries Service. Acid rain research and R&D to support the Pacific Salmon Treaty will be maintained.

National Bureau of Standards (NBS).—NBS conducts research aimed at maintaining and improving a system of measurement required to support the nation's industrial and scientific endeavors. In 1988, NBS is expected to obligate $106 million for the conduct of R&D. This represents an increase of $6 million from 1987. Funding will increase to support development of measurements and standards for process and quality control, high-performance composites, fiber optics, bioprocess engineering and the Cold Neutron Research Facility. Funding for several programs, including fire and building research, will be reduced because such research can and should appropriately be supported by other sectors of the economy.

Other Commerce R&D Activities.—Funding for smaller R&D programs in the Department, which include those in General Administration, the Bureau of the Census, the Economic Development Administration, and the National Telecommunications and Information Administration, are proposed at $12 million in 1988, a decrease of $7 million from the 1987 level.

DEPARTMENT OF THE INTERIOR

The R&D activities of the Department of the Interior principally derive from its broad-ranging responsibilities for management of the nation's natural resources, including developing energy and mineral resources, and restoring and preserving wildlife habitats. R&D programs also serve the needs of other Federal agencies and the private sector.

Obligations for the conduct of R&D for the Department of the Interior for 1988 are estimated at $364 million. This represents a decrease of $2 million from the 1987 level.

About 92 percent of the Department's 1988 funds for the conduct of R&D will be obligated by the Geological Survey ($212 million), Fish and Wildlife Service ($51 million), and the Bureau of Mines ($71 million). Highlights of the 1988 research objectives of these and other departmental programs are described below.

The *Geological Survey* undertakes research on the extent, distribution, and character of the nation's water and other natural resources and on the geologic processes, structures, and hazards that affect the development and use of the land and physical environment. For 1988, obligations will increase by $5 million, to a total of $212 million.

Research in 1988 will be directed toward:

- accurate appraisals of mineral resources and new improved methods of mineral exploration;
- development of basic data on geologic principles and processes;
- improvement of the scientific basis for appraisal and evaluation of water resources; and
- development and application of new technologies, including remote sensing, to prepare cartographic information.

The *Fish and Wildlife Service* supports research in the Service's laboratories and field stations and cooperative efforts with state fish and game departments. It also provides Federal aid to states for research on restoration of fish and wildlife resources. This research provides basic biological information about species numbers, population dynamics, ecological relationships, and habitat requirements. Obligations will total $51 million in 1988.

The Fish and Wildlife Service will support research activities concerned with:

- the habitats of waterfowl, migratory and non-migratory birds, and mammals;
- the status and distribution of endangered and threatened species;
- impact of broad-scale environmental changes on fish and wildlife populations and habitat; and
- diseases of freshwater and anadromous fish.

The *Bureau of Mines* conducts basic and applied research across the minerals cycle to improve understanding of the principles of mining and minerals processing and to reduce associated health hazards. Obligations for the conduct of R&D are expected to decrease by $7 million to $71 million in 1988. This decrease in obligations is the result of proposed reductions in applied research, particularly in projects which are more appropriate for support by non-Federal sources. The 1988 budget reflects continued emphasis on strategic and critical minerals R&D activities and stresses:

- long-range, high-risk research in extractive metallurgy technology;
- development of domestic source substitutes for imported strategic and critical minerals;
- health-related research on the proper quality and quantity of air flow in underground mines; and

- long-term, generic research on mine disaster prevention, ground control, industrial hazards, explosives, and systems engineering.

Other Departmental Programs expect to obligate about $30 million in 1988, a decrease of about $3 million from 1987.

DEPARTMENT OF TRANSPORTATION

The R&D program of the Department of Transportation is oriented toward providing the information and new technology needed for its own operational (e.g., air traffic control) programs and for regulatory (e.g., automotive and aircraft safety standards) programs. Obligations for the conduct of research and development by the Department are estimated at $290 million for 1988, a decrease of $19 million from 1987.

The *Federal Aviation Administration* (FAA) is expected to obligate $160 million in 1988. This funding level is consistent with the National Airspace System Plan. Major initiatives include continued development of a new ATC automation system, modernization of the communications system, development of radars for detection and tracking of severe weather, and completion of programs which will determine the future mix of navigation systems. Other work includes Automated En Route Air Traffic Control (AERA); aircraft safety, which includes explosive or sabotage detection, research into biomedical factors related to aircraft accidents, injuries and fatalities; and minimization of environmental consequences of flight such as noise reduction and control, and reduction and control of aircraft engine emissions.

