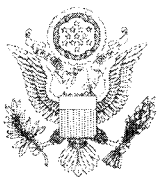

EXECUTIVE OFFICE OF
THE PRESIDENT
OFFICE OF MANAGEMENT
AND BUDGET

SPECIAL ANALYSES
BUDGET OF THE UNITED STATES GOVERNMENT

FISCAL YEAR
1989

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THE BUDGET DOCUMENTS

Budget of the United States Government, 1989 contains the Budget Message of the President and presents an overview of the President's budget proposals. It includes summary information on the economic assumptions used in the 1989 Budget, Federal receipts, and Federal spending. In addition it includes supplemental information on the baselines used in the Budget, Federal credit programs, Federal capital expenditures, several topics that help place the budget in perspective, the budget system and concepts, a listing of the Federal program by agency and account, and summary tables.

United States Budget in Brief, 1989 is designed for use by the general public. It provides a more concise, less technical overview of the 1989 budget than the above volume, including summary and historical tables on the Federal budget and debt, together with graphic displays.

Budget of the United States Government, 1989—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. Supplemental 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, 1989 contains analyses that are designed to highlight specified program areas or provide other significant presentations of budget data. The first part of this document includes information about two alternative views of the budget; i.e., the current services and Gramm-Rudman-Hollings budget baselines, and the national income accounts. The second part provides analyses and tabulations of the totals that cover the Federal Government's finances and operation as a whole and reflect the ways in which Government finances affect the economy. Financial information on Federal research and development programs and data on Federal civilian employment are also included in this part.

Historical Tables, Budget of the United States Government, 1989 provides data on budget receipts, outlays, surpluses or deficits, and Federal debt covering extended time periods—in many cases from 1940–1993. 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 1989 Budget, so the data series are comparable over time.

Management of the United States Government, 1989 includes the President's Management Message and provides the goals and strategies of the President's Management Improvement Program. It reports on the 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 and the status of debt collection and prompt payment efforts.

Major Policy Initiatives, 1989 highlights the major policy changes proposed in the 1989 Budget. Each description includes a brief history of the program and the conditions that precipitated the need for change. The President's proposal describes concisely the initiative and, in most examples, presents a summary funding chart that contains the budget authority and outlay changes that would occur if enacted.

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

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INTRODUCTION

Part 1 includes two alternative views of the budget—baseline 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 (Baseline Estimates) presents two sets of baseline estimates required by law. The first, current services, reflects the anticipated costs of continuing ongoing Federal programs and activities at present levels without any policy changes. Estimates are provided through 1993. The second, the Gramm-Rudman-Hollings budget baseline, is the baseline used to determine if automatic reductions will be triggered under the Balanced Budget and Emergency Deficit Control Act as amended. These estimates are provided for 1989 only.

Special Analysis B (Federal Transactions in the National Income and Product Accounts) presents the Federal Government estimates through 1989 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.

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SPECIAL ANALYSIS A

BASELINE ESTIMATES

This analysis discusses the two sets of baseline estimates that are required to be submitted with the President's Budget. The first, current services, is designed to show what budget estimates would be if current policy continued unchanged into the future. The second, the Gramm-Rudman-Hollings budget baseline, is developed using the rules required to determine whether automatic spending reductions would be triggered under the Balanced Budget and Emergency Deficit Control Act of 1985 as amended in 1987. Each of the baselines is discussed in turn. A final section compares the two baselines.

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.

Current services estimates are designed to show what outlays, receipts, and budget authority would be if no policy changes were made, thus providing a base against which the administration's budget proposals, or other proposals, may be compared. 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 1988–1993 will actually be. Rather, they provide a base against which budgetary alternatives may be assessed. This base embodies the cumulative

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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 is to make the results useful to the Congress and the public. The current services concepts used in this analysis are not the only ones possible. Different concepts may be useful for different purposes. For mandatory programs and receipts, the current services estimates presented in this analysis generally reflect the expected costs of continuing ongoing programs through 1993, without policy change; that is, they omit all proposed new legislative initiatives, presidential or congressional, that are not now enacted. 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. For discretionary programs, the current services estimates are based on the 1988 levels in enacted appropriations. For 1989 only, the 1988 levels are adjusted to include the increases assumed in the Bipartisan Budget Agreement as stated in the Omnibus Budget Reconciliation Act (OBRA) of 1987. (The Act set targets for discretionary programs that are not automatically self-enforcing; achieving them will require specific appropriations.) The 2 percent increase assumed for nondefense accounts in 1989 represents the change in budget authority between the nondefense ceiling set for 1988 and the one set for 1989. The 1989 level then provides the program base to project discretionary programs into 1990 and beyond. (The major exceptions to this approach are described below.)

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

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the selected economic assumptions, see Part 3 of the *Budget of the United States Government, Fiscal Year 1989.*

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

(Fiscal years)

	1987	1988	1989	1990	1991	1992	1993
Gross national product (in billions of current dollars)	4,409	4,706	5,023	5,388	5,759	6,119	6,465
Change in constant dollar GNP (percent change, year over year)	2.5	3.3	2.8	3.5	3.5	3.4	3.3
Inflation measures (percent change, year over year):							
GNP deflator	2.7	3.3	3.8	3.6	3.3	2.8	2.3
Consumer Price Index	2.7	4.3	4.2	3.7	3.3	2.8	2.3
State and local purchases deflator	4.2	3.8	4.1	3.9	3.5	3.0	2.4
Unemployment rate (percent, annual average)	6.3	5.8	5.6	5.4	5.3	5.2	5.2
Interest rate, 91-day Treasury bills (percent)	5.7	5.5	5.2	5.0	4.6	4.1	3.6
Interest rate, 10-year Treasury notes (percent)	7.9	8.4	7.5	6.9	6.2	5.2	4.5

The current services estimates reflect the effects of inflation on virtually all budget accounts, including, for 1990 through 1993, discretionary programs. (For 1989, discretionary programs are held slightly below the assumed inflation rate because of the incorporation of the Bipartisan Budget Agreement levels.) The current services estimates thus provide a "constant real program" base against which to measure the President's budget proposals. To further 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 authority and outlay totals are the same as those proposed by the President. The budget authority and outlay levels for 1989 are the same as the ceilings on defense spending included in OBRA. For 1990 and beyond, budget authority for the national defense function includes two percent real growth per year.

—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 and

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for veterans compensation for which historically such an adjustment has been enacted.

—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 increase by 2 percent in 1989, consistent with the discretionary ceilings in OBRA, and then to be funded at the same real (constant-dollar) amounts as in 1989, through 1993, unless the grants are: (a) set by law at specified amounts; (b) tied by legislation to cost-of-living increases or the unemployment rate; or (c) affected by changes in beneficiary populations or other factors that alter benefit payments under entitlement programs.

—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 set by law, the 1988 Federal pay raise was 2 percent for civilians and military personnel. All funding for the pay raise is assumed to come from already enacted 1988 appropriations, as specified in the conference report on the 1988 Continuing Resolution (Public Law 100–202). For 1989, the civilian agency pay raise is assumed to be 2 percent, as agreed to by the bipartisan budget negotiators. Funding for the pay raise is assumed to be included within the two percent increase applied to discretionary accounts. For 1990 and beyond, the civilian agency pay raise is assumed to equal the inflation rate as measured by the gross national product deflator. Funding for these raises is included in an allowance.

—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.

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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. 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 $1,102.4 billion in 1989, 4.4 percent higher than in 1988, and budget authority is estimated to be $1,224.8 billion, an increase of 4.1 percent over 1988. Outlays are projected to grow at an average annual rate of 4.1 percent from 1989 to 1993. Receipts for 1989 are estimated to increase 6.1 percent on a current services basis, from $908.9 billion in 1988 to $964.0 billion in 1989. Receipts are projected to grow at an average annual rate of 6.9 percent from 1989 to 1993. The resulting 1989 current services deficit is $138.5 billion, $9.0 billion lower than the $147.5 billion deficit for 1988. The deficit is projected to decline further each year, falling to $39.0 billion in 1993.

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

(In billions of dollars)

	1987 actual	1988	1989	1990	1991	1992	1993
Budget authority	1,099.9	1,176.2	1,224.8	1,293.8	1,385.4	1,440.0	1,496.3
(On-budget)	(886.5)	(936.3)	(966.3)	(1,011.4)	(1,079.4)	(1,115.0)	(1,149.5)
(Off-budget)	(213.4)	(239.9)	(258.5)	(282.4)	(306.0)	(325.0)	(346.8)
Receipts	854.1	908.9	964.0	1,043.2	1,123.2	1,189.0	1,257.3
(On-budget)	(640.7)	(669.0)	(705.5)	(760.8)	(817.2)	(864.0)	(910.5)
(Off-budget)	(213.4)	(239.9)	(258.5)	(282.4)	(306.0)	(325.0)	(346.8)
Outlays	1,004.6	1,056.4	1,102.4	1,154.2	1,209.2	1,251.9	1,296.2
(On-budget)	(810.8)	(853.3)	(889.1)	(930.0)	(973.1)	(1,006.8)	(1,042.2)
(Off-budget)	(193.8)	(203.1)	(213.4)	(224.2)	(236.2)	(245.1)	(254.0)
Surplus or deficit (–)	–150.4	–147.5	–138.5	–111.0	–86.0	–62.9	–39.0
(On-budget)	(–170.0)	(–184.3)	(–183.5)	(–169.3)	(–155.9)	(–142.8)	(–131.7)
(Off-budget)	(19.6)	(36.8)	(45.1)	(58.3)	(69.8)	(79.8)	(92.7)

Receipts.—Table A–3 shows receipts by major source on a current services basis. Current services receipts are projected to increase by $55.1 billion from 1988 to 1989 and by $293.3 billion from

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1989 to 1993, largely due to assumed increases in incomes resulting from both real economic growth and inflation.

Individual income taxes are estimated to increase by $19.4 billion from 1988 to 1989 on a current services basis. This growth of 4.9 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 7.9 percent between 1989 and 1993, to $559.5 billion.

Corporation income taxes on a current services basis are estimated to grow by $12.8 billion or 12.1 percent from 1988 to 1989, in large part due to higher corporate profits. Corporation income taxes are projected to increase at an average annual rate of 7.1 percent from 1989 to 1993.

Table A–3 **CURRENT SERVICES RECEIPTS BY SOURCE**

(In billions of dollars)

	1987 actual	1988	1989	1990	1991	1992	1993
Individual income taxes	392.6	393.4	412.8	450.3	492.1	526.3	559.5
Corporation income taxes	83.9	106.0	118.8	130.9	142.5	151.0	156.2
Social insurance taxes and contributions	303.3	331.5	352.9	380.5	407.9	431.0	458.1
(On-budget)	(89.9)	(91.6)	(94.5)	(98.1)	(101.9)	(106.0)	(111.3)
(Off-budget)	(213.4)	(239.9)	(258.5)	(282.4)	(306.0)	(325.0)	(346.8)
Excise taxes	32.5	35.4	35.2	34.9	32.6	31.8	32.2
Other	41.9	42.7	44.2	46.6	48.1	49.0	51.3
Total	**854.1**	**908.9**	**964.0**	**1,043.2**	**1123.2**	**1,189.0**	**1,257.3**
(On-budget)	(640.7)	(669.0)	(705.5)	(760.8)	(817.2)	(864.0)	(910.5)
(Off-budget)	(213.4)	(239.9)	(258.5)	(282.4)	(306.0)	(325.0)	(346.8)

Social insurance taxes and contributions are estimated to increase by $21.4 billion on a current services basis between 1988 and 1989, and by an additional $105.1 billion between 1989 and 1993. The estimates reflect assumed increases in total wages and salaries paid; scheduled increases in the combined employer-employee social security (OASDHI) tax rate from 15.02 percent to 15.3 percent on January 1, 1990; and annual increases in the social security taxable earnings base to $57,600 in 1993.

On a current services basis, excise taxes are estimated to decrease by $0.1 billion or 0.4 percent from 1988 to 1989 and by $3.0 billion from 1989 to 1993. The estimates for 1992 and 1993 assume extension of the highway trust fund taxes scheduled to expire September 30, 1993 and the hazardous substance response trust fund taxes scheduled to expire December 31, 1991. The estimates for 1991–93 assume extension of the airport and airway trust fund taxes that are scheduled to expire December 31, 1990. However, in accordance with the current law requirement that beginning in

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calendar year 1990 these taxes must be reduced if appropriations for the programs they fund are less than 85 percent of authorizations, the estimates assume that most of these taxes are extended at 50 percent of their current law rate.

Other receipts (estate and gift taxes, customs duties, and miscellaneous receipts) are projected to increase on a current services basis by $7.6 billion from 1988 to 1993.

Outlays.—The level of outlays necessary to continue ongoing Federal programs and activities at current services levels is estimated at $1,102.4 billion in 1989. The increase in current services outlays from 1988 to 1989 is $46.1 billion, or 4.4 percent. Between 1989 and 1993 current services outlays are projected to increase at an average annual rate of 4.1 percent.

Table A–4 shows current services outlays by function. Estimates by agency are presented in table A–5. The nondefense outlay increases from 1988 to 1989 are largely due to increases in the number of beneficiaries, cost-of-living adjustments, increases in discretionary programs agreed to as part of the Bipartisan Budget Agreement and, in the case of interest, increased borrowing requirements.

Table A–6 shows the major components of the changes in current services outlays between 1988 and 1989. Outlays for social security (OASDI) are estimated to increase by $14.1 billion between 1988 and 1989, from $219.7 billion in 1988 to $233.8 billion in 1989. Medicare outlays are estimated to increase by $6.2 billion, from $78.9 billion in 1988 to $85.0 billion in 1989, largely as a result of increases in medical care prices and utilization. Outlays for income security programs are estimated to rise by $6.2 billion, from $129.6 billion in 1988 to $135.8 billion in 1989. This increase includes $2.0 billion for civil service retirement and disability programs, resulting from an automatic cost-of-living adjustment and an increase in the number of beneficiaries and $1.5 billion for subsidized housing resulting from increases in rental housing prices and more households being served. Outlays for the remaining income security programs are estimated to grow by $2.8 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 $8.6 billion from 1988 to 1989 primarily from spending approved in prior years. The decline of $4.9 billion for the commerce and housing credit function is primarily the result of a decrease in Federal Deposit Insurance Corporation outlays because costs associated with assistance to certain large banks will not recur in 1989, a decrease in Federal Savings and Loan Insurance Corporation because the volume of assistance provided through the issuance of notes is anticipated to be less in 1989 than 1988, and a decrease in postal

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

(In billions of dollars)

	1987 actual	Current services		1989 administration proposals	1989 differences
		1988 estimate	1989 estimate		
National defense:					
Department of Defense—Military	274.0	277.3	285.5	285.5	.....
Other	8.0	8.1	8.5	8.5	.....
International affairs	11.6	9.9	13.4	13.3	−0.1
General science, space, and technology	9.2	10.9	11.5	13.1	1.6
Energy	4.1	2.7	4.7	3.1	−1.7
Natural resources and environment	13.4	15.1	15.9	16.0	0.1
Agriculture	27.4	22.4	22.3	21.7	−0.6
Commerce and housing credit	6.2	12.4	7.4	7.9	0.4
Transportation	26.2	27.2	27.9	27.3	−0.6
Community and regional development	5.1	6.3	6.6	5.9	−0.7
Education, training, employment, and social services	29.7	33.7	35.2	37.4	2.1
Health	40.0	44.5	48.0	47.8	−0.2
Medicare	75.1	78.9	85.0	84.0	−1.0
Income security	123.2	129.6	135.8	135.6	−0.3
Social security	207.4	219.7	233.8	233.8	−*
On-budget	(4.9)	(5.0)	(5.6)	(5.6)	.....
Off-budget	(202.4)	(214.7)	(228.2)	(228.2)	(−*)
Veterans benefits and services	26.8	28.7	28.8	29.6	0.8
Administration of justice	7.5	8.3	8.5	9.9	1.4
General government	7.6	8.9	9.2	9.5	0.3
Central federal credit activities	.....	.....	.....	−6.3	−6.3
Net interest	138.6	147.9	151.9	151.8	−0.1
On-budget	(143.9)	(155.2)	(162.0)	(161.9)	(−0.1)
Off-budget	(−5.3)	(−7.3)	(−10.1)	(−10.1)	(−*)
Allowances	.....	.....	.....	−*	−*
Undistributed offsetting receipts:					
Employer share, employee retirement (on-budget)	−27.3	−28.7	−29.0	−29.0	.....
Employer share, employee retirement (off-budget)	−3.3	−4.3	−4.7	−4.7	.....
Rents and royalties on the Outer Continental Shelf	−4.0	−3.2	−3.9	−3.9	.....
Sale of major assets	−1.9	.....	.....	−3.3	−3.3
Total Undistributed offsetting receipts	−36.5	−36.1	−37.7	−41.0	−3.3
On-budget	(−33.2)	(−31.8)	(−33.0)	(−36.3)	(−3.3)
Off-budget	(−3.3)	(−4.3)	(−4.7)	(−4.7)	.....
Total outlays	**1,004.6**	**1,056.4**	**1,102.4**	**1,094.2**	**−8.2**
On-budget	(810.8)	(853.3)	(889.1)	(880.9)	(−8.2)
Off-budget	(193.8)	(203.1)	(213.4)	(213.3)	(−*)

* $50 million or less.

service due to increased postage receipts resulting from the projected 16 percent average rate increase in April, 1988.

Outlays for the foreign military sales credit program and Rural Electrification Administration will increase by $3.3 billion and $2.0 billion, respectively, largely because 1988 outlays are artifically low due to expected large loan prepayments. Other large changes are a $2.5 billion increase for medicaid grants and an increase in receipts from the Outer Continental Shelf, which reduces outlays by $0.8 billion.

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

(In billions of dollars)

	1987 actual	Current services		1989 administration proposals	1989 difference
		1988 estimate	1989 estimate		
Legislative Branch	1.8	1.9	1.9	2.1	0.1
The Judiciary	1.2	1.4	1.4	1.7	0.3
Executive Office of the President	0.1	0.1	0.1	0.1	−*
Funds Appropriated to the President	10.4	5.2	8.7	8.8	0.1
Department of Agriculture	50.4	50.7	53.1	48.3	−4.7
Department of Commerce	2.1	2.5	2.7	2.6	−0.1
Department of Defense—Military	274.0	277.3	285.5	285.5	.....
Department of Defense—Civil	20.7	22.3	23.7	23.7	*
Department of Education	16.8	18.8	20.5	22.7	2.2
Department of Energy	10.7	10.5	10.9	11.8	0.9
Department of Health and Human Services, except Social Security	148.9	160.4	170.1	168.6	−1.5
Department of Health and Human Services, Social Security	202.4	214.7	228.2	228.2	−*
Department of Housing and Urban Development	15.5	18.6	19.1	21.6	2.4
Department of the Interior	5.0	5.4	5.3	5.0	−0.3
Department of Justice	4.3	5.2	5.3	5.8	0.5
Department of Labor	23.5	22.1	23.2	23.1	−0.1
Department of State	2.8	3.3	3.4	3.4	*
Department of Transportation	25.4	26.3	27.1	26.4	−0.7
Department of the Treasury	180.3	198.3	211.3	205.7	−5.5
Environmental Protection Agency	4.9	4.9	5.0	5.1	0.1
General Services Administration	0.1	−*	−0.2	−*	0.1
National Aeronautics and Space Administration	7.6	9.1	9.7	11.0	1.3
Office of Personnel Management	27.0	28.5	30.5	30.5	*
Small Business Administration	−0.1	0.3	0.3	−0.4	−0.7
Veterans Administration	27.0	28.5	28.7	29.5	0.8
Other Independent Agencies	14.3	17.9	13.5	13.3	−0.2
Allowances	.....	.....	.....	−*	−*
Undistributed offsetting receipts:					
Interest received by on-budget trust funds	−29.7	−34.3	−38.2	−38.2	−*
Interest received by off-budget trust funds	−5.3	−7.3	−10.1	−10.1	−*
Interest received by OCS escrow account	−0.9	.....	−0.5	−0.5	.....
Employer share, employee retirement (on-budget)	−27.3	−28.7	−29.0	−29.0	.....
Employer share, employee retirement (off-budget)	−3.3	−4.3	−4.7	−4.7	.....
Rents and royalties on the Outer Continental Shelf	−4.0	−3.2	−3.9	−3.9	.....
Sale of major assets	−1.9	.....	.....	−3.3	−3.3
Total Undistributed offsetting receipts	−72.3	−77.7	−86.5	−89.9	−3.3
On-budget	(−63.7)	(−66.1)	(−71.7)	(−75.0)	(−3.3)
Off-budget	(−8.6)	(−11.6)	(−14.9)	(−14.9)	(−*)
Total outlays	**1,004.6**	**1,056.4**	**1,102.4**	**1,094.2**	**−8.2**
On-budget	(810.8)	(853.3)	(889.1)	(880.9)	(−8.2)
Off-budget	(193.8)	(203.1)	(213.4)	(213.3)	(−*)

* $50 million or less.