The *National Highway Traffic Safety Administration* will obligate $27 million for motor vehicle and highway safety research, and demonstrations including safety belt usage, alcohol countermeasures, and emergency medical services.

The *Urban Mass Transportation Administration* (UMTA) is expected to obligate $11 million to conduct research, training, and human resources programs in all phases of urban mass transportation which will promote private sector involvement in mass transportation services or contribute toward meeting total urban transportation needs at minimum costs. In addition, UMTA supports interdisciplinary research at colleges and universities including training of personnel to conduct further research or to obtain employment in urban mass transportation planning, construction, operation or management.

The *Federal Highway Administration* will obligate $52 million to continue research programs in highway planning, design, construction, and maintenance to ensure an effective and efficient highway system. Research will also be directed toward identifying and correcting impediments to highway safety and improving truck safety.

The *Federal Railroad Administration* will obligate $10 million to support R&D efforts to enhance railroad safety.

The *U.S. Coast Guard* will obligate $21 million to support research to maintain and improve search and rescue systems, environmental protection, marine safety, aids to navigation, the enforcement of laws and treaties, and activities affecting all Coast Guard missions.

The *Research and Special Programs Administration* will obligate $2 million for R&D in hazardous materials, pipeline safety, radionavigation, transportation statistics, and emergency transportation.

The *Office of the Secretary* will obligate $8 million for broad-based policy research on domestic and international transportation issues of importance to the nation and research in support of licensing and the promotion of expendable launch vehicles.

ENVIRONMENTAL PROTECTION AGENCY

The Environmental Protection Agency (EPA) conducts research and development in support of its regulatory responsibilities to protect human health and the environment. The 1988 budget proposes $346 million in total obligations, representing an increase of 5 percent above 1987. The 1988 budget emphasizes: (1) a continued commitment to acid rain research to provide a scientifically valid framework for sound policy decisions; (2) enhanced research in air toxics and new efforts to understand the phenomena of stratospheric ozone depletion and global climate change; and (3) providing the scientific information necessary to support the Agency's hazardous waste and Superfund activities.

The acid rain/energy research program will continue to support development of more reliable information upon which mitigation decisions can be made. The program directs basic research in areas identified by the Interagency Task Force on Acid Precipitation to provide enhanced data on the physical and chemical mechanisms governing the acid rain phenomenon.

The *air research* program will be expanded in 1988 to include studies to determine the effects of ozone on tree growth; development of manuals for the prevention and cleanup of accidental releases of high hazard chemicals; new studies to characterize and reduce emissions from incineration of municipal waste; development of advanced monitoring methods to characterize complex mixtures of pollutants; and development of risk assessment methods for health endpoints other than cancer. EPA will also participate in the next National Health and Nutrition Examination Survey (NHANES) as part of a multi-year interagency effort.

The pesticides program will continue to support development of methods to detect the presence of and exposure to pesticides in groundwater, and to assess management strategies to prevent such contamination. Pesticides research will also support studies on the effects of bioengineered pesticides.

The toxic substances research program will continue to address hazards associated with products of biotechnology, as well as to support ongoing engineering efforts that focus on the development and evaluation of release and control methods for new and existing chemicals.

The hazardous waste research program will address several areas of study needed to implement regulations required by the 1984 RCRA Amendments.

The Superfund research program will be expanded under the new Amendments to provide technical support in conducting cleanups and enforcement actions at Superfund sites. Field demonstrations of newly developed technologies for cleaning up Superfund sites will be initiated and a new health research program will be established to assess the risks of and monitor exposure to hazardous substances.

The drinking water research program will examine the health effects of complex chemical mixtures and will provide technology and monitoring data to support the development of drinking water standards. The water quality research program will continue to provide scientific data needed to support a water quality-based approach to pollution control as well as develop data to support the ocean disposal, estuarine and Great Lakes programs.

VETERANS' ADMINISTRATION

The Veterans' Administration (VA) conducts and administers a program of medical, rehabilitation, and health services research designed to improve the quality and increase the effectiveness of health care for the veteran. In 1988, the VA will obligate $214 million for the conduct of R&D. This is an increase of $3 million above 1987.

The VA intramural biomedical research program covers a wide range of medical problems, with special emphasis on Agent Orange, aging, alcoholism, post-traumatic stress, the health problems of female veterans and former prisoners of war, schizophrenia, spinal cord injury and tissue regeneration.

Rehabilitation research focuses on the problems of the disabled veteran, the amputee and the paralyzed, and develops sensory aids for impaired vision and hearing. This work brings the latest electronic and computer technology to bear on problems of prosthetics, orthotics, wheelchair design, and spinal cord injury (including functional electrical stimulation of muscles in paralyzed limbs).

Health services research is designed to help health care professionals and managers to improve the effectiveness, economy, and accessibility of health care services provided to the veteran. Research in this area deals with such areas as aging and preventive medicine.

AGENCY FOR INTERNATIONAL DEVELOPMENT

Research and development activities of the Agency for International Development (AID) consist mainly of applied research to solve specific problems associated with basic human needs and social and economic research aimed at improving U.S. and host-country understanding of the barriers to development. Programs under AID reflect the administration's recognition of the importance of R&D in addressing the problems faced by the Third World. Over the years, AID has provided substantial support to research efforts undertaken by U.S. universities and international research centers such as the International Rice Research Institute in the Philippines.

Obligations by AID for the conduct of R&D are estimated at $233 million for 1988, an increase of $16 million over 1987.

AID will continue to support research aimed at improving agricultural production capability, with an emphasis on efforts to overcome the mounting food crisis in Third World nations. R&D funds will also be devoted to two other critical problems: population growth, emphasizing methods of controlling increasing population growth rates in the developing countries, and energy supply, emphasizing renewable and nonconventional energy sources critical for development to proceed.

Significant research efforts are also being pursued in two other promising areas: oral rehydration therapy and a malaria vaccine. The former holds the promise of significantly reducing the incidence of child mortality associated with diarrheal diseases, currently estimated to claim the lives of over 1 million children annually. Similarly, AID-supported research on a malaria vaccine may lead to a breakthrough in controlling a disease which currently infects some 200 million people worldwide and is the leading cause of death in Third World nations.

OTHER AGENCY PROGRAMS

An additional 9 departments and agencies (listed in table J–2, footnote 1) will obligate an estimated $463 million in 1988, for the conduct of R&D, a decrease of about 10 percent below the 1987 level. Obligations by these agencies amount to less than 1 percent of all federally-funded programs in R&D. The programs of these agencies, like those of other agencies discussed above, are closely related to serving the agencies' missions.

Among the agencies in this category that expect to increase their obligations for R&D in 1988 are the Smithsonian Institution, the

U.S. Army Corps of Engineers, and the Departments of Labor, Housing and Urban Development, and Treasury.

Table J–10 provides information on the long-term trends in Federal funding for the conduct of R&D.

Table J–10. **TRENDS IN CONDUCT OF R&D**

(Obligations in billions of dollars)

Year	Defense [1]	All other	Total	Basic research [2]
1960	6.1	1.5	7.6	0.6
1961	7.0	2.1	9.1	0.8
1962	7.2	3.1	10.3	1.0
1963	7.8	4.7	12.5	1.2
1964	7.8	6.4	14.2	1.3
1965	7.3	7.3	14.6	1.4
1966	7.5	7.8	15.3	1.6
1967	8.6	7.9	16.5	1.8
1968	8.3	7.6	15.9	1.8
1969	8.4	7.2	15.6	1.9
1970	8.0	7.3	15.3	1.9
1971	8.1	7.4	15.5	2.0
1972	8.9	7.6	16.5	2.2
1973	9.0	7.8	16.8	2.2
1974	9.0	8.4	17.4	2.4
1975	9.7	9.3	19.0	2.6
1976	10.4	10.4	20.8	2.8
1977	11.9	11.6	23.5	3.3
1978	12.6	13.2	25.8	3.7
1979	13.6	14.5	28.1	4.2
1980	15.1	14.7	29.8	4.7
1981	17.8	15.3	33.1	5.0
1982	22.1	14.3	36.4	5.5
1983	24.5	13.9	38.4	6.4
1984	28.3	14.9	43.2	7.0
1985	33.4	16.1	49.5	7.8
1986	36.5	16.2	52.6	8.1
1987 (estimate)	39.9	17.7	57.6	8.8
1988 (estimate)	46.6	18.2	64.8	9.1

[1] Includes military-related programs of the Departments of Defense and Energy.
[2] Included in totals for conduct of R&D.