The estimated 1989 current services deficit of $138.5 billion would add a like amount to the Federal debt. Primarily due to this increase in debt, net interest outlays would increase by $4.0 billion between 1988 and 1989 under current services assumptions.

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Table A–6. **CHANGE IN CURRENT SERVICES BUDGET AUTHORITY AND OUTLAYS, 1987–88**

(In billions of dollars)

	Budget authority	Outlays
1988 current services estimate	**1,176.2**	**1,056.4**
(On-budget)	(936.3)	(853.3)
(Off-budget)	(239.9)	(203.1)
Changes:		
National defense	8.1	8.6
Social security	22.4	14.1
Medicare	11.1	6.2
Income security:		
General retirement and disability (excluding social security)	−0.1	0.2
Federal employee retirement and disability	3.8	3.2
Unemployment compensation	−0.4	0.7
Housing assistance	−0.3	1.0
Food and nutrition assistance	0.1	0.2
Other income security programs	0.2	0.9
Subtotal, income security	3.2	6.2
International affairs	−*	3.5
General science, space, and technology	0.2	0.6
Energy programs	*	2.0
Natural resources and environment	0.3	0.8
Agriculture	1.9	−*
Commerce and housing credit	−3.6	−4.9
Transportation programs	0.1	0.7
Community and regional development	−2.0	0.3
Education	0.5	1.7
Training and Employment	*	0.1
Social and other labor services	−*	−0.2
Medicaid	2.5	2.5
Other health programs	0.7	1.0
Veterans programs	−0.2	0.1
Net interest	4.0	4.0
Undistributed offsetting receipts	−1.6	−1.6
All other programs, net	0.7	0.4
Subtotal, changes	48.5	46.1
(On-budget)	(29.9)	(35.8)
(Off-budget)	(18.6)	(10.3)
1989 current services estimate	**1,224.8**	**1,102.4**
(On-budget)	(966.3)	(889.1)
(Off-budget)	(258.5)	(213.4)

* $50 million or less.

Budget Authority.—Current services budget authority is estimated to total $1,224.8 billion in 1989, $48.5 billion more than in 1988. Increases in budget authority between 1988 and 1989 generally reflect the higher funding levels for discretionary programs agreed to as part of the Bipartisan Budget Agreement and increases needed to maintain mandatory programs at levels specified in current law. 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

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erratic year-to-year changes due to sporadic funding patterns or advance funding.

Table A–7. **PROGRAMMATIC ASSUMPTIONS**

	Fiscal years					
	1988	1989	1990	1991	1992	1993
Beneficiaries (annual average, in thousands):						
Social security (OASDI) [1]	38,470	39,047	39,679	40,316	40,844	41,363
Railroad retirement	920	903	887	872	857	840
Federal civil service retirement	2,032	2,101	2,167	2,232	2,294	2,356
Military retirement	1,557	1,589	1,618	1,647	1,677	1,708
Veterans compensation	2,528	2,508	2,487	2,465	2,441	2,418
Veterans pensions	1,229	1,160	1,099	1,045	996	955
Disabled coal miners programs	339	320	301	283	263	248
Supplemental security income [2]	4,415	4,540	4,660	4,790	4,902	5,005
Maintenance assistance (AFDC)	11,002	11,079	11,124	11,204	11,268	11,343
Food stamps [3]	18,823	18,771	18,351	18,160	18,005	17,954
HUD Housing subsidy recipients (households)	4,255	4,405	4,485	4,565	4,645	4,725
Medicaid	24,178	24,996	25,179	25,426	25,648	25,871
Medicare:						
Hospital insurance	31,820	32,428	33,016	33,580	34,127	34,661
Supplementary medical insurance	31,576	32,183	32,773	33,330	33,859	34,384
Automatic benefit increases (percent):						
Social security and veterans pensions (January)	4.2	4.2	4.0	3.6	3.1	2.6
Federal employee retirement (January)	4.2	4.2	4.2	3.6	3.1	2.6
Food stamps (October)	1.4	4.1	3.6	3.2	2.8	2.4
Unemployment rate (percent, annual average):						
Total	5.8	5.6	5.4	5.3	5.2	5.2
Insured [4]	2.2	2.2	2.0	2.0	1.9	1.9
Strategic petroleum reserves annual fill rate (millions of barrels)	18	21	21	21	21	21

[1] In current pay status as of June.
[2] Includes those receiving federally administered State supplements.
[3] Average monthly participation.
[4] 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.

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 1988 and 1989 are also shown in table A–6.

An increase in budget authority of $22.4 billion for social security (for which trust fund receipts constitute budget authority) is primarily due to higher payroll tax payments. Budget authority for the national defense function increases by $8.1 billion to reach the ceiling included in OBRA. Other major changes in current services budget authority include an $11.1 billion increase for medicare, a $3.8 billion increase for Federal employee retirement and disability programs, and a $3.6 billion decrease for commerce and housing credit programs.

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

(In billions of dollars)

	1987 actual	Current services		1989 administration proposals	1989 differences
		1988 estimate	1989 estimate		
National defense:					
Department of Defense—Military	279.5	283.2	290.8	290.8	.....
Other	8.0	8.3	8.7	8.7	.....
International affairs	18.7	16.2	16.2	16.5	0.3
General science, space, and technology	12.5	10.7	11.0	13.9	2.9
Energy	3.4	5.5	5.5	4.8	−0.7
Natural resources and environment	14.6	15.4	15.8	15.2	−0.6
Agriculture	25.4	22.5	24.4	23.8	−0.7
Commerce and housing credit	10.9	16.3	12.6	14.8	2.2
Transportation	27.0	28.0	28.2	27.0	−1.2
Community and regional development	6.6	9.5	7.5	6.2	−1.2
Education, training, employment, and social services	33.2	35.0	35.6	39.4	3.8
Health	41.3	45.5	48.8	48.8	0.1
Medicare	84.0	93.9	105.0	106.5	1.6
Income security	160.7	171.0	174.1	173.2	−0.9
Social security	226.9	256.5	278.9	278.9	.....
On-budget	(4.9)	(5.0)	(5.6)	(5.6)	.....
Off-budget	(222.0)	(251.5)	(273.3)	(273.3)	.....
Veterans benefits and services	27.5	29.3	29.1	30.2	1.1
Administration of justice	8.8	8.5	8.7	10.3	1.6
General government	8.7	9.2	9.7	9.9	0.1
Central federal credit activities	.....	.....	.....	3.4	3 .4
Net interest	138.6	147.9	151.9	151.8	−0.1
On-budget	(143.9)	(155.2)	(162.0)	(161.9)	(−0.1)
Off-budget	(−5.3)	(−7.3)	(−10.1)	(−10.1)	(−*)
Allowances	.....	.....	.....	−*	−*
Undistributed offsetting receipts:					
Employer share, employee retirement (on-budget)	−27.3	−28.7	−29.0	−29.0	.....
Employer share, employee retirement (off-budget)	−3.3	−4.3	−4.7	−4.7	.....
Rents and royalties on the Outer Continental Shelf	−4.0	−3.2	−3.9	−3.9	.....
Sale of major assets	−1.9	.....	.....	−3.3	−3.3
Total Undistributed offsetting receipts	−36.5	−36.1	−37.7	−41.0	−3.3
On-budget	(−33.2)	(−31.8)	(−33.0)	(−36.3)	(−3.3)
Off-budget	(−3.3)	(−4.3)	(−4.7)	(−4.7)	.....
Total budget authority	**1,099.9**	**1,176.2**	**1,224.8**	**1,233.2**	**8.4**
On-budget	(886.5)	(936.3)	(966.3)	(974.7)	(8.4)
Off-budget	(213.4)	(239.9)	(258.5)	(258.5)	(−*)

* $50 million or less.

Change in Current Services Since Release of the 1988.—When the 1988 Budget was released in January, 1987, the current services deficit for 1988 was estimated to be $150 billion. These projections were based on the 1987 continuing resolution and enacted law at the time they were issued. The current estimate for 1988 is $147 billion, or $3 billion less. The net effect of changes in the national defense function have reduced the estimate of the 1988 deficit by $12 billion since last January. Changes in economic assumptions have increased the deficit by approximately $21 billion, from the effects of reducing receipts due primarily to lower real growth and

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increasing outlays due primarily to higher interest rates. Nondefense policy changes have reduced the 1988 deficit by approximately $17 billion, mostly from legislation enacted to implement the Bipartisan Budget Agreement. Technical reestimates account for the remaining difference, or a $6 billion increase in the 1988 current services deficit.

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

(In billions of dollars)

	1987 actual	Current services		1989 administration proposals	1989 difference
		1988 estimate	1989 estimate		
Legislative Branch	1.9	1.9	2.0	2.1	0.2
The Judiciary	1.3	1.3	1.4	1.7	0.4
Executive Office of the President	0.1	0.1	0.1	0.1	—*
Funds Appropriated to the President	13.0	10.5	10.4	10.6	0.2
Department of Agriculture	52.5	59.9	57.6	55.5	—2.1
Department of Commerce	2.2	2.4	2.7	2.4	—0.2
Department of Defense—Military	279.5	283.2	290.8	290.8	.....
Department of Defense—Civil	35.1	36.9	38.4	38.5	*
Department of Education	19.6	20.3	20.8	24.2	3.4
Department of Energy	10.1	10.8	11.5	12.5	1.0
Department of Health and Human Services, except Social Security	159.7	176.7	190.0	191.4	1.4
Department of Health and Human Services, Social Security	222.0	251.5	273.3	273.3	.....
Department of Housing and Urban Development	14.7	15.4	15.2	16.2	0.9
Department of the Interior	5.3	5.4	5.3	4.8	—0.5
Department of Justice	5.2	5.4	5.5	6.2	0.7
Department of Labor	30.3	31.5	31.3	31.7	0.5
Department of State	3.8	3.7	3.8	3.8	—*
Department of Transportation	26.1	27.1	27.4	26.1	—1.3
Department of the Treasury	181.9	198.3	211.5	215.8	4.2
Environmental Protection Agency	5.3	5.0	5.0	4.7	—0.3
General Services Administration	0.3	0.1	0.1	*	—0.1
National Aeronautics and Space Administration	10.9	8.9	9.1	11.5	2.4
Office of Personnel Management	44.8	47.7	50.4	50.5	*
Small Business Administration	0.6	0.5	0.5	0.8	0.3
Veterans Administration	27.4	29.2	29.0	30.1	1.1
Other Independent Agencies	18.8	20.3	18.0	17.8	—0.2
Allowances	.....	.....	.....	—*	—*
Undistributed offsetting receipts:					
Interest received by on-budget trust funds	—29.7	—34.3	—38.2	—38.2	—*
Interest received by off-budget trust funds	—5.3	—7.3	—10.1	—10.1	—*
Interest received by OCS escrow account	—0.9	.....	—0.5	—0.5	.....
Employer share, employee retirement (on-budget)	—27.3	—28.7	—29.0	—29.0	.....
Employer share, employee retirement (off-budget)	—3.3	—4.3	—4.7	—4.7	.....
Rents and royalties on the Outer Continental Shelf	—4.0	—3.2	—3.9	—3.9	.....
Sale of major assets	—1.9	.....	.....	—3.3	—3.3
Total Undistributed offsetting receipts	—72.3	—77.7	—86.5	—89.9	—3.3
On-budget	(—63.7)	(—66.1)	(—71.7)	(—75.0)	(—3.3)
Off-budget	(—8.6)	(—11.6)	(—14.9)	(—14.9)	(—*)
Total budget authority	**1,099.9**	**1,176.2**	**1,224.8**	**1,233.2**	**8.4**
On-budget	(886.5)	(936.3)	(966.3)	(974.7)	(8.4)
Off-budget	(213.4)	(239.9)	(258.5)	(258.5)	(—*)

* $50 million or less.

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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 $8.9 billion in 1989 and would reduce the 1993 deficit by $15.7 billion. Between 1988 and 1993, the cumulative deficit reductions proposed by the administration total $50.8 billion. Receipts proposals would reduce the deficit by a total of $4.8 billion, whereas proposed outlay reductions would reduce the deficit by $46.0 billion. As shown in Table A-11, cumulative increases for international affairs, space and science, and administration of

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

(In billions of dollars)

	1987 actual	Estimate					
		1988	1989	1990	1991	1992	1993
Receipts:							
Current services	854.1	908.9	964.0	1,043.2	1,123.2	1,189.0	1,257.3
Effect of proposals		.3	.7	.9	1.2	.9	.8
Administration budget	854.1	909.2	964.7	1,044.1	1,124.4	1,189.9	1,258.1
Total outlays:							
Current services	1,004.6	1,056.4	1,102.4	1,154.2	1,209.2	1,251.9	1,296.2
Effect of proposals		−0.5	−8.2	−5.9	−5.6	−10.9	−14.9
Administration budget	1,004.6	1,055.9	1,094.2	1,148.3	1,203.7	1,241.0	1,281.3
Total surplus or deficit (−):							
Current services	−150.4	−147.5	−138.5	−111.0	−86.0	−62.9	−39.0
Effect of proposals		0.7	8.9	6.8	6.8	11.9	15.7
Administration budget	−150.4	−146.7	−129.5	−104.2	−79.3	−51.1	−23.3

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

(In billions of dollars)

	1988	1989	1990	1991	1992	1993	Total 1988–1993
National defense							
International affairs, space and science, and justice	0.7	2.9	5.5	7.3	7.5	7.2	31.1
Human resources [1]	−1.0	−2.0	−2.2	−5.0	−7.5	−10.3	−27.9
Net interest	−0.1	−0.3	−0.3	−0.4	*	−0.9	−2.0
Other domestic programs	−0.1	−8.9	−8.9	−7.4	−10.9	−11.0	−47.3
Subtotal, outlays	−0.5	−8.2	−5.9	−5.6	−10.9	−14.9	−46.0
Receipts [2]	−0.3	−0.7	−0.9	−1.2	−0.9	−0.8	−4.8
Total deficit reduction	**−0.7**	**−8.9**	**−6.8**	**−6.8**	**−11.9**	**−15.7**	**−50.8**

Note: Estimates exclude the effect of the administration's credit reform proposal.
*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.

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justice are $31.1 billion. Reductions to human resources programs account for $27.9 billion of the cumulative reduction in total deficits. Reductions in other domestic program areas account for $47.3 billion of the total deficit reduction. Net interest savings from all of the reductions during 1988–1993 total $2.0 billion.

Receipts.—As shown in table A–12, the administration's estimate of receipts for 1988 is only $0.3 billion greater than the current services level of $908.9 billion.

Current services receipts for 1989 are estimated at $964.0 billion. Legislative and administrative proposals, which are estimated to increase receipts to $964.7 billion, or $0.7 billion above the current services level, include the following: extension of medicare hospital insurance (HI) coverage to all State and local government employees, revision of research and experimentation (R&E) allocation rules, initiation of a permanent R&E tax credit, exemption of mutual fund shareholder expenses from the two percent floor for miscellaneous deductions, increases in Nuclear Regulatory Commission (NCR) and Federal Emergency Management Agency

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

(In billions of dollars)

	1988	1989	1990	1991	1992	1993
Current services receipts estimates	**908.9**	**964.0**	**1,043.2**	**1,123.2**	**1,189.0**	**1,257.3**
(On-budget)	(669.0)	(705.5)	(760.8)	(817.2)	(864.0)	(910.5)
(Off-budget)	(239.9)	(258.5)	(282.4)	(306.0)	(325.0)	(346.8)
Differences:						
Extend HI coverage to State and local employees		1.6	2.1	2.1	2.2	2.2
R&E allocation rules	−0.4	−0.6	−0.7	−0.7	−0.8	−0.9
R&E credit		−0.4	−0.8	−1.0	−1.2	−1.4
Mutual fund exemption		−0.4	−0.5	−0.6	−0.7	−0.9
Customs user fees [1] [2]	0.6	0.6	0.5	0.5	0.5	0.5
FEMA fees		*	*	*	*	*
NRC fees		*	*	*	*	*
Other	−*	−0.1	0.2	0.8	0.9	1.2
Total differences [3]	**0.3**	**0.7**	**0.9**	**1.2**	**0.9**	**0.8**
(On-budget)	(0.3)	(0.7)	(0.9)	(1.3)	(1.0)	(0.9)
(Off-budget)			(−*)	(−0.1)	(−0.1)	(−*)
Administration policy receipts estimates	**909.2**	**964.7**	**1,044.1**	**1,124.4**	**1,189.9**	**1,258.1**
(On-budget)	(669.3)	(706.2)	(761.7)	(818.5)	(865.0)	(911.3)
(Off-budget)	(239.9)	(258.5)	(282.4)	(306.0)	(324.9)	(346.7)

*$50 million or less.

[1] Net of income tax offsets.

[2] These estimates reflect only the effect of the proposal on budget receipts. The proposal increases Customs outlays by the following amounts: 1988, $0.7 billion; 1989, $0.7 billion; 1990, $0.7 billion; 1991, $0.8 billion; 1992, $0.8 billion; and 1993, $0.8 billion.

[3] Because the proposed reclassification of the Customs user fee is estimated to increase outlays, the receipts proposals increase or decrease (−) the deficit by the following amounts: 1988, $0.4 billion; 1989, $26 million; 1990, $−0.2 billion; 1991, $−0.4 billion; 1992, −0.1 billion; and 1993, $−17 million.

(FEMA) user fees, and a modification and reclassification of the customs ad valorem user fee as governmental receipts. A more detailed discussion of the administration's receipts proposals is pre-

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sented in the *Budget of the United States Government, Fiscal Year 1989,* Part 4, "Federal Receipts by Source."

The administration's proposals are estimated to increase receipts above the current services level between $0.8 billion and $1.2 billion each year, 1990–1993.

Outlays.—The total outlay change proposed by the administration is, on net, a $8.2 billion reduction for 1989. Of this reduction, $7.5 billion is from loan and real asset sales. The remaining $0.8 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 1989,* 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 1989,* Part 5, "The Federal Program by Function."

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

(In billions of dollars)

	1988	1989	1990	1991	1992	1993
Current services estimates	**1,056.4**	**1,102.4**	**1,154.2**	**1,209.2**	**1,251.9**	**1,296.2**
(On-budget)	(853.3)	(889.1)	(930.0)	(973.1)	(1,006.8)	(1,042.2)
(Off-budget)	(203.1)	(213.4)	(224.2)	(236.2)	(245.1)	(254.0)
Differences:						
National defense						
International affairs:						
International development and humanitarian assistance		−0.3	−0.4	−0.4	−0.5	−0.7
International security assistance:						
Military assistance		−0.1	−0.1	−0.2	−0.3	−0.3
Other		0.2	0.3	0.2	0.1	0.1
Subtotal, international security assistance		0.1	0.2	−*	−0.1	−0.2
Conduct of foreign affairs		*	0.1	0.1	0.2	0.2
Foreign information and exchange actitivities		*	0.2	0.1	*	−*
International financial programs		0.1	0.1	0.1	0.1	*
Subtotal, international affairs		−0.1	0.1	−0.1	−0.4	−0.7
General science, space, and technology		1.6	3.8	5.3	5.5	5.4
Energy		−1.7	−0.3	−0.5	−0.7	−1.1
Natural resources and environment		0.1	−1.6	−0.3	−2.0	−1.2

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

(In billions of dollars)

	1988	1989	1990	1991	1992	1993
Agriculture:						
Farm income stabilization		−0.5	−0.5	−0.7	−0.8	−0.6
Agricultural research and services		−0.1	−0.2	−0.3	−0.4	−0.4
Subtotal, agriculture		−0.6	−0.7	−1.0	−1.2	−1.1
Commerce and housing credit:						
Mortgage credit and deposit insurance		0.8	1.6	0.9	0.2	−0.1
Postal service		−0.2	*	0.1	0.3	0.6
Other advancement of commerce		−0.2	−0.2	0.2	0.1	−0.1
Subtotal, commerce and housing credit		0.4	1.4	1.1	0.5	0.4
Transportation:						
Ground transportation		−1.2	−2.0	−2.8	−3.2	−3.4
Air transportation		0.3	0.5	0.6	0.6	0.6
Water transportation		0.2	0.3	0.4	0.5	0.5
Other transportation		*	*	*	*	*
Subtotal, transportation		−0.6	−1.1	−1.8	−2.0	−2.3
Community and regional development		−0.7	−1.2	−1.8	−2.0	−2.1
Education, training, employment, and social services:						
Education	−*	2.2	3.0	1.9	0.8	−0.2
Training and employment		−0.1	0.3	0.3	0.2	0.2
Social services and other		*	−0.2	−0.5	−0.6	−0.8
Subtotal, education, training, employment, and social services	−*	2.1	3.1	1.8	0.3	−0.9
Health:						
Medicaid		−0.4	−0.5	−0.6	−0.7	−0.8
Other health		0.2	0.6	0.5	0.3	0.2
Subtotal, health		−0.2	0.1	−0.1	−0.4	−0.6
Medicare		−1.0	−2.0	−3.2	−4.2	−5.7
Income security:						
General retirement and disability (excluding social security)	−0.1	*	−*	−*	−*	−*
Federal employee retirement and disability		*	*	*	0.1	0.1
Unemployment compensation		−0.1	−0.1	−0.1	−0.1	−0.1
Housing assistance		−*	*	−0.3	−0.6	−0.7
Food and nutritional assistance		*	−*	−*	−*	−*
Other income security		−0.2	−0.3	−0.5	−0.6	−0.7
Subtotal, income security	−0.1	−0.3	−0.5	−0.9	−1.3	−1.5
Social security		−*	−0.1	−0.2	−0.2	−0.3

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

(In billions of dollars)

	1988	1989	1990	1991	1992	1993
(On-budget)			(*)	(*)	(*)	(*)
(Off-budget)		(–*)	(–0.1)	(–0.2)	(–0.2)	(–0.3)
Veterans benefits and services:						
Income security for veterans	–0.4	–0.1	–*	–*	–*	–*
Hospital and medical care for veterans		*	*	*	*	0.1
Other	–0.5	0.8	1.2	0.9	0.7	0.7
Subtotal, veterans benefits and services	–0.9	0.8	1.2	0.9	0.7	0.7
Administration of justice:						
Federal law enforcement activities	0.7	0.9	0.9	0.9	0.9	0.9
Federal correctional activities		0.2	0.4	0.6	0.8	0.9
Other		0.3	0.4	0.4	0.4	0.5
Subtotal, administration of justice	0.7	1.4	1.7	1.9	2.2	2.3
General government:						
Central fiscal operations		0.2	0.3	0.3	0.4	0.4
Other	–0.1	0.2	0.2	0.1	–0.3	–0.1
Subtotal, general government	–0.1	0.3	0.5	0.4	*	0.3
Central federal credit activities		–6.3	–7.7	–6.3	–5.3	–5.2
Net interest	–0.1	–0.1	0.2	0.3	0.9	*
(On-budget)	(–0.1)	(–0.1)	(0.2)	(0.3)	(0.9)	(–*)
(Off-budget)		(–*)	(*)	(*)	(*)	(*)
Allowances		–*	–0.5	–0.6	–0.5	–0.3
Undistributed offsetting receipts:						
Employer share, employee retirement			–0.4	–0.4	–0.7	–1.0
(On-budget)			(–0.4)	(–0.5)	(–0.7)	(–1.1)
(Off-budget)			(*)	(0.1)	(0.1)	(*)
Rents and royalties on the Outer Continental Shelf						
Sale of major assets		–3.3	–1.9	–0.2	–0.2	–0.2
Subtotal, undistributed offsetting receipts		–3.3	–2.3	–0.7	–0.9	–1.3
(On-budget)		(–3.3)	(–2.3)	(–0.7)	(–1.0)	(–1.3)
(Off-budget)			(*)	(0.1)	(0.1)	(*)
Total, differences	**–0.5**	**–8.2**	**–5.9**	**–5.6**	**–10.9**	**–14.9**
(On-budget)	(–0.5)	(–8.2)	(–5.9)	(–5.5)	(–10.8)	(–14.7)
(Off-budget)		(–*)	(–0.1)	(–0.1)	(–0.1)	(–0.2)
Administration policy estimates	**1,055.9**	**1,094.2**	**1,148.3**	**1,203.7**	**1,241.0**	**1,281.3**
(On-budget)	(852.8)	(880.9)	(924.2)	(967.6)	(996.0)	(1,027.5)
(Off-budget)	(203.1)	(213.3)	(224.1)	(236.1)	(245.0)	(253.8)

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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 1993 by $50.8 billion, from $2,458.4 billion to $2,407.5 billion.

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

(In billions of dollars)

	1988	1989	1990	1991	1992	1993
Requirements for borrowing from the public:						
Current services	128.0	135.9	110.5	85.5	62.3	38.4
Budget proposals	127.2	127.0	103.6	78.7	50.5	22.6
Difference	0.7	8.9	6.8	6.8	11.9	15.7
End of year debt held by the public:						
Current services	2,025.8	2,161.8	2,272.2	2,357.7	2,420.0	2,458.4
Budget proposals	2,025.1	2,152.1	2,255.7	2,334.4	2,384.9	2,407.5
Difference	0.7	9.7	16.5	23.2	35.1	50.8

Tables A–15 and A–16 provide a more detailed comparison (by function, subfunction, and program) of the President's policy estimates for 1989 with the current services budget authority and outlay estimates.

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
050 NATIONAL DEFENSE				
051 Department of Defense—Military:				
Military personnel	74,010	76,145	78,399	78,399
Operation and maintenance	79,607	80,684	85,649	85,649
Procurement	80,234	81,027	80,037	80,037
Research, development, test and evaluation	35,644	36,695	38,157	38,157
Military construction	5,093	5,354	5,743	5,743
Family housing	3,075	3,149	3,272	3,272
Revolving funds and other	2,647	854	788	788
Offsetting receipts	−841	−750	−766	−766
Allowances: Savings from reform of Davis-Bacon and Service Contract Acts:				
Proposed legislation			−310	−310
Allowances: Other legislation (proposed)			−185	−185
Subtotal, Department of Defense—Military	279,469	283,159	290,784	290,784
053 Atomic energy defense activities	7,478	7,749	8,100	8,100
054 Defense-related activities	480	508	645	645
Total budget authority	287,427	291,416	299,529	299,529
150 INTERNATIONAL AFFAIRS				
151 International development and humanitarian assistance:				
Multilateral development banks	1,207	1,206	1,230	1,324
International organizations	237	245	249	200

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
Agency for International Development:				
Existing law	2,162	2,240	2,273	2,169
Proposed credit reform				16
P.L. 480 food aid:				
Existing law	1,083	1,060	1,128	1,023
Proposed credit reform				−214
Refugee assistance	361	338	345	340
Other:				
Existing law	300	292	297	296
Proposed credit reform				25
Offsetting receipts	−449	−479	−456	−458
Subtotal, International development and humanitarian assistance	4,902	4,901	5,066	4,722
152 International security assistance:				
Foreign military sales credit:				
Existing law	4,053	4,017	4,130	4,460
Proposed credit reform				155
Military assistance	950	701	715	467
Economic support fund	3,576	3,201	3,265	3,281
Guarantee reserve fund		532	643	643
Other	98	89	91	94
Offsetting receipts	−464	−114	−132	−132
Subtotal, International security assistance	8,213	8,425	8,711	8,968
153 Conduct of foreign affairs:				
Administration of foreign affairs:				
Existing law	2,091	2,039	2,071	2,071
Proposed credit reform				−*
International organizations and conferences	420	515	526	525
Other	80	91	93	89
Subtotal, Conduct of foreign affairs	2,591	2,645	2,689	2,685
154 Foreign information and exchange activities	1,022	1,041	1,058	1,110
155 International financial programs:				
Foreign military sales trust fund (net)	811	−791	−1,214	−1,214
Export-Import Bank:				
Existing law	78	110		
Proposed credit reform				336
Other	1,196			
Offsetting receipts	−89	−90	−92	−92
Subtotal, International financial programs	1,997	−771	−1,306	−970
Total budget authority	18,724	16,241	16,219	16,515
250 GENERAL SCIENCE, SPACE, AND TECHNOLOGY				
251 General science and basic research:				
National Science Foundation programs	1,639	1,733	1,767	2,066
Department of Energy general science programs	702	804	821	1,197
Subtotal, General science and basic research	2,340	2,537	2,588	3,263
253 Space flight	6,864	4,683	4,776	6,359
254 Space science, applications, and technology	2,297	2,444	2,493	2,998
255 Supporting space activities	1,037	1,077	1,098	1,259
Total budget authority	12,538	10,741	10,955	13,879

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
270 ENERGY				
271 Energy supply:				
Research and development	1,704	2,416	2,938	2,852
Petroleum reserves	−542	−596	−596	−574
Federal power marketing	64	−213	−219	−175
Tennessee Valley Authority:				
Existing law	1,243	1,269	858	858
Proposed credit reform				−45
Uranium enrichment	55	−159	−323	−108
Nuclear waste disposal fund	58	−148	−169	−88
Subsidies for nonconventional fuel production	−596	*	*	16
Rural electric and telephone:				
Existing law	294	1,442	1,429	22
Proposed credit reform				81
Subtotal, Energy supply	2,280	4,010	3,917	2,838
272 Energy conservation:				
Energy conservation grants and R&D	232	310	316	89
Solar Energy and Energy Conservation Bank	2	2		
Subtotal, Energy conservation	234	311	316	89
274 Emergency energy preparedness:				
Existing law	153	609	627	513
Proposed legislation				684
Subtotal, Emergency energy preparedness	153	609	627	1,197
276 Energy information, policy, and regulation	763	588	664	711
Total budget authority	3,430	5,518	5,524	4,837
300 NATURAL RESOURCES AND ENVIRONMENT				
301 Water resources:				
Corps of Engineers	3,236	3,471	3,498	3,537
Bureau of Reclamation:				
Existing law	951	1,057	1,079	1,077
Proposed credit reform				−7
Other	218	206	210	138
Offsetting receipts:				
Existing law	−297	−459	−438	−483
Proposed legislation				10
Subtotal, Water resources	4,107	4,274	4,350	4,273
302 Conservation and land management:				
Management of national forests, cooperative forestry, and forestry research (Forest Service)	2,054	2,071	2,189	1,971
Management of public lands (BLM)	564	520	528	547
Mining reclamation and enforcement	319	309	315	260
Conservation reserve program		1,086	1,107	1,864
Other conservation of agricultural lands	642	687	700	486
Other resources management	293	301	307	303
Offsetting receipts:				
Existing law	−2,151	−2,298	−2,348	−2,354
Proposed legislation				23
Subtotal, Conservation and land management	1,721	2,676	2,799	3,101
303 Recreational resources:				
Federal land acquisition:				
Existing law	244	232	235	81
Proposed legislation				−30
Urban park and historic preservation funds	24	27	29	

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
Operation of recreational resources:				
Existing law	1,475	1,560	1,609	1,465
Proposed legislation				23
Offsetting receipts:				
Existing law	−59	−109	−113	−113
Proposed legislation				−23
Subtotal, Recreational resources	1,685	1,710	1,760	1,403
304 Pollution control and abatement:				
Regulatory, enforcement, and research programs	1,487	1,538	1,569	1,589
Hazardous substance response fund	1,411	1,128	1,151	1,600
Oil pollution funds (gross)	7	5	6	6
Sewage treatment plant construction grants	2,361	2,304	2,350	1,500
Leaking underground storage tank trust fund	50	14	15	50
Offsetting receipts	−20	−68	−104	−104
Subtotal, Pollution control and abatement	5,296	4,922	4,986	4,641
306 Other natural resources:				
Program activities	1,781	1,868	1,905	1,801
Offsetting receipts	−11	−26	−27	−27
Subtotal, Other natural resources	1,770	1,842	1,878	1,774
Total budget authority	14,578	15,424	15,773	15,191
350 AGRICULTURE				
351 Farm income stabilization:				
Commodity Credit Corporation:				
Existing law	20,115	16,344	15,696	15,658
Proposed legislation				7
Proposed credit reform				565
Crop insurance	345	429	437	330
Agricultural credit:				
Existing law	2,933	3,615	6,161	5,795
Proposed credit reform				−524
Other programs and unallocated overhead	1	*	*	
Subtotal, Farm income stabilization	23,394	20,388	22,294	21,832
352 Agricultural research and services:				
Research programs	902	910	928	834
Extension programs	339	358	365	300
Marketing programs	138	141	142	142
Animal and plant health programs	319	336	343	302
Economic intelligence	188	204	208	205
Other programs and unallocated overhead	219	224	229	240
Offsetting receipts	−98	−103	−103	−103
Subtotal, Agricultural research and services	2,007	2,070	2,112	1,920
Total budget authority	25,401	22,458	24,406	23,752
370 COMMERCE AND HOUSING CREDIT				
371 Mortgage credit and deposit insurance:				
Mortgage-backed securities (GNMA):				
Proposed credit reform				1,900
Mortgage purchase activities (GNMA)	1	14		270
Mortgage credit (FHA):				
Existing law	480	825	957	957
Proposed credit reform				903
Housing for the elderly or handicapped:				
Existing law	533	584	525	289
Proposed credit reform				−216

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
Rural housing programs (FmHA)	2,434	6,339	4,185	3,864
Federal Deposit Insurance Corporation	1,099	903	27	27
Federal Savings and Loan Insurance Corporation and other	1,600	3,986	2,000	2,000
Subtotal, Mortgage credit and deposit insurance	6,148	12,652	7,695	9,994
372 Postal service:				
Existing law	2,944	1,699	2,763	2,764
Proposed legislation				−351
Subtotal, Postal service	2,944	1,699	2,763	2,412
376 Other advancement of commerce:				
Small and minority business assistance:				
Existing law	644	515	524	404
Proposed legislation				
Proposed credit reform				336
Science and technology	317	362	368	378
Economic and demographic statistics	298	473	699	704
International trade and other:				
Existing law	535	562	571	597
Proposed legislation				−1
Subtotal, Other advancement of commerce	1,792	1,912	2,163	2,419
Total budget authority	10,885	16,262	12,621	14,825
400 TRANSPORTATION				
401 Ground transportation:				
Highways	13,581	13,806	13,804	13,701
Highway safety	298	402	321	315
Mass transit:				
Existing law	3,598	3,334	3,428	1,430
Proposed legislation				144
Railroads	720	671	682	57
Regulation:				
Existing law	47	44	45	44
Proposed legislation				−13
Subtotal, Ground transportation	18,244	18,258	18,279	15,678
402 Air transportation:				
Airports and airways (FAA)	4,761	6,147	6,235	6,937
Aeronautical research and technology	727	723	738	872
Air carrier subsidies	30	24	24	
Subtotal, Air transportation	5,518	6,895	6,998	7,809
403 Water transportation:				
Marine safety and transportation	2,588	2,526	2,608	2,968
Ocean shipping:				
Existing law	531	332	164	163
Proposed legislation				206
Proposed credit reform				*
Reimbursement to Treasury from Panama Canal Commission		−86		
Subtotal, Water transportation	3,120	2,772	2,772	3,338
407 Other transportation	115	108	110	138
Total budget authority	26,996	28,032	28,159	26,963
450 COMMUNITY AND REGIONAL DEVELOPMENT				
451 Community development:				
Community development block grants	3,000	2,880	2,938	2,480

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
Urban development action grants	225	216	220	−50
Rental rehabilitation and rental development	314	206	210	150
Pennsylvania Avenue Development Corporation	8	6	6	5
Other	273	245	249	262
Subtotal, Community development	3,819	3,552	3,622	2,847
452 Area and regional development:				
Rural development:				
Existing law	1,447	4,468	2,277	2,234
Proposed legislation				−51
Proposed credit reform				−10
Economic development assistance	217	205	211	40
Indian programs:				
Existing law	990	1,100	1,118	1,021
Proposed credit reform				14
Regional commissions	108	111	113	1
Tennessee Valley Authority	100	103	105	76
Offsetting receipts	−242	−251	−253	−250
Subtotal, Area and regional development	2,620	5,736	3,571	3,073
453 Disaster relief and insurance:				
Small business disaster loans:				
Proposed credit reform				38
Other	210	202	284	278
Subtotal, Disaster relief and insurance	210	202	284	316
Total budget authority	6,649	9,490	7,476	6,236
500 EDUCATION, TRAINING, EMPLOYMENT, AND SOCIAL SERVICES				
501 Elementary, secondary, and vocational education:				
School improvement programs:				
Existing law	939	1,040	1,061	30
Proposed legislation				1,101
Compensatory education:				
Existing law	3,952	4,337	4,423	
Proposed legislation				4,566
Education for the handicapped	1,742	1,869	1,906	1,917
Impact aid	718	708	723	592
Vocational and adult education:				
Existing law	995	1,013	1,033	888
Proposed legislation				150
Other:				
Existing law	656	541	550	392
Proposed legislation				185
Subtotal, Elementary, secondary, and vocational education	9,001	9,508	9,696	9,820
502 Higher education:				
Student financial assistance:				
Existing law	5,483	5,545	5,652	6,021
Proposed legislation				79
Guaranteed student loan program:				
Existing law	2,717	2,565	2,745	2,740
Proposed legislation				−5
Proposed credit reform				3,094
Other:				
Existing law	852	902	910	779
Proposed legislation				6

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
Subtotal, Higher education	9,052	9,012	9,308	12,714
503 Research and general education aids:				
Existing law	1,308	1,352	1,408	1,260
Proposed legislation				76
Subtotal, Research and general education aids	1,308	1,352	1,408	1,336
504 Training and employment:				
Training and employment services	3,706	3,805	3,823	3,431
Worker readjustment (proposed)				948
Older Americans employment	336	331	331	336
Work incentive program	126	93	94	
Federal-State employment service	990	982	1,002	926
Other	67	71	72	72
Subtotal, Training and employment	5,226	5,282	5,324	5,713
505 Other labor services	730	778	794	806
506 Social services:				
Social services block grant	2,700	2,700	2,700	2,700
Community services block grant	405	382	390	310
Rehabilitation services	1,485	1,590	1,622	1,616
Payments to states for foster care and adoption assistance	1,061	811	966	1,075
Human development services	2,100	2,456	2,505	2,457
Domestic volunteer programs	156	163	166	166
Other social services	24	957	672	670
Subtotal, Social services	7,932	9,059	9,021	8,994
Total budget authority	33,249	34,992	35,550	39,383
550 HEALTH				
551 Health care services:				
Medicaid grants	27,612	30,657	33,146	32,733
Federal employees' health benefits	1,459	1,789	2,374	2,374
Other health care services:				
Existing law	3,814	4,156	4,167	4,129
Proposed credit reform				—*
Subtotal, Health care services	32,886	36,601	39,687	39,235
552 Health research:				
National Institutes of Health research	5,894	6,368	6,470	6,233
Other research programs	766	689	702	1,620
Subtotal, Health research	6,660	7,057	7,173	7,853
553 Education and training of health care work force:				
Research training	289	299	305	302
Clinical training:				
Existing law	202	209	213	43
Proposed legislation				—3
Proposed credit reform				17
Other	39	41	42	35
Subtotal, Education and training of health care work force	530	548	559	394
554 Consumer and occupational health and safety:				
Consumer safety	858	902	920	907
Occupational safety and health	392	405	414	420

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
Subtotal, Consumer and occupational health and safety	1,250	1,308	1,334	1,327
Total budget authority	41,325	45,514	48,752	48,810
570 MEDICARE				
571 Medicare:				
Hospital insurance (HI):				
Existing law	62,735	67,858	72,794	72,794
Proposed legislation				1,660
Supplementary medical insurance (SMI):				
Existing law	27,797	34,871	42,737	42,855
Proposed legislation				−285
Medicare premiums and collections:				
Existing law	−6,520	−8,800	−10,534	−10,563
Proposed legislation				87
Interfund transactions	−14			
Total budget authority	83,998	93,928	104,997	106,548
600 INCOME SECURITY				
601 General retirement and disability insurance (excluding social security):				
Railroad retirement	4,627	4,734	4,646	4,354
Special benefits for disabled coal miners	1,136	1,584	1,567	1,558
Other	75	80	87	87
Subtotal, General retirement and disability insurance (excluding social security)	5,838	6,397	6,301	5,999
602 Federal employee retirement and disability:				
Civilian retirement and disability programs:				
Existing law	44,145	46,528	48,770	48,770
Proposed legislation				4
Military retirement	31,919	33,563	35,060	35,060
Federal employees workers' compensation (FECA)	226	205	257	253
Subtotal, Federal employee retirement and disability	76,290	80,296	84,087	84,087
603 Unemployment compensation:				
Existing law	24,037	24,479	24,036	24,110
Proposed legislation				−102
Subtotal, Unemployment compensation	24,037	24,479	24,036	24,008
604 Housing assistance:				
Subsidized housing	6,903	7,368	7,488	6,533
Rural housing voucher program				382
Public housing operating subsidies	1,350	1,450	1,479	1,518
Low-rent public housing loans	1,300	1,436	956	956
Other housing assistance:				
Existing law	311	229	234	189
Proposed credit reform				*
Subtotal, Housing assistance	9,864	10,483	10,156	9,578
605 Food and nutrition assistance:				
Food stamps and aid to Puerto Rico	12,646	13,518	13,418	13,428
Child nutrition and other programs	6,922	7,132	7,319	7,330
Subtotal, Food and nutrition assistance	19,568	20,650	20,737	20,758
609 Other income security:				
Supplemental security income (SSI)	10,797	12,571	12,482	12,474

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
Family support payments:				
Existing law	10,461	11,125	10,355	10,355
Proposed legislation				368
Earned income tax credit (EITC)	1,410	2,893	3,897	3,897
Refugee assistance	340	347	320	279
Other	2,078	1,720	1,754	1,386
Subtotal, Other income security	25,086	28,656	28,808	28,759
Total budget authority	160,682	170,962	174,125	173,188
650 SOCIAL SECURITY				
651 Social security:				
Old-age and survivors insurance (OASI)	206,870	234,246	254,844	254,844
Disability insurance (DI)	20,052	22,244	24,064	24,064
Interfund transactions	1	*		
Total budget authority	226,922	256,490	278,908	278,908
On-budget	(4,930)	(5,022)	(5,572)	(5,572)
Off-budget	(221,992)	(251,468)	(273,336)	(273,336)
700 VETERANS BENEFITS AND SERVICES				
701 Income security for veterans:				
Service-connected compensation:				
Existing law	10,505	10,832	11,110	10,749
Proposed legislation				361
Non-service-connected pensions	3,794	3,854	3,865	3,865
Burial and other benefits:				
Existing law	123	147	145	145
Proposed legislation				−4
National service life insurance trust fund	1,391	1,421	1,426	1,426
All other insurance programs:				
Existing law	22	30	23	23
Proposed legislation				4
Insurance program receipts	−444	−434	−420	−420
Subtotal, Income security for veterans	15,392	15,850	16,149	16,149
702 Veterans education, training, and rehabilitation:				
Readjustment benefits (GI Bill and related programs)	763	651	598	598
Post-Vietnam era education				
All-volunteer force educational assistance trust fund	−170	−169	−166	−166
Veterans jobs program	30			
Other:				
Proposed credit reform				*
Subtotal, Veterans education, training, and rehabilitation	623	482	432	432
703 Hospital and medical care for veterans:				
Medical care and hospital services:				
Existing law	9,728	10,120	10,322	10,328
Proposed legislation				24
Construction	531	563	576	543
Medical administration, research, and other	255	240	245	253
Third-party reimbursement	−33	−113	−138	−138
Subtotal, Hospital and medical care for veterans	10,481	10,810	11,005	11,009
704 Veterans housing:				
Loan guaranty revolving fund:				
Existing law	100	1,282	658	658
Proposed credit reform				1,091

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
Direct loan revolving fund:				
Proposed credit reform				*
Subtotal, Veterans housing	100	1,282	658	1,749
705 Other veterans benefits and services:				
Cemeteries, administration of veterans benefits, and other	792	797	813	803
Non-VA support programs	78	68	71	76
Subtotal, Other veterans benefits and services	870	865	884	878
Total budget authority	27,466	29,289	29,128	30,217
750 ADMINISTRATION OF JUSTICE				
751 Federal law enforcement activities:				
Criminal investigations (DEA, FBI, and OCDE)	1,788	1,883	1,920	2,041
Alcohol, tobacco, and firearms investigation (ATF)	198	218	222	219
Border enforcement activities (Customs and INS)	1,977	2,162	2,147	2,229
Customs user fee:				
Existing law		−680	−707	−707
Proposed legislation				707
Protection activities (Secret Service)	351	382	389	370
Other enforcement	411	427	436	469
Subtotal, Federal law enforcement activities	4,726	4,391	4,407	5,328
752 Federal litigative and judicial activities:				
Civil and criminal prosecution and representation	1,082	1,195	1,276	1,414
Federal judicial activities	1,292	1,369	1,397	1,751
Representation of indigents in civil cases	306	306	312	250
Subtotal, Federal litigative and judicial activities	2,680	2,869	2,984	3,416
753 Federal correctional activities:				
Existing law	867	921	940	1,370
Proposed legislation				20
Subtotal, Federal correctional activities	867	921	940	1,390
754 Criminal justice assistance	502	324	328	173
Total budget authority	8,775	8,505	8,659	10,307
800 GENERAL GOVERNMENT				
801 Legislative functions	1,572	1,599	1,637	1,786
802 Executive direction and management	115	125	127	136
803 Central fiscal operations:				
Collection of taxes	4,445	5,059	5,160	5,300
Other fiscal operations:				
Existing law	352	340	344	383
Proposed legislation				2
Proposed credit reform				4
Subtotal, Central fiscal operations	4,797	5,399	5,504	5,689
804 General property and records management:				
Property receipts	−78	−160	−162	−287
Records management	102	116	119	118
Other	357	281	288	314
Subtotal, General property and records management	380	238	245	145
805 Central personnel management	141	145	148	150

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
806 General purpose fiscal assistance:				
Payments and loans to the District of Columbia	287	520	552	493
Payments to States and counties from Forest Service receipts	213	314	306	306
Payments to States from receipts under the Mineral Leasing Act	375	412	439	439
Payments to States and counties from Federal land management activities	13	162	90	90
Payments in lieu of taxes	105	105	105	105
Payments to territories and Puerto Rico	176	175	178	178
Other	199	213	213	213
Subtotal, General purpose fiscal assistance	1,369	1,902	1,883	1,825
808 Other general government:				
Compacts of free association	395	325	179	179
Territories	146	120	123	74
Treasury claims	361	328	313	313
Other	84	87	87	83
Subtotal, Other general government	985	860	702	650
809 Deductions for offsetting receipts	−623	−1,098	−500	−500
Total budget authority	8,736	9,170	9,745	9,880
870 CENTRAL FEDERAL CREDIT ACTIVITIES				
871 Central federal credit activities:				
Proposed credit reform				3,432
Total budget authority				3,432
900 NET INTEREST				
901 Interest on the public debt:				
Existing law	195,249	210,108	220,727	220,210
Proposed legislation				52
Subtotal, Interest on the public debt	195,249	210,108	220,727	220,262
902 Interest received by on-budget trust funds:				
Existing law	−29,662	−34,321	−38,219	−38,189
Proposed legislation				−52
Subtotal, Interest received by on-budget trust funds	−29,662	−34,321	−38,219	−38,240
903 Interest received by off-budget trust funds	−5,290	−7,271	−10,136	−10,136
908 Other interest:				
Interest on loans to Federal Financing Bank	−15,216	−15,127	−14,397	−14,224
Interest on refunds of tax collections	1,941	1,756	1,793	1,793
Interest on unvested funds:				
Existing law	21	18	18	18
Proposed credit reform				177
Other	−8,479	−7,237	−7,885	−7,846
Subtotal, Other interest	−21,732	−20,590	−20,471	−20,082
Total budget authority	138,565	147,926	151,901	151,804
On-budget	(143,856)	(155,197)	(162,037)	(161,940)
Off-budget	(−5,290)	(−7,271)	(−10,136)	(−10,136)
920 ALLOWANCES				
923 Savings from reform of Davis-Bacon and Service Contract Acts:				
Proposed legislation				−50

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
Total budget authority				−50
950 UNDISTRIBUTED OFFSETTING RECEIPTS				
951 Employer share, employee retirement (on-budget):				
Military retired contributions	−18,288	−18,353	−18,577	−18,577
Contributions to HI trust fund	−1,700	−1,888	−1,945	−1,945
Contributions from Postal Service	−2,788	−3,647	−3,421	−3,421
Contributions from other civilian agencies	−4,483	−4,782	−5,095	−5,095
Subtotal, Employer share, employee retirement (on-budget)	−27,259	−28,670	−29,038	−29,038
952 Employer share, employee retirement (off-budget)	−3,300	−4,298	−4,719	−4,719
953 Rents and royalties on the Outer Continental Shelf	−4,021	−3,155	−3,920	−3,920
954 Sale of major assets:				
Sale of Conrail	−1,875			
Sale of petroleum reserve (proposed)				−3,225
Sale of power administrations (proposed)				−100
Subtotal, Sale of major assets	−1,875			−3,325
Total budget authority	−36,455	−36,123	−37,677	−41,002
On-budget	(−33,155)	(−31,825)	(−32,958)	(−36,283)
Off-budget	(−3,300)	(−4,298)	(−4,719)	(−4,719)
Total budget authority	**1,099,893**	**1,176,236**	**1,224,751**	**1,233,151**
On-budget	(886,491)	(936,337)	(966,270)	(974,670)
Off-budget	(213,402)	(239,899)	(258,481)	(258,481)

*$500 thousand or less.

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
050 NATIONAL DEFENSE				
051 Department of Defense—Military:				
Military personnel	72,020	75,453	77,827	77,827
Operation and maintenance	76,205	80,433	82,725	82,725
Procurement	80,744	79,166	79,820	79,820
Research, development, test and evaluation	33,596	33,127	36,295	36,295
Military construction	5,853	5,418	5,668	5,668
Family housing	2,908	3,022	3,229	3,229
Revolving funds and other:				
Existing law	3,481	1,405	906	906
Proposed legislation			−40	−40
Offsetting receipts	−841	−750	−766	−766
Allowances: Savings from reform of Davis-Bacon and Service Contract Acts:				
Proposed legislation			−196	−196
Allowances: Other legislation (proposed)			33	33
Subtotal, Department of Defense—Military	273,966	277,275	285,500	285,500
053 Atomic energy defense activities	7,451	7,631	7,945	7,945
054 Defense-related activities	582	517	575	575
Total outlays	281,999	285,423	294,020	294,020
150 INTERNATIONAL AFFAIRS				
151 International development and humanitarian assistance:				
Multilateral development banks	1,043	1,248	1,311	1,298
International organizations	263	257	258	239
Agency for International Development:				
Existing law	2,012	2,056	2,141	2,126
Proposed credit reform				*
P.L. 480 food aid:				
Existing law	970	1,155	1,177	1,082
Proposed credit reform				−194
Refugee assistance	341	335	328	336
Other:				
Existing law	139	173	184	186
Proposed credit reform				3
Offsetting receipts	−449	−479	−456	−458
Subtotal, International development and humanitarian assistance	4,319	4,744	4,944	4,618
152 International security assistance:				
Foreign military sales credit:				
Existing law	3,758	−2,264	1,085	1,091
Proposed credit reform				155
Military assistance	356	633	688	624
Economic support fund	3,466	3,362	3,450	3,459
Guarantee reserve fund	−117	723	701	701
Other	108	89	91	93
Offsetting receipts	−464	−114	−132	−132
Subtotal, International security assistance	7,106	2,428	5,883	5,991
153 Conduct of foreign affairs:				
Administration of foreign affairs:				
Existing law	1,793	2,037	2,109	2,156
Proposed credit reform				−*
International organizations and conferences	360	565	524	523
Other	65	97	94	90
Subtotal, Conduct of foreign affairs	2,218	2,699	2,726	2,769

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
154 Foreign information and exchange activities	990	1,119	1,112	1,115
155 International financial programs:				
Foreign military sales trust fund (net)	1,407	155	142	142
Special defense acquisition fund	−21	31	−38	−38
Export-Import Bank:				
Existing law	−2,300	−985	−1,084	−1,084
Proposed credit reform				81
Exchange stabilization fund	−1,410	−176	−168	−168
Other	−572			
Offsetting receipts	−89	−90	−92	−92
Subtotal, International financial programs	−2,985	−1,065	−1,240	−1,160
Total outlays	11,649	9,926	13,425	13,334
250 GENERAL SCIENCE, SPACE, AND TECHNOLOGY				
251 General science and basic research:				
National Science Foundation programs	1,562	1,673	1,733	1,818
Department of Energy general science programs	697	795	816	1,104
Subtotal, General science and basic research	2,260	2,468	2,550	2,922
253 Space flight	4,137	5,180	5,434	6,350
254 Space science, applications, and technology	1,942	2,352	2,418	2,673
255 Supporting space activities	878	903	1,078	1,158
Total outlays	9,216	10,903	11,480	13,103
270 ENERGY				
271 Energy supply:				
Research and development	2,285	2,469	2,686	2,664
Petroleum reserves	−515	−597	−599	−587
Federal power marketing	−401	−622	−600	−580
Tennessee Valley Authority:				
Existing law	979	907	774	774
Proposed credit reform				−45
Uranium enrichment	−102	−3	−278	−91
Nuclear waste disposal fund	5	−87	−143	−102
Subsidies for nonconventional fuel production	272	108	161	161
Rural electric and telephone:				
Existing law	−206	−998	1,018	805
Proposed legislation				−2,093
Proposed credit reform				10
Subtotal, Energy supply	2,318	1,177	3,018	915
272 Energy conservation:				
Energy conservation grants and R&D	271	322	306	306
Solar Energy and Energy Conservation Bank	10	4	2	2
Subtotal, Energy conservation	281	325	308	308
274 Emergency energy preparedness:				
Existing law	788	611	714	634
Proposed legislation				479
Subtotal, Emergency energy preparedness	788	611	714	1,113
276 Energy information, policy, and regulation	727	600	671	724
Total outlays	4,115	2,713	4,711	3,061

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
300 NATURAL RESOURCES AND ENVIRONMENT				
301 Water resources:				
Corps of Engineers	2,873	3,440	3,495	3,531
Bureau of Reclamation:				
Existing law	964	919	1,076	1,078
Proposed credit reform				−4
Other	243	254	215	166
Offsetting receipts:				
Existing law	−297	−459	−438	−483
Proposed legislation				10
Subtotal, Water resources	3,783	4,154	4,349	4,298
302 Conservation and land management:				
Management of national forests, cooperative forestry, and forestry research (Forest Service)	1,876	2,068	2,159	1,977
Management of public lands (BLM)	537	545	538	560
Mining reclamation and enforcement	325	324	303	287
Conservation reserve program		736	1,235	1,841
Other conservation of agricultural lands	580	786	721	627
Other resources management	306	298	306	305
Offsetting receipts:				
Existing law	−2,151	−2,298	−2,348	−2,354
Proposed legislation				23
Subtotal, Conservation and land management	1,473	2,459	2,913	3,266
303 Recreational resources:				
Federal land acquisition	281	312	273	185
Urban park and historic preservation funds	29	33	31	16
Operation of recreational resources:				
Existing law	1,312	1,612	1,556	1,507
Proposed legislation				17
Offsetting receipts:				
Existing law	−59	−109	−113	−113
Proposed legislation				−23
Subtotal, Recreational resources	1,564	1,847	1,747	1,589
304 Pollution control and abatement:				
Regulatory, enforcement, and research programs	1,419	1,511	1,547	1,580
Hazardous substance response fund	541	778	1,115	1,205
Oil pollution funds (gross)	6	8	7	7
Sewage treatment plant construction grants	2,920	2,566	2,407	2,378
Leaking underground storage tank trust fund	1	23	27	32
Offsetting receipts	−20	−68	−104	−104
Subtotal, Pollution control and abatement	4,869	4,819	4,999	5,097
306 Other natural resources:				
Program activities	1,686	1,886	1,929	1,801
Offsetting receipts	−11	−26	−27	−27
Subtotal, Other natural resources	1,675	1,860	1,902	1,773
Total outlays	13,363	15,139	15,909	16,024
350 AGRICULTURE				
351 Farm income stabilization:				
Commodity Credit Corporation:				
Existing law	22,454	17,707	17,170	17,149
Proposed legislation				7
Proposed credit reform				565
Crop insurance	454	491	498	541

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
Agricultural credit:				
Existing law	2,564	2,124	2,597	1,999
Proposed credit reform				−497
Other programs and unallocated overhead	20	12	*	
Subtotal, Farm income stabilization	25,492	20,334	20,264	19,763
352 Agricultural research and services:				
Research programs	808	885	903	867
Extension programs	319	353	364	312
Marketing programs	103	134	142	143
Animal and plant health programs	324	338	342	306
Economic intelligence	183	191	205	204
Other programs and unallocated overhead	225	220	228	239
Offsetting receipts	−98	−103	−103	−103
Subtotal, Agricultural research and services	1,864	2,018	2,081	1,969
Total outlays	27,356	22,352	22,346	21,732
370 COMMERCE AND HOUSING CREDIT				
371 Mortgage credit and deposit insurance:				
Mortgage-backed securities (GNMA):				
Existing law	−234	−100	−278	−278
Proposed credit reform				1,007
Mortgage purchase activities (GNMA)	−481	27	−7	−7
Mortgage credit (FHA):				
Existing law	−555	281	154	36
Proposed credit reform				1,586
Housing for the elderly or handicapped	404	545	530	530
Rural housing programs (FmHA):				
Existing law	799	3,248	3,029	1,411
Proposed legislation				−89
Federal Deposit Insurance Corporation	−1,438	2,268	502	502
Federal Savings and Loan Insurance Corporation and other	4,755	2,189	951	951
National Credit Union Administration	−188	−253	−295	−295
Subtotal, Mortgage credit and deposit insurance	3,062	8,205	4,586	5,355
372 Postal service:				
Existing law	1,593	2,223	843	1,183
Proposed legislation				−508
Subtotal, Postal service	1,593	2,223	843	675
376 Other advancement of commerce:				
Small and minority business assistance:				
Existing law	342	471	469	74
Proposed legislation				
Proposed credit reform				173
Science and technology	370	411	366	373
Economic and demographic statistics	246	480	619	624
International trade and other:				
Existing law	569	575	564	589
Proposed legislation				−1
Subtotal, Other advancement of commerce	1,527	1,936	2,018	1,832
Total outlays	6,182	12,364	7,448	7,862
400 TRANSPORTATION				
401 Ground transportation:				
Highways	12,687	13,336	13,597	13,388
Highway safety	269	302	316	317

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
Mass transit:				
Existing law	3,351	3,589	3,842	3,104
Proposed legislation				309
Railroads	808	527	563	26
Regulation:				
Existing law	42	43	45	44
Proposed legislation				−16
Subtotal, Ground transportation	17,157	17,797	18,363	17,172
402 Air transportation:				
Airports and airways (FAA)	4,858	5,311	5,564	5,801
Aeronautical research and technology	635	679	723	797
Air carrier subsidies	26	24	24	5
Subtotal, Air transportation	5,520	6,014	6,311	6,603
403 Water transportation:				
Marine safety and transportation	2,575	2,775	2,727	2,961
Ocean shipping:				
Existing law	886	604	402	401
Proposed legislation				8
Proposed credit reform				−5
Reimbursement to Treasury from Panama Canal Commission		−86		
Subtotal, Water transportation	3,461	3,293	3,129	3,365
407 Other transportation	91	133	116	141
Total outlays	26,228	27,237	27,920	27,280
450 COMMUNITY AND REGIONAL DEVELOPMENT				
451 Community development:				
Community development block grants	2,991	2,980	2,977	2,959
Urban development action grants	354	400	366	366
Rental rehabilitation and rental development	166	324	354	348
Pennsylvania Avenue Development Corporation	11	9	14	13
Other	157	55	242	233
Subtotal, Community development	3,680	3,768	3,953	3,920
452 Area and regional development:				
Rural development:				
Existing law	300	1,181	1,142	1,128
Proposed legislation				−118
Proposed credit reform				−18
Economic development assistance	341	268	247	226
Indian programs:				
Existing law	950	1,088	1,111	1,044
Proposed credit reform				1
Regional commissions	152	134	120	116
Tennessee Valley Authority	112	85	96	89
Other	−14	−6	−7	−7
Offsetting receipts	−242	−251	−253	−250
Subtotal, Area and regional development	1,599	2,500	2,457	2,210
453 Disaster relief and insurance:				
Small business disaster loans:				
Existing law	−362	−150	−112	−484
Proposed credit reform				−90
National flood insurance fund	−219	−107	−70	−70
Other	352	310	395	393
Subtotal, Disaster relief and insurance	−229	53	213	−251

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
Total outlays	5,051	6,321	6,623	5,879
500 EDUCATION, TRAINING, EMPLOYMENT, AND SOCIAL SERVICES				
501 Elementary, secondary, and vocational education:				
School improvement programs:				
Existing law	889	733	1,058	934
Proposed legislation				133
Compensatory education:				
Existing law	3,210	3,841	4,341	3,810
Proposed legislation				548
Education for the handicapped	1,339	1,801	1,863	1,864
Impact aid	704	756	748	632
Vocational and adult education:				
Existing law	1,231	979	913	895
Proposed legislation				18
Other:				
Existing law	537	505	528	523
Proposed legislation				22
Subtotal, Elementary, secondary, and vocational education	7,911	8,614	9,450	9,380
502 Higher education:				
Student financial assistance:				
Existing law	4,780	5,319	5,708	5,774
Proposed legislation				16
Guaranteed student loan program:				
Existing law	2,548	2,630	2,747	2,743
Proposed legislation				−3
Proposed credit reform				2,476
Other:				
Existing law	78	519	838	839
Proposed legislation				−220
Subtotal, Higher education	7,406	8,468	9,294	11,625
503 Research and general education aids:				
Existing law	1,255	1,407	1,417	1,357
Proposed legislation				30
Subtotal, Research and general education aids	1,255	1,407	1,417	1,388
504 Training and employment:				
Training and employment services	3,604	3,717	3,820	3,808
Worker readjustment (proposed)				29
Older Americans employment	312	329	332	333
Work incentive program	137	95	94	6
Federal-State employment service	968	1,008	990	961
Other	64	71	74	74
Subtotal, Training and employment	5,084	5,221	5,310	5,211
505 Other labor services	675	768	797	808
506 Social services:				
Social services block grant	2,688	2,685	2,700	2,700
Community services block grant	361	406	404	349
Rehabilitation services	1,405	1,585	1,605	1,600
Payments to states for foster care and adoption assistance	802	996	933	1,014
Human development services	1,959	2,389	2,478	2,451
Domestic volunteer programs	159	160	165	165
Other social services	21	957	671	672

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
Subtotal, Social services	7,394	9,176	8,955	8,951
Total outlays	29,724	33,654	35,224	37,362
550 HEALTH				
551 Health care services:				
Medicaid grants	27,435	30,664	33,146	32,733
Federal employees' health benefits	1,799	1,835	1,914	1,914
Other health care services:				
Existing law	3,382	3,811	4,059	3,991
Proposed credit reform				—*
Subtotal, Health care services	32,616	36,309	39,119	38,637
552 Health research:				
National Institutes of Health research	4,971	5,682	6,304	6,214
Other research programs	628	795	736	1,155
Subtotal, Health research	5,599	6,477	7,040	7,369
553 Education and training of health care work force:				
Research training	251	218	253	253
Clinical training:				
Existing law	250	156	210	162
Proposed legislation				—4
Proposed credit reform				18
Other	56	41	42	36
Subtotal, Education and training of health care work force	556	415	504	465
554 Consumer and occupational health and safety:				
Consumer safety	827	879	902	891
Occupational safety and health	370	398	404	409
Subtotal, Consumer and occupational health and safety	1,197	1,278	1,306	1,300
Total outlays	39,968	44,479	47,968	47,771
570 MEDICARE				
571 Medicare:				
Hospital insurance (HI):				
Existing law	50,803	52,484	55,713	55,782
Proposed legislation				—980
Supplementary medical insurance (SMI):				
Existing law	30,837	35,173	39,847	40,026
Proposed legislation				—337
Medicare premiums and collections:				
Existing law	—6,520	—8,800	—10,534	—10,563
Proposed legislation				87
Interfund transactions				
Total outlays	75,120	78,857	85,026	84,015
600 INCOME SECURITY				
601 General retirement and disability insurance (excluding social security):				
Railroad retirement	3,963	3,889	4,028	4,005
Special benefits for disabled coal miners	1,602	1,556	1,575	1,619
Pension Benefit Guaranty Corporation	—72	—571	—505	—504
Other	72	74	81	81
Subtotal, General retirement and disability insurance (excluding social security)	5,565	4,948	5,178	5,200

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
602 Federal employee retirement and disability:				
Civilian retirement and disability programs	26,161	27,552	29,532	29,532
Military retirement	18,080	19,128	20,320	20,324
Federal employees workers' compensation (FECA)	206	205	257	253
Federal employees life insurance fund:				
Existing law	−702	−722	−775	−769
Proposed legislation				18
Subtotal, Federal employee retirement and disability	43,745	46,163	49,334	49,357
603 Unemployment compensation:				
Existing law	17,080	15,764	16,493	16,477
Proposed legislation				−102
Subtotal, Unemployment compensation	17,080	15,764	16,493	16,375
604 Housing assistance:				
Subsidized housing	9,786	10,630	12,087	12,069
Rural housing voucher program	14	19	20	24
Public housing operating subsidies	1,388	1,486	1,497	1,515
Low-rent public housing loans	1,356	1,492	1,022	1,022
Other housing assistance	112	208	235	218
Subtotal, Housing assistance	12,656	13,833	14,860	14,847
605 Food and nutrition assistance:				
Food stamps and aid to Puerto Rico	12,407	13,426	13,408	13,412
Child nutrition and other programs	6,533	7,103	7,346	7,354
Subtotal, Food and nutrition assistance	18,940	20,530	20,754	20,765
609 Other income security:				
Supplemental security income (SSI)	10,909	12,636	12,482	12,474
Family support payments:				
Existing law	10,540	10,785	10,772	10,772
Proposed legislation				168
Earned income tax credit (EITC)	1,410	2,893	3,897	3,897
Refugee assistance	387	305	321	295
Other	2,017	1,757	1,757	1,421
Subtotal, Other income security	25,264	28,376	29,230	29,028
Total outlays	123,250	129,614	135,850	135,573
650 SOCIAL SECURITY				
651 Social security:				
Old-age and survivors insurance (OASI)	186,124	197,528	210,642	210,615
Disability insurance (DI)	21,227	22,189	23,170	23,155
Interfund transactions	1			
Total outlays	207,353	219,717	233,811	233,769
On-budget	(4,930)	(5,022)	(5,572)	(5,572)
Off-budget	(202,422)	(214,695)	(228,239)	(228,197)
700 VETERANS BENEFITS AND SERVICES				
701 Income security for veterans:				
Service-connected compensation:				
Existing law	10,500	10,771	11,070	10,671
Proposed legislation				325
Non-service-connected pensions	3,793	3,849	3,864	3,864
Burial and other benefits:				
Existing law	131	147	145	145
Proposed legislation				−4
National service life insurance trust fund	1,034	1,077	1,132	1,132

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
All other insurance programs:				
Existing law	−52	−44	−41	−41
Proposed legislation				4
Insurance program receipts	−444	−434	−420	−420
Subtotal, Income security for veterans	14,962	15,366	15,750	15,675
702 Veterans education, training, and rehabilitation:				
Readjustment benefits (GI Bill and related programs)	776	677	608	606
Post-Vietnam era education	51	59	89	89
All-volunteer force educational assistance trust fund	−401	−309	−222	−222
Veterans jobs program	38	32	5	5
Other:				
Existing law	−10	−8	−6	−6
Proposed legislation				−*
Proposed credit reform				−*
Subtotal, Veterans education, training, and rehabilitation	454	451	474	472
703 Hospital and medical care for veterans:				
Medical care and hospital services:				
Existing law	9,500	10,083	10,294	10,296
Proposed legislation				24
Construction	563	604	579	580
Medical administration, research, and other	236	253	243	250
Third-party reimbursement	−33	−113	−138	−138
Subtotal, Hospital and medical care for veterans	10,266	10,828	10,979	11,012
704 Veterans housing:				
Loan guaranty revolving fund:				
Existing law	382	1,048	730	683
Proposed credit reform				881
Direct loan revolving fund:				
Existing law	−33	−67	−27	−27
Proposed credit reform				−1
Other (HUD participation sales trust fund)	−19	153		
Subtotal, Veterans housing	330	1,134	703	1,536
705 Other veterans benefits and services:				
Cemeteries, administration of veterans benefits, and other	715	825	816	799
Non-VA support programs:				
Existing law	54	71	74	80
Proposed legislation				−1
Subtotal, Other veterans benefits and services	769	896	890	877
Total outlays	26,782	28,674	28,797	29,573
750 ADMINISTRATION OF JUSTICE				
751 Federal law enforcement activities:				
Criminal investigations (DEA, FBI, and OCDE)	1,633	1,786	1,873	1,969
Alcohol, tobacco, and firearms investigation (ATF)	179	217	221	218
Border enforcement activities (Customs and INS)	1,616	2,099	2,123	2,186
Customs user fee:				
Existing law		−680	−707	−707
Proposed legislation				707
Protection activities (Secret Service)	312	404	383	368
Other enforcement	365	447	440	465
Subtotal, Federal law enforcement activities	4,105	4,273	4,334	5,207

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
752 Federal litigative and judicial activities:				
Civil and criminal prosecution and representation	977	1,116	1,202	1,313
Federal judicial activities	1,196	1,397	1,400	1,710
Representation of indigents in civil cases	309	296	311	257
Subtotal, Federal litigative and judicial activities	2,482	2,809	2,912	3,280
753 Federal correctional activities:				
Existing law	711	842	883	1,092
Proposed legislation				20
Subtotal, Federal correctional activities	711	842	883	1,112
754 Criminal justice assistance	250	366	352	295
Total outlays	7,548	8,290	8,482	9,894
800 GENERAL GOVERNMENT				
801 Legislative functions	1,444	1,574	1,619	1,755
802 Executive direction and management	110	123	127	133
803 Central fiscal operations:				
Collection of taxes	4,162	5,061	5,138	5,255
Other fiscal operations:				
Existing law	−244	243	150	184
Proposed legislation				−*
Proposed credit reform				4
Subtotal, Central fiscal operations	3,918	5,304	5,288	5,443
804 General property and records management:				
Federal buildings fund	−84	−133	−286	−55
Property receipts	−78	−160	−162	−287
Records management	96	113	118	117
Other	211	281	287	291
Subtotal, General property and records management	146	101	−43	66
805 Central personnel management	143	145	132	134
806 General purpose fiscal assistance:				
Payments and loans to the District of Columbia	267	523	554	495
Payments to States and counties from Forest Service receipts	303	289	308	308
Payments to States from receipts under the Mineral Leasing Act	375	412	439	439
Payments to States and counties from Federal land management activities	89	86	90	90
Payments in lieu of taxes	105	105	105	105
Payments to territories and Puerto Rico	168	175	178	178
Other	312	214	213	213
Subtotal, General purpose fiscal assistance	1,621	1,804	1,886	1,828
808 Other general government:				
Compacts of free association	296	325	179	179
Territories	93	127	133	92
Treasury claims	361	328	313	313
Other	60	189	45	47
Subtotal, Other general government	810	969	670	632
809 Deductions for offsetting receipts	−623	−1,098	−500	−500
Total outlays	7,569	8,921	9,179	9,492

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
870 CENTRAL FEDERAL CREDIT ACTIVITIES				
871 Central federal credit activities:				
Direct loan revolving fund:				
Proposed credit reform				1,981
Guaranteed loan revolving fund:				
Proposed credit reform				−8,263
Total outlays				−6,282
900 NET INTEREST				
901 Interest on the public debt:				
Existing law	195,249	210,108	220,727	220,210
Proposed legislation				52
Subtotal, Interest on the public debt	195,249	210,108	220,727	220,262
902 Interest received by on-budget trust funds:				
Existing law	−29,662	−34,321	−38,219	−38,189
Proposed legislation				−52
Subtotal, Interest received by on-budget trust funds	−29,662	−34,321	−38,219	−38,240
903 Interest received by off-budget trust funds	−5,290	−7,271	−10,136	−10,136
908 Other interest:				
Interest on loans to Federal Financing Bank	−15,216	−15,127	−14,397	−14,224
Interest on refunds of tax collections	1,941	1,756	1,793	1,793
Interest on unvested funds:				
Existing law	19	18	18	18
Proposed credit reform				177
Other	−8,472	−7,237	−7,885	−7,846
Subtotal, Other interest	−21,727	−20,590	−20,471	−20,082
Total outlays	138,570	147,926	151,901	151,804
On-budget	(143,860)	(155,197)	(162,037)	(161,940)
Off-budget	(−5,290)	(−7,271)	(−10,136)	(−10,136)
920 ALLOWANCES				
923 Savings from reform of Davis-Bacon and Service Contract Acts:				
Proposed legislation				−48
Total outlays				−48
950 UNDISTRIBUTED OFFSETTING RECEIPTS				
951 Employer share, employee retirement (on-budget):				
Military retired contributions	−18,288	−18,353	−18,577	−18,577
Contributions to HI trust fund	−1,700	−1,888	−1,945	−1,945
Contributions from Postal Service	−2,788	−3,647	−3,421	−3,421
Contributions from other civilian agencies	−4,483	−4,782	−5,095	−5,095
Subtotal, Employer share, employee retirement (on-budget)	−27,259	−28,670	−29,038	−29,038
952 Employer share, employee retirement (off-budget)	−3,300	−4,298	−4,719	−4,719
953 Rents and royalties on the Outer Continental Shelf	−4,021	−3,155	−3,920	−3,920
954 Sale of major assets:				
Sale of Conrail	−1,875			
Sale of petroleum reserve (proposed)				−3,225

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

(In millions of dollars)

	1987 actual	Current services		1989 administration proposals
		1988 estimate	1989 estimate	
Sale of power administrations (proposed)				−100
Subtotal, Sale of major assets	−1,875			−3,325
Total outlays	−36,455	−36,123	−37,677	−41,002
On-budget	(−33,155)	(−31,825)	(−32,958)	(−36,283)
Off-budget	(−3,300)	(−4,298)	(−4,719)	(−4,719)
Total outlays	**1,004,586**	**1,056,386**	**1,102,443**	**1,094,215**
On-budget	(810,754)	(853,260)	(889,059)	(880,873)
Off-budget	(193,832)	(203,126)	(213,384)	(213,342)

*$500 thousand or less.

GRAMM-RUDMAN-HOLLINGS BUDGET BASELINE

The Balanced Budget and Emergency Deficit Control Act of 1985 defines a budget baseline for calculating a budget deficit to determine whether automatic spending reductions are to be triggered. The 1987 amendments specified that the President's budget include a baseline estimate developed using the same rules. The Act also stipulates that this baseline use economic and technical assumptions consistent with current services estimates.

The Act (commonly known as Gramm-Rudman-Hollings or G-R-H) stipulates that budget deficits must decrease annually and specifies measures that must be taken to achieve this result. If by October 15 when revised estimates are required, the estimated G-R-H budget baseline deficit exceeds $146 billion (the 1989 deficit target of $136 billion plus the $10 billion "cushion" allowed under the Act), a sequestration will be triggered to reduce the baseline deficit. For 1989, the Act stipulates that the deficit must be reduced by $36 billion or to $136 billion, whichever requires the smaller reduction.

G-R-H Budget Baseline Totals for 1989

Under the specifications set forth in the Act, the deficit for 1989 is $142.7 billion. Outlays total $1,107.4 billion; while receipts total $964.6 billion. Since the estimated deficit exceeds $136 billion by less than $10 billion, a sequester would not be triggered.

These estimates generally assume that current law for revenues and entitlements will continue unchanged. Because these estimates are being prepared prior to appropriations action for 1989, the estimates for discretionary programs are required to be based on enacted 1988 appropriations. The 1988 levels are adjusted for inflation and pay-related cost increases. The aggregate spendout rate

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for sequesterable nondefense discretionary budgetary resources is estimated to be 50 percent. Spendout rates for each account are the same as those used for current service estimates. These were developed in close cooperation with the Congressional Budget Office, in keeping with the instruction of the Bipartisan Budget Agreement that the two institutions work together to minimize technical differences. The use of these spendout rates also conforms with the requirement that the G-R-H budget baseline be based on technical factors consistent with the current services estimates. However, the result is a difference in aggregate spendout rate from the October, 1987 G-R-H aggregate spendout rate in excess of one half of one percent.

The G-R-H budget baseline is estimated using the economic assumptions shown in Table A–1, the same assumptions used for current services and proposed policy estimates. The Act requires that this report include the assumptions used for the rate of real growth for each quarter of the fiscal year and for the last two quarters of the preceding fiscal year. Table A–17 presents these assumptions.

Table A–17. **REAL ECONOMIC GROWTH RATES BY QUARTER**

(In percents, annual rates)

	1988			1989			
	Jan-Mar 1988	Apr-Jun 1988	Jun-Sep 1988	Oct-Dec 1988	Jan-Mar 1989	Apr-Jun 1989	Jun-Sep 1989
Real growth rate	2.5	2.0	2.5	2.5	3.5	3.5	3.5

Sequesterable Resources

If reductions in outlays were required under the Act, they would not be made directly; rather, they would be achieved by the permanent cancellation—referred to under the Act as "sequestration"—of budget authority and other authority to obligate and expend funds (except that amounts sequestered in special and trust funds remain in such funds). For defense programs, sequesterable budgetary resources are defined to be new budget authority provided for 1989 and unobligated balances of budget authority provided in previous years. For nondefense programs, the sequesterable budgetary resources are new budget authority; new direct loan obligations, commitments, or limitations; new guaranteed loan commitments or limitations; obligation limitations, and spending authority as defined in Section 401(c)(2) of the Congressional Budget Act of 1974. As defined, spending authority includes various mandatory and permanent appropriations, as well as Federal payments financed by offsetting collections that are credited to budget accounts.

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Not all programs and not all budgetary resources are subject to sequestration. The Act exempts many programs and activities of the Federal Government. The largest are social security benefits, net interest, certain low-income programs, most Federal retirement and disability benefits, veterans compensation and pensions, and regular State unemployment insurance benefits. Federal administrative expenses for most otherwise exempt programs and activities, however, are sequesterable, including programs that are self-supporting. Budgetary resources that are exempt from sequestration are unobligated balances of prior-year appropriations for nondefense programs, prior legal obligations of the Government in certain specified budget accounts, as well as the program bases for certain programs whose automatic spending increases are subject to sequester.

Under the Act, the President is granted authority to exempt all military personnel accounts from sequester. Since the notification to Congress is not required for this report, Table A-18 presents the composition of baseline estimates under two scenarios; all military personnel are exempt and no special exemptions are made.

Certain programs and activities, while not exempt, are subject to special rules that have the effect of limiting the amount of the spending reduction. For example, the sequestration reduction for medicare, veterans medical care, and certain health programs (but not for the administrative expenses of these programs) is limited to two percent annually. In addition, the total amount of the automatic spending increases in three programs specified in the Act is sequesterable.

For credit programs, the sequesterable budgetary resources are direct loan obligations and guaranteed loan commitments. In the event of a sequester, the Act requires that credit limitations enacted in annual appropriation acts be reduced, and that *de facto* limitations be imposed on both types of new credit activity where there is no enacted limitation.

Composition of Baseline Outlays

Table A-18 provides detail on the OMB G-R-H baseline outlay estimates for 1989. An estimated $107.4 billion of 1989 outlays for defense programs, or 37 percent of total defense outlays, are associated with budgetary resources that would be subject to an across-the-board percentage reduction if all military personnel accounts were exempted by the President. If these accounts were not exempt, $182.9 billion of 1989 outlays or 62 percent of total defense outlays would be in this category.

An estimated $210.5 billion of outlays for nondefense programs, or 26 percent of total nondefense outlays, are associated with sequesterable budgetary resources. About $105.8 billion of these out-

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Table A–18. **COMPOSITION OF BASELINE OUTLAYS FOR 1989**

(In billions of dollars)

	Estimate	Percent of Total
Defense: [1]		
Subject to across-the-board reduction	182.9	16.5
Exempt from sequestration	110.8	10.0
Subtotal, defense programs	293.7	26.5
Nondefense programs:		
Subject to sequestration:		
Certain programs with automatic spending increases	1.3	0.1
Programs subject to special rules	104.6	9.4
Subject to across-the-board reduction	104.7	9.5
Subtotal, subject to sequestration	210.5	19.0
Exempt from sequestration:		
Social security	232.6	21.0
Federal retirement, disability, and workers compensation	61.1	5.5
Earned income tax credit	3.9	0.4
Low-income programs	74.4	6.7
Veterans compensation and pensions	14.9	1.3
State unemployment benefits	14.4	1.3
Offsetting receipts	−61.7	−5.6
Net interest	152.1	13.7
Other	111.4	10.1
Subtotal, exempt from sequestration	603.1	54.5
Subtotal, nondefense programs	813.6	73.5
Total	1,107.4	100.0
Memorandum:		
Defense with all military personnel accounts exempt:		
Subject to across-the-board reduction	107.4	9.7
Exempt from sequestration	186.3	16.8

[1] Excludes Federal Emergency Management Agency accounts.

lays, or 13 percent of total nondefense outlays, are associated with programs with automatic spending increases and certain special rule programs, the largest of which is medicare. The Act limits the extent of spending reductions for these programs.

Of the total estimated 1989 nondefense outlays of $813.6 billion, an estimated $104.7 billion—about 13 percent of nondefense outlays—are associated with budgetary resources subject to an across-the-board percentage reduction. An estimated $603.1 billion of nondefense outlays, or 74 percent of total nondefense outlays, are exempt from sequestration.

Tables A–19 and A–20 show the G-R-H budget baseline by function and agency.

Sequestration Calculations

Under the current G-R-H budget baseline estimates, sequestration is not triggered and no further calculations are required. If

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Table A–19. **1989 G-R-H BUDGET BASELINE BY FUNCTION**

(In billions of dollars)

	Budget authority	Outlays
National defense	306.8	294.0
International affairs	16.7	15.9
General science, space and technology	11.2	11.6
Energy	5.7	4.8
Natural resources and environment	16.3	16.3
Agriculture	24.5	22.4
Commerce and housing credit	12.5	7.5
Transportation	28.4	27.8
Community and regional development	7.5	6.6
Education, training, employment, and social services	35.3	35.5
Health	49.6	48.3
Medicare	105.0	85.2
Income security	175.9	135.9
Social security	278.9	234.1
Veterans' benefits and services	29.5	29.1
Administration of justice	8.9	8.7
General government	9.9	9.5
Net interest	152.1	152.1
Undistributed offsetting receipts	−37.8	−37.8
Total	1,236.8	1,107.4

estimates developed in August or October yield a deficit greater than $146 billion, the following steps would be taken to determine the sequestration amounts.

First, the deficit reduction to be achieved through sequester would be calculated by determining the amount that the estimated deficit exceeds the $136 billion target. If the excess is less than $36 billion, it would become the total sequester amount. If it is greater than $36 billion, $36 billion would be the required reduction. One-half of the required deficit reduction would be assigned to defense programs (budget accounts in the national defense function, 050, excluding the Federal Emergency Management Agency) and the other half to nondefense programs.

Second, all savings from eliminating automatic spending increases in three specific programs—the National Wool Act, the special milk program, and vocational rehabilitation—would be applied to the required reduction in outlays for nondefense programs.

Third, the amount of outlay savings to be obtained by applying two of the four special rules would be calculated. These special rules are for guaranteed student loans and for foster care and adoption assistance. The estimated savings from these special rules would be applied toward the required spending reductions in nondefense programs. If the nondefense sequester percentage was greater than two percent, the savings from applying two additional special rules for medicare and certain other health programs would

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Table A–20. **1989 G-R-H BUDGET BASELINE BY AGENCY**

(In billions of dollars)

	Budget authority	Outlays
Legislative Branch	2.0	2.0
Judicial Branch	1.4	1.4
Executive Office of the President	0.1	0.1
Funds appropriated to the President	10.6	11.1
Agriculture	57.9	53.4
Commerce	2.5	2.6
Defense—Military	298.2	285.5
Defense—Civil	38.5	23.7
Education	21.3	20.8
Energy	11.6	10.9
Health and Human Services, except Social Security	190.5	170.6
Health and Human Services, Social Security	273.3	228.5
Housing and Urban Development	15.9	19.1
Interior	5.5	5.4
Justice	5.6	5.4
Labor	31.4	23.1
State	3.9	3.4
Transportation	27.5	26.9
Treasury	211.9	211.6
Environmental Protection Agency	5.1	5.1
General Services Administration	0.1	—*
National Aeronautics and Space Administration	9.3	9.8
Office of Personnel Management	51.0	30.5
Small Business Administration	0.4	0.4
Veterans Administration	29.4	29.0
Other independent agencies	18.3	13.6
Undistributed offsetting receipts	—86.7	—86.7
Total	1,236.8	1,107.4

also be calculated at this stage and applied toward the required spending reductions for nondefense.

The reductions in defense programs and remaining reductions in nondefense programs must be taken on a uniform percentage basis, computed separately for each category. The uniform reduction percentages are computed from outlay estimates. The remaining outlay savings to be achieved separately in defense and nondefense spending would be divided by the estimated outlays associated with sequesterable budgetary resources in each category. The two resulting uniform reduction percentages for defense and nondefense would then be applied separately to all of the remaining sequesterable budgetary resources (budget authority, credit authority, and other spending authority) in each category.

Differences Between Current Services and the G-R-H Budget Baseline

The two baselines presented in this analysis are closely related. The current services deficit for 1989 is $138.5 billion, while the G-R-H budget baseline deficit is $142.7 billion. For mandatory pro-

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grams the two baselines are nearly identical. One difference that does exist between the baselines concerns a program under which the Internal Revenue Service reduces tax refunds of borrowers who have not met repayment schedules on loans from the Government. Because the authorizing legislation for this program will expire before the beginning of 1989, the G-R-H budget baseline can not legally assume that collections from this source will continue. The current services baseline does assume that the program will be reauthorized. As a result, net outlays in current services are $0.2 billion below net outlays in the G-R-H budget baseline.

Asset sales and loan prepayments are treated differently in the two baselines. Under rules specified in the Act, these items can only be counted if they were enacted prior to September 18, 1987 or were part of an agency's ongoing activities in 1986. Current services estimates include all such sales and prepayments that have been enacted. The current services estimates, therefore, include specific loan prepayments enacted in the 1988 Continuing Resolution and the Omnibus Budget Reconciliation Act of 1987. The inclusion of these prepayments makes current services outlays $2.5 billion below G-R-H budget baseline outlays.

A small difference between the baselines, less than $50 million, relates to the treatment of clearly temporary discretionary programs. Current services estimates assume such programs will sunset as scheduled while the G-R-H budget baseline estimates, as specified in the Act, assume continuation of the programs.

The remaining difference between the baselines is a result of including portions of the Bipartisan Budget Agreement in current services but not in the G-R-H budget baseline. For discretionary programs, the current services baseline incorporates levels agreed to by the bipartisan budget negotiators. The G-R-H Act does not permit these levels to be incorporated into the G-R-H budget baseline until they are specifically enacted in appropriations action. Thus, the G-R-H budget baseline adjusts all discretionary programs for inflation and increased pay-related costs as required by the Act. For nondefense programs, the current services estimates will be below the G-R-H budget baseline estimates for both budget authority and outlays. For defense programs, current services budget authority will be below the G-R-H budget baseline estimates; while, due to a shift in composition of budget authority in current services, outlays will be nearly identical in the two baselines. The current services baseline also uses different pay raises than the G-R-H budget baseline, again because Bipartisan Budget Agreements are included only in current services estimates. The pay raise difference also leads to a difference in governmental receipts because a lower pay raise leads to fewer employee contributions to employee retirement and social security (OASDHI) and to reduc-

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tions in individual income taxes. Thus, current services receipts are below the G-R-H receipts.

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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 is a *report to the Congress and the people* on how the Government has spent the funds entrusted to it in past years.
- It is an *economic document* that reflects the taxation and spending policies of the Government for promoting economic growth, high employment, and a stable price level.
- 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.

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 (NIPAs) of the United States provide the most useful measures. This special analysis shows Federal finances as measured in the NIPAs. 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 1988 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 3 of the *Budget* 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 1987–89.

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

(In billions of dollars)

Description	1987 actual	1988 estimate	1989 estimate
RECEIPTS			
Personal tax and nontax receipts	401.9	406.3	421.2
Corporate profits tax accruals	104.0	129.7	138.2
Indirect business tax and nontax accruals	54.1	57.6	60.1
Contributions for social insurance	345.6	380.2	409.6
Total receipts	**905.6**	**973.8**	**1,029.1**
EXPENDITURES			
Purchases of goods and services	374.9	375.3	396.4
Defense	(290.5)	(289.1)	(295.4)
Nondefense	(84.4)	(86.2)	(101.0)
Transfer payments	410.1	433.8	459.4
Domestic ("to persons")	(398.7)	(421.3)	(447.4)
Foreign	(11.4)	(12.5)	(12.0)
Grants-in-aid to State and local governments	103.1	110.7	113.3
Net interest paid	139.6	147.8	152.7
Subsidies less current surplus of Government enterprises	27.5	30.4	24.1
Wage disbursements less accruals	0.1	−0.1	.....
Total expenditures	**1,055.1**	**1,098.1**	**1,145.9**
Deficit (−)	**−149.5**	**−124.3**	**−116.8**

Note: The estimates for 1988 and 1989 are preliminary; revisions will be published in the February 1988 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 1989 levels. The 3-year averages limit the impact of annual fluctuations, thereby permitting greater focus on trends.

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

Description	1956–58 average actual	1966–68 average actual	1976–78 average actual	1986–88 average estimate	1989 estimate
Personal tax and nontax receipts	8.1	8.1	8.4	8.8	8.4
Corporate profits tax accruals	4.6	4.0	3.1	2.4	2.8
Indirect business tax and nontax accruals	2.6	2.0	1.3	1.2	1.2
Contributions for social insurance	2.8	4.6	6.5	7.9	8.2
Total receipts	**18.1**	**18.6**	**19.3**	**20.2**	**20.5**

Personal tax and nontax receipts.—The largest receipt category—personal tax and nontax receipts—is comprised primarily of individual income taxes but also includes estate and gift taxes and some miscellaneous receipts. Increases in income, because of both

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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 1989.

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 NIPAs 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 NIPAs 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 comprised 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-

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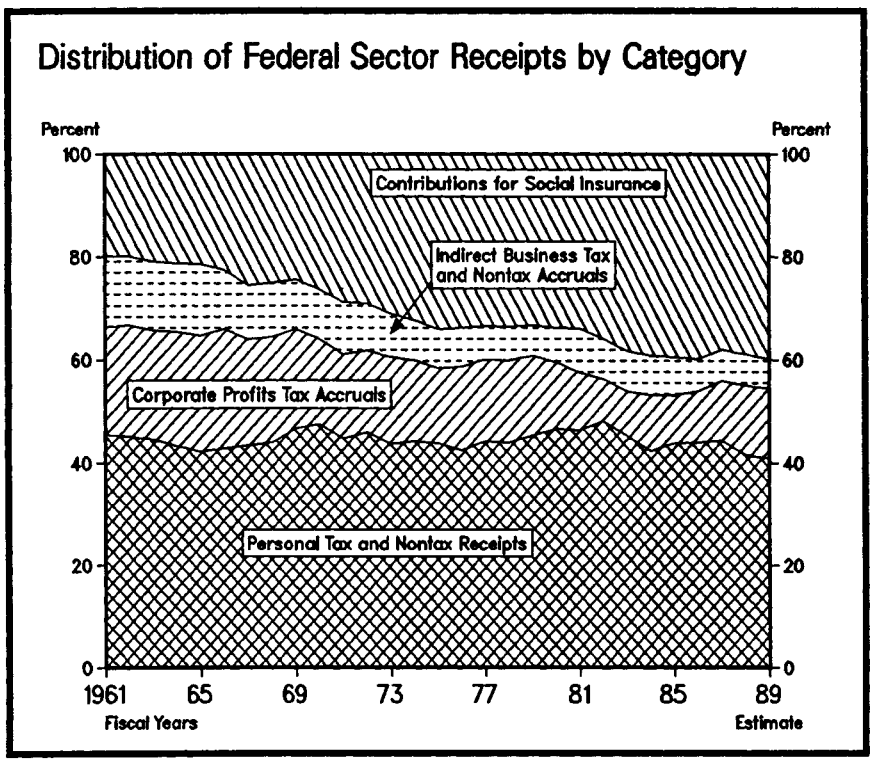
tion to the nominal growth in the economy; most are taxes on physical quantities rather than on the value of a good. Second, some excise taxes have been reduced or repealed.

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, 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

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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 Revenue 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*; additional details on an NIPA basis will be published in the February 1988 *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

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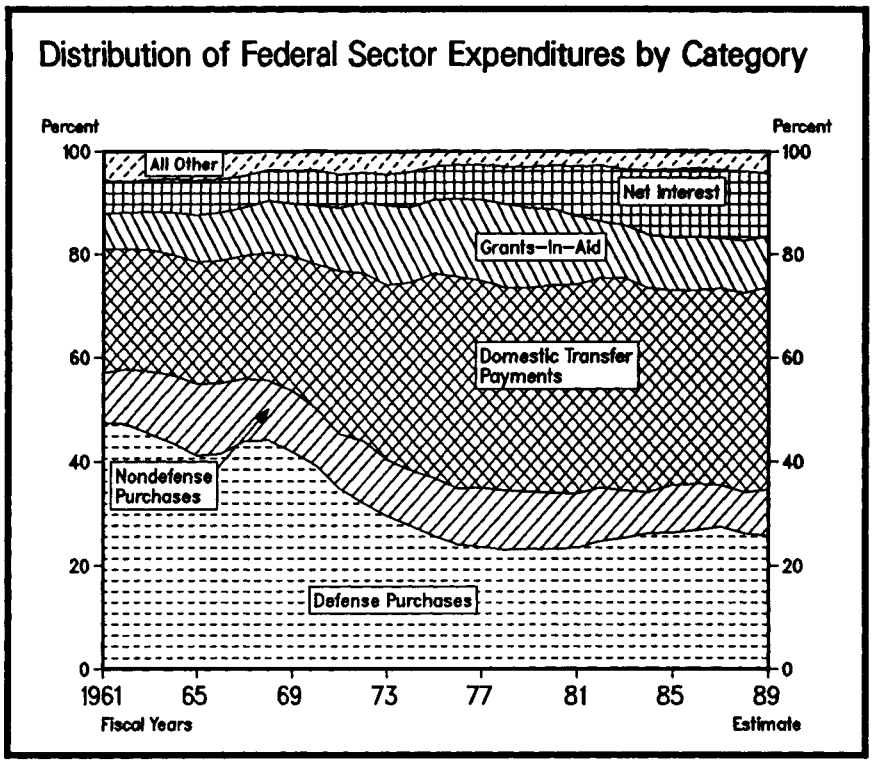

temporarily reversed for three years during the Vietnam period, but by 1970 the defense share was well below the pre-Vietnam percentages and continued declining through 1978. The defense share rose slightly in 1979 and 1980, and has increased significantly under this administration, reflecting the President's commitment to strengthen the Nation's defense capability while reducing total Federal spending relative to the GNP. Defense purchases are expected to decline as a share of total spending, as a result of the Bipartisan Budget Agreement, from 27.5 percent in 1987 to 26.3 percent in 1988 and 25.8 percent in 1989.

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

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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 will decline from 16.2 percent in 1978 to 9.9 percent in 1989. Conversely, the net interest share doubled in the past decade—from about 6.5 percent throughout the 1960s and early 1970s to 13.5 percent in 1988. This increase was due to a combination of growth in Federal debt and higher interest rates. In 1989, however, the increase in the net interest share is expected to reverse, because of lower interest rates and lower deficits that will slow 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	1956–58 average actual	1966–68 average actual	1976–78 average actual	1986–88 average estimate	1989 estimate
Defense purchases	9.7	8.5	5.1	6.4	5.9
Nondefense purchases	1.4	2.4	2.4	2.0	2.0
Domestic transfer payments ("to persons")	3.4	4.7	8.6	9.0	8.9
Foreign transfer payments	0.4	0.3	0.2	0.3	0.2
Grants-in-aid to State and local governments	0.9	1.9	3.4	2.4	2.3
Net interest paid	1.2	1.2	1.5	3.2	3.0
Subsidies less current surplus of Government enterprises	0.5	0.6	0.4	0.6	0.5
Total expenditures	**17.6**	**19.5**	**21.7**	**23.9**	**22.8**

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

In 1956–58, after the Korean war, defense purchases were nearly 10 percent of GNP. The years 1966–68 include the large military build-up for the Vietnam war, yet the defense expenditures share of GNP (8.5 percent) was significantly lower than the post-Korean war level. By the 1976–78 period after the Vietnam war, defense purchases had declined to 5.1 percent of GNP. For 1986–88 defense purchases are expected to be 6.4 percent of GNP, reflecting the Reagan administration's defense build up. In 1989 they are expected to be 5.9 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

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significantly in recent years. Spending for everything except defense purchases averaged 7.9 percent of GNP in 1956–58. In 1986–88 such spending is estimated to average 17.5 percent of GNP; in 1989 its share is estimated to decline to 16.9 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. 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 $6.3 billion in defense purchases in 1989 over 1988.

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

(In billions of dollars)

	1984 actual	1985 actual	1986 actual	1987 actual	1988 estimate	1989 estimate
Defense purchases:						
Compensation of employees	93.4	99.4	103.8	107.7	111.5	115.7
Other	135.1	153.7	171.5	182.8	177.6	179.7
Total defense purchases	228.5	253.1	275.3	290.5	289.1	295.4
Nondefense purchases:						
Compensation of employees	36.7	39.0	39.6	41.0	43.3	45.2
Other	32.0	48.3	53.5	43.4	42.9	55.8
Total nondefense purchases	68.7	87.3	93.1	84.4	86.2	101.0

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 grew more rapidly than nondefense purchases through 1987, although they are expected to decline in 1988 and increase only modestly in 1989.

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

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years 1980 to 1989, reflecting the agency structure in the 1989 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, 1984, 1988, and 1989—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 NIPAs 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 $20.9 billion in 1989, 85 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 $10.9 billion in 1989 nondefense purchases, and the Department of Energy, with $4.5 billion in 1989 nondefense purchases, conduct major research and development programs. The Transportation Department's $8.0 billion of 1989 nondefense purchases are mainly for the Federal Aviation Administration and the Coast Guard. The Corps of Engineers has an estimated $3.3 billion in 1989 nondefense purchases, which, along with the Tennessee Valley Authority's $1.8 billion, is primarily used for natural resources public works projects and for power activities.

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

(In billions of dollars)

	Actual								Estimate	
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Legislative and judicial branches	1.8	1.8	2.1	2.2	2.4	2.6	2.7	3.0	3.3	3.7
Department of Agriculture	5.4	5.6	12.9	9.6	−2.0	12.1	15.9	4.4	−2.6	4.0
Commodity Credit Corporation	(1.0)	(1.2)	(8.0)	(4.3)	(−7.6)	(6.3)	(10.9)	(−0.8)	(−8.2)	(−1.7)
Forest Service	(1.7)	(1.9)	(1.9)	(1.8)	(1.8)	(2.0)	(1.9)	(1.9)	(2.1)	(2.0)
All other	(2.7)	(2.6)	(3.0)	(3.5)	(3.9)	(3.9)	(3.1)	(3.3)	(3.5)	(3.7)
Department of Commerce	1.9	1.5	1.5	1.6	1.6	1.7	1.8	1.7	2.1	2.4
Corps of Engineers, Civil	3.2	3.2	3.0	3.0	3.0	3.0	2.8	2.8	3.2	3.3
Department of Education	0.7	0.8	0.8	0.7	0.9	0.8	0.8	0.9	0.9	0.9
Department of Energy	2.6	7.8	5.2	5.1	4.8	5.0	3.5	3.3	3.4	4.5
Department of Health and Human Services	7.5	8.3	8.7	8.6	9.2	9.8	10.0	10.7	11.8	12.9
Health, including medicare	(5.3)	(5.9)	(5.9)	(5.8)	(6.3)	(7.1)	(7.5)	(7.8)	(8.7)	(10.0)
Social security, income security, and other	(2.2)	(2.4)	(2.8)	(2.7)	(2.8)	(2.7)	(2.5)	(2.9)	(3.1)	(2.9)
Department of Housing and Urban Development	0.5	0.4	0.5	0.7	1.0	1.1	1.6	0.5	0.9	0.7
Department of the Interior	3.9	4.0	3.9	4.2	4.3	4.5	4.4	4.3	4.6	4.5
Department of Justice	2.1	2.3	2.4	2.7	3.0	3.4	3.5	4.2	4.9	5.6
Department of Labor	1.9	1.9	1.9	1.5	1.5	1.4	1.6	1.5	1.8	1.9
Department of State	1.0	1.0	1.1	1.3	1.4	1.6	1.9	1.9	2.2	2.3
Department of Transportation	4.8	5.1	5.3	5.7	6.0	6.3	6.5	7.0	7.4	8.0
Coast Guard	(1.4)	(1.6)	(1.8)	(2.1)	(2.2)	(2.2)	(2.1)	(2.2)	(2.3)	(2.5)
Federal Aviation Administration	(2.5)	(2.7)	(2.5)	(2.8)	(3.1)	(3.4)	(3.8)	(4.0)	(4.3)	(4.7)
Other	(0.9)	(0.8)	(0.9)	(0.8)	(0.8)	(0.6)	(0.6)	(0.8)	(0.8)	(0.8)
Department of the Treasury	4.0	4.2	4.2	4.6	4.7	5.4	5.8	6.2	7.3	8.1
Internal Revenue Service	(2.3)	(2.4)	(2.5)	(2.9)	(3.2)	(3.6)	(3.8)	(4.2)	(5.1)	(5.3)
Other	(1.7)	(1.8)	(1.7)	(1.7)	(1.5)	(1.9)	(2.0)	(2.0)	(2.2)	(2.8)
Environmental Protection Agency	0.9	1.0	0.9	1.0	1.1	1.3	1.4	1.6	1.8	2.2
National Aeronautics and Space Administration	4.7	5.3	5.9	6.5	6.9	7.2	7.3	7.5	9.1	10.9
Veterans Administration	7.1	7.6	8.1	8.9	9.6	10.3	10.6	11.0	11.8	11.8
Hospital and medical care	(6.3)	(6.8)	(7.3)	(8.1)	(8.7)	(9.3)	(9.7)	(10.1)	(10.7)	(10.9)
Administration and other	(0.8)	(0.8)	(0.8)	(0.8)	(0.9)	(1.0)	(0.9)	(0.9)	(1.1)	(0.9)
All other	8.8	9.3	8.8	9.0	9.1	9.8	11.0	11.9	12.3	13.3
National Science Foundation	(0.4)	(0.4)	(0.5)	(0.5)	(0.5)	(0.6)	(0.7)	(0.7)	(0.7)	(0.8)
Nuclear Regulatory Commission	(0.4)	(0.4)	(0.4)	(0.5)	(0.5)	(0.5)	(0.4)	(0.4)	(0.4)	(0.4)
Office of Personnel Management: Employee health benefits and imputed employee retirement contributions	(1.9)	(2.3)	(2.5)	(2.7)	(3.0)	(2.9)	(2.7)	(2.8)	(3.1)	(3.3)
Postal Service	(0.4)	(0.5)	(0.4)	(0.6)	(0.9)	(1.0)	(1.3)	(1.7)	(1.4)	(1.7)
Tennessee Valley Authority	(1.7)	(1.5)	(1.0)	(0.9)	(0.2)	(0.8)	(1.3)	(1.7)	(1.8)	(1.8)
United States Information Agency	(0.4)	(0.4)	(0.5)	(0.5)	(0.5)	(0.6)	(0.7)	(0.8)	(0.8)	(0.8)

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

(In billions of dollars)

	Actual								Estimate	
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Imputed bank service charges	(0.3)	(0.4)	(0.4)	(0.4)	(0.5)	(0.6)	(0.5)	(0.6)	(0.5)	(0.5)
Other	(3.3)	(3.3)	(3.1)	(2.8)	(3.0)	(2.8)	(3.1)	(3.2)	(3.6)	(4.0)
Total nondefense purchases	**62.8**	**71.1**	**77.1**	**77.0**	**68.7**	**87.3**	**93.1**	**84.4**	**86.2**	**101.0**

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 1989, largely due to increases in the covered population and cost-of-living adjustments. Social security is estimated to account for 50.2 percent of total domestic transfer payments in 1989, while medicare accounts for another 20.6 percent, unemployment assistance for 3.3 percent, Federal civilian and military employees' retirement and disability for 11.0 percent, and veterans benefits for 3.8 percent of the total. Program trends on a unified budget basis are discussed extensively in Part 5 of the *Budget* 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 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 $1.6 billion between 1980 and 1989, despite a 50 percent higher price level. 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.

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

(*In billions of dollars*)

Description	Actual										Estimate	
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
HUMAN RESOURCES PROGRAMS												
Social security (OASDI)	89.3	99.4	113.7	134.1	149.6	163.3	170.9	181.2	190.9	199.3	211.2	224.8
Medicare (HI&SMI)	24.2	28.1	33.8	41.1	49.0	56.1	60.8	68.3	73.8	81.5	86.4	92.1
Income security:												
Railroad retirement	3.9	4.2	4.7	5.2	5.6	6.0	6.1	6.2	6.3	6.5	6.7	6.9
Civil service retirement	10.8	12.4	14.6	17.6	19.4	20.7	21.8	23.0	23.9	25.7	27.2	29.2
Military retired pay	9.0	10.1	11.8	13.6	14.7	15.8	16.3	15.6	17.5	17.9	19.0	20.2
Unemployment benefits	10.9	9.9	16.4	17.9	22.0	29.4	16.9	16.0	16.4	15.6	14.2	14.8
Benefits for coal miners	1.0	1.6	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.5	1.5	1.5
Supplemental security income	4.9	5.2	5.7	6.4	6.9	7.2	8.1	8.7	9.3	9.8	10.5	11.4
Food and nutrition	4.5	5.7	7.9	9.8	9.5	11.1	10.7	10.7	10.6	10.4	11.4	11.3
Special payments, Treasury	0.9	0.8	1.3	1.3	1.2	1.2	1.2	1.1	1.4	1.4	2.9	3.9
Workers' compensation	0.6	0.7	0.8	0.9	0.9	0.9	1.0	1.1	1.1	1.2	1.2	1.3
Other	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.5	0.5	0.4
Subtotal, income security	46.7	50.6	65.0	74.5	81.9	94.2	83.9	84.1	88.5	90.6	95.1	100.8
Health	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.8
Education, training, employment, and social services:												
Education	2.8	3.4	4.5	5.7	5.3	5.9	6.1	6.3	6.1	5.9	6.5	6.9
Training, employment, and social services	0.8	0.9	1.5	1.1	0.9	0.8	1.0	1.0	1.0	1.0	1.1	1.1
Subtotal, education, training, employment, and social services	3.5	4.3	6.0	6.8	6.2	6.7	7.1	7.3	7.1	6.9	7.6	8.0
Veterans benefits and services	13.5	14.0	14.4	15.5	16.2	16.5	16.3	16.5	16.6	16.5	16.3	17.0

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Total human resources programs	**177.8**	**196.9**	**233.5**	**272.7**	**303.6**	**337.4**	**339.6**	**358.0**	**377.5**	**395.5**	**417.3**	**443.6**
ALL OTHER FUNCTIONS												
National defense: CHAMPUS [1]	0.6	0.7	0.7	0.9	1.1	1.2	1.3	1.5	1.7	2.0	2.5	2.5
Other	0.9	0.9	1.1	1.1	1.0	1.1	1.4	1.1	1.3	1.2	1.5	1.3
Total functions not included in human resources grouping	**1.5**	**1.5**	**1.8**	**1.9**	**2.1**	**2.3**	**2.7**	**2.6**	**3.0**	**3.2**	**4.0**	**3.8**
Total domestic transfer payments	**179.3**	**198.5**	**235.4**	**274.6**	**305.6**	**339.8**	**342.3**	**360.6**	**380.5**	**398.7**	**421.3**	**447.4**

*$50 million or less.

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

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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 NIPAs, 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 will rise by 11.8 percent in 1988 and 6.7 percent in 1989. Transportation grants will rise by 5.6 percent in 1988, 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 increase by only 1.8 percent in 1989. The administration also proposes to reduce expenditures for most other grants-in-aid categories.

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

(In billions of dollars)

Description	Actual										Estimate	
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
HUMAN RESOURCES PROGRAMS												
Income security:												
Family support payments	6.6	6.5	7.2	8.4	7.9	7.8	8.2	8.5	9.2	10.5	10.7	10.9
Child nutrition and other food programs	2.8	3.3	3.9	4.4	4.2	4.7	5.4	5.8	6.2	6.6	7.2	7.5
Other	1.6	1.7	2.2	4.5	4.7	5.4	5.4	5.5	5.6	4.7	4.4	4.1
Subtotal, income security	11.0	11.5	13.3	17.2	16.7	17.9	19.0	19.8	20.9	21.8	22.3	22.4
Health:												
Medicaid	10.6	12.4	13.9	16.8	17.3	18.9	20.0	22.6	24.9	27.4	30.6	32.6
Other (includes research, construction, services, and medical training)	2.7	2.7	3.0	3.1	3.1	2.8	3.0	3.2	3.7	3.4	3.7	4.0
Subtotal, health	13.4	15.1	16.9	19.9	20.5	21.8	23.0	25.7	28.6	30.8	34.3	36.6
Education, training, employment, and social services:												
Education	5.4	6.6	7.3	7.5	7.0	6.6	6.6	7.9	8.3	8.0	9.0	9.6
Training and employment	8.9	8.5	7.7	6.7	3.3	3.3	2.6	2.9	3.1	2.9	2.9	2.9
Social services	5.0	5.3	6.3	5.4	5.0	5.4	6.2	5.8	6.3	6.3	7.1	7.1
Subtotal, education, training, employment, and social services	19.3	20.3	21.3	19.6	15.3	15.3	15.5	16.6	17.6	17.3	19.0	19.7
Other (social security, medicare, and veterans benefits and services)	0.4	0.4	0.5	0.6	0.7	0.8	0.8	0.8	0.9	0.9	1.0	1.1
Total human resources programs	**44.1**	**47.4**	**52.0**	**57.2**	**53.2**	**55.8**	**58.2**	**62.9**	**68.1**	**70.7**	**76.6**	**79.8**

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

(In billions of dollars)

Description	Actual										Estimate	
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
OTHER FUNCTIONS:												
Natural resources and environment:												
EPA	3.4	3.9	4.6	4.1	4.0	3.2	2.9	3.2	3.4	3.2	2.9	2.8
Other	0.4	0.6	0.7	0.7	0.7	0.6	0.8	0.8	0.7	0.7	0.8	0.5
Subtotal, natural resources and environment	3.8	4.5	5.2	4.8	4.7	3.9	3.7	4.0	4.1	4.0	3.7	3.3
Community and regional development:												
Local public works	2.9	1.6	0.4	0.1	*	*	*	*	*	*	*	.....
Block grants	2.4	3.2	4.0	4.3	4.1	3.9	4.1	4.2	3.7	3.2	3.3	3.3
Other	1.5	1.6	1.8	1.5	1.1	0.9	0.8	0.8	0.8	0.6	0.7	0.6
Subtotal, community and regional development	6.8	6.4	6.2	5.9	5.2	4.8	5.0	4.9	4.5	3.9	4.0	3.9
Transportation	8.1	9.6	11.8	12.2	10.8	12.1	14.3	16.0	17.7	16.1	17.0	17.3
General purpose fiscal assistance:												
General revenue sharing	6.8	6.8	6.8	5.1	4.6	4.6	4.6	4.6	5.1	0.1	.....	.....
Anti-recession fiscal assistance	1.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other	0.9	0.9	1.1	1.1	1.4	1.2	1.6	1.6	1.5	1.4	1.4	1.5
Subtotal, general purpose fiscal assistance	9.1	7.8	7.9	6.3	5.9	5.9	6.1	6.1	6.6	1.5	1.4	1.5
All other functions	2.8	3.5	3.5	3.7	3.6	3.3	3.4	3.8	6.5	7.1	8.0	7.5
Total other functions	**30.6**	**31.7**	**34.7**	**32.9**	**30.3**	**29.9**	**32.5**	**34.9**	**39.4**	**32.4**	**34.1**	**33.5**
Total grants-in-aid	**74.7**	**79.1**	**86.7**	**90.1**	**83.4**	**85.7**	**90.7**	**97.8**	**107.4**	**103.1**	**110.7**	**113.3**

*50 million or less.

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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 0.2 percent of GNP. The peak year for foreign transfer payments was 1949; in that year they were equal to 1.9 percent of GNP, due to the Marshall Plan.

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.

"Government enterprise" is the term used in the NIPAs 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. 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.

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

(In billions of dollars)

Description	Actual										Estimate	
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Subsidies:												
Commodity Credit Corporation	2.3	2.0	0.5	1.4	1.6	4.9	10.6	8.0	10.3	13.2	13.8	14.3
Rural housing insurance fund	0.4	0.6	0.6	0.8	1.4	1.7	1.7	1.9	2.1	1.7	1.6	1.1
Other Department of Agriculture	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.3
Housing (HUD)	3.5	4.3	5.1	6.3	7.6	9.2	9.7	11.0	11.0	11.0	11.9	13.3
Maritime	0.5	0.5	0.6	0.5	0.6	0.4	0.4	0.3	0.3	0.2	0.2	0.3
Railroad and mass transit	1.4	1.5	2.0	2.2	1.9	1.7	1.7	1.6	1.3	1.3	1.3	0.4
Other [1]	0.3	0.6	0.5	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Subtotal	8.9	9.9	9.5	11.7	13.5	18.2	24.4	23.2	25.3	27.8	29.2	29.8
Enterprise surpluses (—) or deficits:												
Commodity Credit Corporation	0.8	1.4	1.5	1.8	2.3	5.5	2.5	2.0	4.4	9.0	9.2	4.3
Postal Service	1.5	0.6	1.6	1.1	—0.1	0.4	0.6	1.1	—0.1	—0.3	—0.5	—1.5
Bonneville Power Administration	—0.2	—0.2	—0.2	—0.3	—0.2	—0.4	—0.7	—0.7	—0.5	—0.3	—0.6	—0.5
Tennessee Valley Authority	—0.6	—0.8	—1.1	—1.0	—1.2	—1.4	—1.5	—2.0	—2.3	—2.4	—2.7	—2.9
Federal Housing Administration	—0.2	—0.2	—0.4	—0.4	—0.5	—0.5	—0.4	—0.5	—0.7	—2.9	—1.7	—1.7
Federal Deposit Insurance Corporation	—0.3	—0.3	—0.3	—0.4	—0.6	—0.6	—1.1	—1.2	—1.4	—1.4	—1.6	—1.7
Federal Savings and Loan Insurance Corporation	—0.3	—0.3	—0.3	*	—0.2	—0.3	—0.4	—1.5	—1.9	—1.9	—1.6	—1.3
All other [1]	*	—0.2	*	*	*	—*	0.1	—0.2	.....	—*	—0.4	—0.3
Subtotal	0.7	—*	1.0	0.9	—0.5	2.7	—1.0	—2.6	—2.4	—0.3	—1.1	—5.6
Total subsidies less current surplus	**9.7**	**9.9**	**10.4**	**12.5**	**13.0**	**20.9**	**23.4**	**20.7**	**22.9**	**27.5**	**30.4**	**24.2**

* $50 million or less.

[1] Includes wage disbursements less accruals.

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Wage disbursements less accruals.—This is an adjustment occasionally made in the NIPAs 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 NIPAs 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 1987 to 1989. 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 1989 budget.

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Table B–9. **FEDERAL RECEIPTS AND EXPENDITURES IN THE NIPAs, QUARTERLY, 1987–89**

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

Description	Actual					Estimate						
	Oct.–Dec. 1986	Jan.–Mar. 1987	Apr.–June 1987	July–Sept. 1987	Oct.–Dec. 1987	Jan.–Mar. 1988	Apr.–June 1988	July–Sept. 1988	Oct.–Dec. 1988	Jan.–Mar. 1989	Apr.–June 1989	July–Sept. 1989
RECEIPTS												
Personal tax and nontax receipts	376.4	381.5	415.6	404.3	413.8	399.0	417.8	399.3	407.1	413.1	425.4	430.7
Corporate profits tax accruals	90.5	103.0	107.9	114.5	117.9	131.8	133.6	135.6	138.1	134.9	138.2	141.7
Indirect business tax and nontax accruals	51.1	53.3	54.2	53.9	54.6	57.7	58.7	59.6	59.8	59.8	60.2	60.7
Contributions for social insurance	334.5	341.5	345.2	350.3	356.6	382.5	387.6	392.6	398.4	407.6	413.5	419.2
Total receipts	**852.5**	**879.3**	**922.9**	**923.0**	**943.0**	**971.0**	**997.7**	**987.1**	**1,003.4**	**1,015.4**	**1,037.3**	**1,052.3**
EXPENDITURES												
Purchases of goods and services	368.6	366.9	379.6	382.1	393.7	375.8	367.4	365.7	386.6	393.6	398.8	406.7
Defense	(279.0)	(287.5)	(294.5)	(299.0)	(300.0)	(292.8)	(283.9)	(280.8)	(285.2)	(293.4)	(297.9)	(305.2)
Nondefense	(89.6)	(79.4)	(85.1)	(83.0)	(93.7)	(83.0)	(83.5)	(84.9)	(101.4)	(100.2)	(100.9)	(101.5)
Transfer payments	405.7	406.7	412.0	413.4	420.6	434.0	437.9	441.5	445.0	461.5	464.0	466.4
Domestic ("to persons")	(391.0)	(396.0)	(401.5)	(403.7)	(406.2)	(422.1)	(426.0)	(429.6)	(433.0)	(449.5)	(452.0)	(454.4)
Foreign	(14.7)	(10.7)	(10.5)	(9.8)	(14.4)	(11.9)	(11.9)	(11.9)	(12.0)	(12.0)	(12.0)	(12.0)
Grants-in-aid to State and local governments	102.8	102.2	106.0	103.5	107.0	110.6	112.5	112.5	112.6	113.0	113.5	114.0
Net interest paid	137.8	139.5	139.8	142.9	148.3	147.8	147.2	147.8	149.6	151.6	153.7	155.8
Subsidies less current surplus of Government enterprises	26.3	34.3	24.8	17.2	35.9	31.0	32.1	21.6	34.5	23.1	22.9	15.8
Wage disbursements less accruals	.....	.....	.....	0.3	−0.3	.....	.....	−0.3	0.3	.....	.....	.....
Total expenditures	**1,041.2**	**1,049.8**	**1,062.1**	**1,058.8**	**1,105.8**	**1,099.2**	**1,097.1**	**1,089.4**	**1,128.0**	**1,142.8**	**1,152.9**	**1,158.7**
Deficit (−)	**−188.7**	**−170.5**	**−139.2**	**−135.8**	**−162.8**	**−128.2**	**−99.4**	**−102.3**	**−124.6**	**−127.4**	**−115.6**	**−106.4**

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.

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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 NIPAs. Adjustments required to reconcile the budget to the Federal sector in the NIPAs are explained below.

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

(In billions of dollars)

Description	1985 actual	1986 actual	1987 actual	1988 estimate	1989 estimate
RECEIPTS					
Total budget receipts [1]	**734.1**	**769.1**	**854.1**	**909.2**	**964.7**
Government contributions for employee retirement (grossing)	32.3	33.7	35.5	38.9	41.5
Other netting and grossing	14.6	12.6	13.7	16.4	18.4
Timing adjustments	−3.3	0.2	3.7	10.9	6.1
Geographic exclusions	−1.2	−1.2	−1.5	−1.6	−1.7
Other		−0.2			
Federal sector, NIPA receipts	**776.4**	**814.2**	**905.6**	**973.8**	**1,029.1**
EXPENDITURES					
Total budget outlays [1]	**946.3**	**990.3**	**1,004.6**	**1,055.9**	**1,094.2**
Lending and financial transactions	−27.2	−11.9	−6.4	−9.3	−7.2
Government contributions for employee retirement (grossing)	32.3	33.7	35.5	38.9	41.5
Other netting and grossing	14.6	12.6	13.7	16.4	18.4
Defense timing adjustment	0.9	4.0	7.4	3.0	−0.5
Bonuses on Outer Continental Shelf land leases	1.9	2.1	1.6	0.7	1.2
Geographic exclusions	−5.4	−5.4	−5.5	−5.7	−6.0
Other	−2.4	2.3	4.3	−1.9	4.4
Federal sector, NIPA expenditures	**961.0**	**1,027.8**	**1,055.1**	**1,098.1**	**1,145.9**

[1] Includes off-budget amounts.

Lending and financial transactions.—The NIPAs 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 NIPAs 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 NIPAs.

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In 1987, the administration began a pilot program to sell existing and newly made loan assets without recourse, or the right to make a claim against the Federal Government in the event of borrower default. In 1987, loans with a face value of $7.9 billion were sold or prepaid by borrowers and yielded $5.5 billion in net offsetting receipts. In 1988, the administration proposes to sell loans with a face value of $12.8 billion, which are expected to yield $10.9 billion. In 1989 the loans to be sold have a face value of $12.0 billion and will yield an estimated $8.5 billion. The net proceeds of all of these loans will be excluded from the NIPAs.

The other major financial transaction excluded from the NIPAs was the sale of Conrail stock. In 1987, the Federal Government received $1.9 billion from the sale of Conrail.

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 NIPAs 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 NIPAs 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

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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 NIPAs, 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 NIPAs 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 NIPAs 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 NIPAs 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 NIPAs.

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 NIPAs as indirect business nontaxes; this converts the collections from an offset to outlays in the budget to a receipt in the NIPAs.

All netting and grossing items, including Government contributions for employee retirement, have an equal impact on receipts

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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 NIPAs 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 NIPAs 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 NIPAs 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 NIPAs. 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 NIPAs. As already noted, the budget records these bonuses as proprietary receipts and, therefore, deducts them from budget outlays. The NIPAs 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,

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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 NIPAs exclude such transactions, this constitutes a major reconciliation item between the two data series.

Other.—In 1989, the administration proposes to sell the naval petroleum reserves and other physical assets, yielding $3.5 billion in offsetting receipts. The NIPAs exclude this transaction, along with other purchases and sales of land and existing natural assets. This category also contains miscellaneous adjustments, such as foreign currency transactions that are included in the NIPAs but not in the budget.

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Table B–11. **FEDERAL TRANSACTIONS IN THE NATIONAL INCOME AND PRODUCT ACCOUNTS, 1978–1989**

(In billions of dollars)

Description	Actual										Estimate	
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
RECEIPTS												
Personal tax and nontax receipts	186.5	222.9	250.7	289.6	310.0	292.5	302.5	340.6	358.0	401.9	406.3	421.2
Corporate profits tax accruals	67.8	75.7	70.2	69.4	52.1	55.7	75.3	74.3	80.3	104.0	129.7	138.2
Indirect business tax and nontax accruals	27.1	29.0	35.3	53.4	50.0	50.2	54.9	56.0	51.7	54.1	57.6	60.1
Contributions for social insurance	142.9	163.6	182.3	211.4	231.1	247.3	279.2	305.6	324.1	345.6	380.2	409.6
Total receipts	**424.3**	**491.2**	**538.6**	**623.8**	**643.3**	**645.7**	**711.9**	**776.4**	**814.2**	**905.6**	**973.8**	**1,029.1**
EXPENDITURES												
Purchases of goods and services	158.6	173.1	199.9	231.8	264.4	287.4	297.2	340.4	368.4	374.9	375.3	396.4
Defense	(106.3)	(117.7)	(137.2)	(160.7)	(187.3)	(210.4)	(228.5)	(253.1)	(275.3)	(290.5)	(289.1)	(295.4)
Nondefense	(52.2)	(55.5)	(62.8)	(71.1)	(77.1)	(77.0)	(68.7)	(87.3)	(93.1)	(84.4)	(86.2)	(101.0)
Transfer payments	183.6	203.5	241.1	281.3	312.8	347.5	352.2	374.0	394.8	410.1	433.8	459.4
Domestic ("to persons")	(179.3)	(198.5)	(235.4)	(274.6)	(305.6)	(339.8)	(342.2)	(360.6)	(380.5)	(398.7)	(421.3)	(447.4)
Foreign	(4.4)	(5.1)	(5.8)	(6.7)	(7.2)	(7.7)	(9.9)	(13.4)	(14.3)	(11.4)	(12.5)	(12.0)
Grants-in-aid to State and local governments	74.7	79.1	86.7	90.1	83.4	85.7	90.7	97.8	107.4	103.1	110.7	113.3
Net interest paid	33.5	40.7	50.8	66.7	82.2	90.6	109.7	128.0	134.3	139.6	147.8	152.7
Subsidies less current surplus of Government enterprises	9.7	9.9	10.4	12.5	13.0	20.9	23.3	20.7	22.9	27.5	30.4	24.1
Wage disbursements less accruals	−0.1	*	.....	−0.1	*	0.4	−0.1	0.1	.....	0.1	−0.1	.....
Total expenditures	**459.9**	**506.4**	**589.0**	**682.4**	**755.9**	**832.4**	**873.0**	**961.0**	**1,027.8**	**1,055.1**	**1,098.1**	**1145.9**
Deficit (−)	**−35.6**	**−15.2**	**−50.4**	**−58.5**	**−112.6**	**−186.7**	**−161.0**	**−184.5**	**−213.6**	**−149.5**	**−124.3**	**−116.8**

*$50 million or less.

Note.—The estimates for 1988 and 1989 are preliminary; revisions will be published in the February 1988 issue of the *Survey of Current Business*.

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PART 2

ANALYSES OF THE TOTALS

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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. It includes a section on the measurement of borrowing and debt.

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

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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.

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SPECIAL ANALYSIS C

FUNDS IN THE BUDGET

This analysis provides information about Federal Government transactions. It includes breakouts of Federal and trust funds, receipts and outlays, surpluses and deficits, net obligations, and net balances.

Federal and trust funds.—All Federal Government receipt and expenditure accounts are in one of these two groups. Federal funds include the general fund, special funds, public enterprise revolving funds, and intragovernmental management and revolving funds. Trust funds include regular (non-revolving) trust funds and trust revolving funds.

Governmental receipts and outlays.—Governmental receipts include only payments by the public that result from exercise of the Government's sovereign powers (primarily taxes and other compulsory assessments). 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 another Federal Government account's spending is also offset against Federal Government outlays. Thus, *receipts* measure the income of the government in its sovereign capacity, and *outlays* measure the net spending that must be financed from receipts. Calculating the difference between receipts and outlays yields the *surplus* or *deficit.*

Any income that is recorded as an offset to outlays rather than as governmental receipts is entitled "offsetting collections." Offsetting collections may be offset within the expenditure account that they finance (reimbursements to appropriations) or may be deposited within receipt accounts that are recorded as offsets to outlays rather than as on-budget or off-budget receipts (offsetting receipts). There is no substantive difference between reimbursements to appropriations and offsetting receipts—the differences are purely a matter of the legal status of the money. In almost all budgetary presentations, all offsetting collections are offsets to outlays rather than being included as on-budget or off-budget receipts. However, the tables in Special Analysis C show several presentations of receipt and outlay tabulations partially grossed, and then show the offsets, to arrive at the net receipts and net outlays. (A further discussion of the nature and treatment of offsetting collections may be found in the "collections" section in part 6e in the 1989 Budget).

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

Note that neither the on-budget nor the off-budget totals include the receipts and disbursements of the Thrift Savings Fund established under the Federal Employees' Retirement Act of 1986. The monies in the Fund are owned by the individuals who contribute them, and are managed in a purely fiduciary capacity by the Federal Retirement Thrift Investment Board. This is further explained in Part 6e of the Budget.

The Balanced Budget and Emergency Deficit Control Act of 1985 (Public Law 99–177) eliminated the off-budget status of former 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.

The movement of the previously off-budget Federal entities to on-budget status means that all Federal funds are now on-budget. However, the movement of the two social security 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 deduc-

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tions 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.

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

(In millions of dollars)

Description	1987 actual	1988 estimate	1989 estimate
RECEIPTS			
On-budget:			
Federal funds:			
Total in receipt accounts	577,086	596,461	631,822
Intrafund transactions	−19,754	−19,473	−18,873
Interfund receipts from off-budget	−685	−820	−774
Proprietary receipts from the public	−18,833	−15,412	−18,983
Subtotal, Federal fund receipts	537,814	560,756	593,191
Trust funds:			
Total in receipt accounts	235,925	253,322	271,149
Intrafund receipts from on-budget	−10	−1	−1
Intrafund receipts from off-budget	−2,614	−2,890	−3,009
Proprietary receipts from the public	−16,656	−18,913	−20,228
Subtotal, trust fund receipts	216,645	231,517	247,910
Interfund transactions	−113,718	−123,010	−134,909
Total on-budget receipts	**640,741**	**669,264**	**706,193**
Off-budget:			
Trust funds:			
Total in receipt accounts	227,640	257,310	279,682
Interfund receipts from on-budget	−14,205	−17,411	−21,201
Proprietary receipts from the public	−33		
Total off-budget (trust fund) receipts	**213,402**	**239,899**	**258,481**
Total receipts	**854,143**	**909,163**	**964,674**
OUTLAYS			
On-budget:			
Federal funds:			
Total in expenditure accounts	800,188	840,666	873,978
Intrafund transactions	−19,754	−19,473	−18,873
Interfund receipts from off-budget	−685	−820	−774
Proprietary receipts from the public	−18,833	−15,412	−18,983
Subtotal, Federal fund outlays	760,916	804,961	835,348
Trust funds:			
Total in expenditure accounts	182,836	192,632	203,672
Intrafund receipts from on-budget	−10	−1	−1
Intrafund receipts from off-budget	−2,614	−2,890	−3,009
Proprietary receipts from the public	−16,656	−18,913	−20,228
Subtotal trust fund outlays	163,556	170,827	180,434
Interfund transactions	−113,718	−123,010	−134,909
Total on-budget outlays	**810,754**	**852,778**	**880,873**
Off-budget:			
Trust funds:			
Total in expenditure accounts	208,070	220,537	234,544
Interfund receipts from on-budget	−14,205	−17,411	−21,201
Proprietary receipts from the public	−33		
Total off-budget (trust fund) outlays	**193,832**	**203,126**	**213,342**
Total outlays	**1,004,586**	**1,055,904**	**1,094,215**

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

(In millions of dollars)

Description	1987 actual	1988 estimate	1989 estimate
Surplus or deficit (—):			
On-budget:			
Federal funds	—223,103	—244,204	—242,157
Trust funds	53,089	60,690	67,476
Total on-budget deficit	—170,014	—183,514	—174,680
Off-budget (trust funds) surplus	19,570	36,773	45,139
Total deficit	**—150,444**	**—146,741**	**—129,542**

Federal Funds

As stated above, 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 outlays are net of collections at the account level. There are five types of expenditure (appropriation or fund) accounts and two types of receipt accounts associated with the Federal fund group, as follows:

- General fund receipt accounts—Receipt accounts in which all collections not earmarked by law for a specific purpose are deposited. Receipt accounts, in turn, are categorized as being governmental or offsetting receipts. Offsetting receipts are stratified to identify the paying and receiving side of each transaction. For example, proprietary receipts from the public include all offsetting receipts collected from outside the Federal Government ("the public"). Intergovernmental offsetting receipts are collections in receipt accounts of money paid by the Government to itself. These are stratified into the categories "intrafund" receipts and "interfund" receipts in order to identify the fund group of both the paying and receiving accounts.
- Special fund receipt accounts—Receipt accounts in which collections that are earmarked by law for a specific purpose are deposited and held until appropriated. Special fund receipts may be governmental or offsetting receipts. Special fund offsetting receipts are stratified into the same categories as general fund offsetting receipts, in order to identify both the source of the payment and of the offsetting collection.

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- General fund appropriation accounts—Expenditure or fund accounts established to record amounts appropriated by law for the general support of Federal Government activities and the subsequent outlay of these funds.
- Special fund expenditure accounts—Expenditure accounts established to record special fund amounts appropriated by law for specific programs and the subsequent outlay of the funds. Special fund income is deposited in receipt accounts as they are collected. When they are appropriated, they are credited to expenditure accounts.
- Public enterprise revolving fund accounts—Expenditure accounts authorized to be credited with collections, primarily from outside the Government, that are earmarked to finance a continuing cycle of business-type operations, primarily with the public, and financed primarily by crediting the expenditure account with the income derived from the sale of its goods and services. No additional appropriation is required to obligate these funds.
- Intragovernmental revolving fund accounts—Expenditure 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. No additional appropriation is required to obligate these funds.
- Management fund accounts—Expenditure 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. No additional appropriation is required to obligate these funds.

Federal fund receipts and outlays.—In 1989, the Federal fund receipts are estimated at $593 billion and outlays are estimated at $835 billion. Table C–2 presents the distribution of receipts by source and outlays by agency for the Federal fund group. As explained above, all Federal funds are on-budget. The Federal fund receipts shown in Table C–2 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 "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.

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

(In millions of dollars)

Description	1987 actual	1988 estimate	1989 estimate
RECEIPTS BY SOURCE			
Individual income taxes	392,557	393,395	412,353
Corporation income taxes	83,730	105,234	117,327
Excise taxes	14,844	15,749	15,289
Estate and gift taxes	7,493	7,567	7,795
Customs duties	15,032	16,234	17,036
Miscellaneous receipts	24,158	22,577	23,391
Total receipts, Federal funds	**537,814**	**560,756**	**593,191**
OUTLAYS BY AGENCY			
Legislative branch	1,810	1,939	2,087
The Judiciary	1,170	1,356	1,668
Executive Office of the President	109	124	125
Funds appropriated to the President	9,002	5,077	8,655
Agriculture	50,511	50,676	48,292
Commerce	2,104	2,456	2,572
Defense—Military	273,968	277,255	285,484
Defense—Civil	13,280	13,363	13,745
Education	16,800	18,795	22,744
Energy	10,676	10,506	11,826
Health and Human Services, except social security	95,083	108,003	116,992
Housing and Urban Development	15,484	18,553	21,580
Interior	4,922	5,219	4,803
Justice	4,333	5,151	5,794
Labor	5,000	4,795	5,142
State	2,894	3,336	3,433
Transportation	9,322	9,081	7,841
Treasury	180,617	199,339	206,178
Environmental Protection Agency	4,917	4,345	3,965
General Services Administration	51	−135	−45
National Aeronautics and Space Administration	7,591	9,112	10,978
Office of Personnel Management	17,499	17,978	19,404
Small Business Administration	−65	280	−355
Veterans' Administration	26,328	26,939	28,724
Other independent agencies	14,307	14,572	11,492
Allowances [1]			−48
Undistributed offsetting receipts:			
Other interest	−903		−484
Rents and royalties on the Outer Continental Shelf	−4,021	−3,155	−3,920
Sale of major assets	−1,875		−3,325
Total outlays, Federal funds	**760,916**	**804,961**	**835,348**
Excess of outlays (−)	**−223,103**	**−244,204**	**−242,157**

[1] Reflects allowance for savings from reform of Davis-Bacon and Service Contract Acts.

Obligations.—The obligations (net) for Federal funds are estimated at $836 billion for 1989, as set forth in table C–3. These transactions flow largely from budget authority for Federal funds of $863 billion for the year, although some flow from prior years' budget authority.

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

(In millions of dollars)

Department or other unit	1987 actual	1988 estimate	1989 estimate
Legislative branch	1,916	2,019	2,139
The Judiciary	1,204	1,379	1,719
Executive Office of the President	114	123	125
Funds appropriated to the President	12,532	4,737	8,826
Agriculture	48,187	49,889	43,009
Commerce	2,323	2,564	2,353
Defense—Military	294,251	289,127	291,911
Defense—Civil	13,518	13,569	13,881
Education	18,519	20,239	23,752
Energy	10,818	11,557	11,942
Health and Human Services, except social security	96,813	109,170	117,634
Housing and Urban Development	23,762	22,536	20,495
Interior	5,009	5,374	4,592
Justice	5,008	5,527	6,049
Labor	4,953	5,021	5,516
State	3,111	3,881	3,879
Transportation	9,088	8,231	6,444
Treasury	182,012	200,183	205,192
Environmental Protection Agency	4,255	4,418	3,705
General Services Administration	488	90	188
National Aeronautics and Space Administration	8,752	10,395	11,942
Office of Personnel Management	17,613	18,056	19,469
Small Business Administration	−59	218	−419
Veterans Administration	26,797	28,458	29,227
Other independent agencies:			
Export-Import Bank	−2,315	−1,410	−1,491
Federal Home Loan Bank Board	1,515	−1,405	−1,495
U.S. Postal Service	2,808	1,438	1,686
Railroad Retirement Board	2,787	3,084	2,958
All other independent agencies	7,683	8,325	8,090
Allowances: [1]			−50
Undistributed offsetting receipts:			
Other interest	−903		−484
Rents and royalties on the Outer Continental Shelf	−4,021	−3,155	−3,920
Sale of major assets	−1,875		−3,325
Total	**796,665**	**823,639**	**835,539**

[1] Reflects allowance for savings from reform of Davis-Bacon and Service Contract Acts.

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 only 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 long-term 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.

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

(In millions of dollars)

Department or other unit	Start 1987		End 1987		End 1988		End 1989	
	Obligated	Unobligated	Obligated	Unobligated	Obligated	Unobligated	Obligated	Unobligated
Legislative branch	386	401	458	338	519	224	585	207
The Judiciary	115	9	146	58	169	4	220	1
Executive Office of the President	17	*	19	.....	19	2	19	1
Funds appropriated to the President	31,667	27,220	34,745	28,394	34,343	28,339	34,485	28,365
Agriculture	30,209	1,106	31,592	1,453	31,380	909	25,398	669
Commerce	1,460	382	1,544	244	1,643	76	1,418	111
Defense—Military	198,620	59,577	213,866	47,546	224,563	41,165	230,911	39,996
Defense—Civil	607	426	845	522	1,051	296	1,187	140
Education	13,670	1,676	13,637	2,241	14,977	1,759	15,984	1,954
Energy	7,047	2,651	7,131	1,832	8,194	598	8,310	754
Health and Human Services, except social security	7,549	508	9,202	583	10,323	615	10,968	194
Housing and Urban Development	205,381	56,698	208,002	48,162	195,449	38,994	178,871	34,052
Interior	2,072	738	1,981	695	2,137	424	1,926	326
Justice	1,003	346	1,679	534	2,056	389	2,310	496
Labor	3,791	1,990	3,714	1,987	3,930	2,421	4,294	3,100
State	853	1,009	1,008	1,245	1,553	665	1,998	145
Transportation	11,687	1,816	10,914	1,615	10,064	1,082	8,336	289
Treasury	1,360	19,065	1,769	20,017	1,793	19,673	3,308	31,251
Environmental Protection Agency	8,440	950	7,493	1,400	7,566	1,096	7,306	497
General Services Administration	375	1,275	750	1,106	975	1,002	1,208	837
National Aeronautics and Space Administration	1,640	1,256	2,795	3,298	4,078	1,738	5,043	1,179
Office of Personnel Management	9	914	132	664	209	278	274	176
Small Business Administration	421	444	426	785	364	850	300	1,632
Veterans Administration	3,471	2,552	3,862	2,032	5,373	1,590	5,874	1,420
Other independent agencies:								
Export-Import Bank	1,732	797	1,561	1,093	889	1,207	128	1,669
Federal Home Loan Bank Board	6,671	1,084	3,431	1,169	2	6,160	1	9,255
Railroad Retirement Board	*	6	2	3	2	*	2	*
All other independent agencies	13,770	3,766	15,038	4,156	14,463	4,155	15,598	4,862
Allowances [1]	.....	.....	.....	.....	.....	.....	−2	.....
Total	**554,024**	**188,661**	**577,745**	**173,171**	**578,084**	**155,712**	**566,260**	**163,577**

*500 thousand or less.
[1] Reflects allowance for savings from reform of Davis-Bacon and Service Contract Acts.

Public enterprise revolving funds.—Public enterprise funds are used to conduct a cycle of business-type operations, primarily with the public. These funds are usually provided from the general fund, directly or through the Federal Financing Bank (FFB), and, in a few cases, by borrowing from the public.

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Data on public enterprise funds are displayed *net* of collections in tables C–1 through C–4. Information on the *gross* outlays and applicable collections is shown in table C–5. Collections of public enterprise funds are estimated at $118 billion in 1989, and gross outlays are estimated at $133 billion, resulting in a net outlay of $15 billion.

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

(In millions of dollars)

Description	Applicable collections			Gross outlays		
	1987 actual	1988 estimate	1989 estimate	1987 actual	1988 estimate	1989 estimate
Funds appropriated to the President:						
International Security Assistance	827	698	95	710	1,421	796
Overseas Private Investment Corporation	123	136	139	37	35	35
Military Sales Program	287	244	270	267	275	232
Agriculture:						
Commodity Credit Corporation	19,484	21,615	15,586	41,892	39,272	32,737
Farmers Home Administration:						
Rural housing insurance fund	5,096	3,009	3,722	5,894	6,255	5,045
Agricultural credit insurance fund	3,561	3,697	3,618	6,124	5,820	4,874
Rural development insurance fund	1,924	1,528	1,199	1,715	2,305	1,611
Federal Crop Insurance Corporation	332	318	336	609	608	666
Rural Electrification Administration	4,257	5,850	5,573	3,944	4,275	4,278
Commerce	104	83	72	200	97	85
Education:						
College housing loans	690	350	240	132	13	51
Energy:						
Bonneville Power Administration fund	2,505	3,006	3,086	2,554	2,794	2,871
Colorado River Basins Power Marketing fund	41	158	137	11	103	84
Health and Human Services, except social security	62	89	123	62	101	77
Housing and Urban Development:						
Public and Indian Housing programs	99	39	42	1,454	1,531	1,064
Federal Housing Administration fund	6,363	6,060	5,083	5,808	6,341	6,283
Housing for the elderly or handicapped fund	559	583	628	964	1,128	1,158
Government National Mortgage Association	1,194	966	746	538	1,159	490
Community Planning and Development	159	320	117	71	119	84
Other	160	130	52	125	113	37
Interior:						
Lower Colorado River Basin development fund	189	240	279	188	240	279
Upper Colorado River Basin fund	155	179	204	152	179	204
Other	31	37	104	32	49	47
Labor	637	779	976	565	207	472
Transportation	289	725	362	851	582	215
Treasury [1]	1,780	184	14,032	370	8	7,584
General Services Administration	3	3	3	4	3	5

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

(In millions of dollars)

Description	Applicable collections			Gross outlays		
	1987 actual	1988 estimate	1989 estimate	1987 actual	1988 estimate	1989 estimate
Small Business Administration:						
Business loan and investment fund	1,014	869	1,138	1,011	961	852
Disaster loan fund	744	657	910	382	507	317
Veterans Administration:						
Loan guaranty revolving fund	2,931	2,701	2,240	3,313	3,269	2,676
Other	534	518	502	472	428	465
Other independent agencies:						
Export-Import Bank	4,953	3,424	3,033	2,653	2,438	1,863
Federal Emergency Management Agency	492	623	685	285	532	631
Federal Savings and Loan Insurance Corporation fund	3,203	7,681	6,852	7,970	9,870	7,803
National Credit Union Administration	683	704	799	494	452	504
Postal Service	32,681	36,121	38,476	33,624	37,827	39,132
Tennessee Valley Authority	5,425	5,670	5,432	6,516	6,661	6,249
All other not included above	267	628	892	695	1,031	873
Total	**103,838**	**110,621**	**117,777**	**132,687**	**139,008**	**132,726**
Offsetting collections from the public	(97,058)	(102,363)	(98,241)			
Offsetting collections from other accounts	(6,780)	(8,258)	(19,537)			

[1] Includes two new Federal credit revolving funds in 1989.

Trust Funds

As stated above, the trust fund group is composed of the *regular trust funds* and a few *trust revolving funds.* The regular trust funds collect certain earmarked taxes and other receipts to finance spending programs specified by law, such as payment of social security benefits, or in accordance with the terms of a trust agreement. There are two types of appropriation accounts and one type of receipt account associated with the trust fund, as follows:

- Trust fund expenditure accounts—Appropriation accounts established to record amounts appropriated to finance programs specified by law as being trust funds.
- Trust fund receipt accounts—Receipt accounts credited with collections generated by statute or 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 are used to conduct a cycle of business-type operations and their outlays are

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normally displayed *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 $506 billion in 1989, with outlays planned at $394 billion, as shown in tables C-1 and C-6. This includes off budget funds of $258 billion in receipts and $213 billion in outlays for transactions of the Federal old-age and survivors insurance and disability insurance funds.

In fiscal years 1987-89, estimated trust funds receipts exceed outlays by the following amounts:

(In millions of dollars)

	1987 actual	*1988 estimate*	*1989 estimate*
Total receipts, trust funds	430,047	471,416	506,391
On-budget	(216,645)	(231,517)	(247,910)
Off-budget	(213,402)	(239,899)	(258,481)
Total outlays, trust funds	357,388	373,953	393,776
On-budget	(163,556)	(170,827)	(180,434)
Off-budget	(193,832)	(203,126)	(213,342)
Excess of receipts or outlays (−), trust funds	72,659	97,463	112,615
On-budget	(53,089)	(60,690)	(67,476)
Off-budget	(19,570)	(36,773)	(45,139)

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

	1986 actual	*1987 actual*	*1988 estimate*	*1989 estimate*
Open book balances	22,459	19,096	17,630	17,999
On-budget	(21,873)	(19,205)	(17,029)	(17,398)
Off-budget	(586)	(−109)	(601)	(601)
Investments in U.S. securities:				
Public debt	354,976	430,342	530,498	642,451
On-budget	(309,692)	(364,793)	(428,886)	(495,700)
Off-budget	(45,283)	(65,548)	(101,611)	(146,751)
Agency debt	765	715	.....	.....
Total	378,200	450,153	548,128	660,450

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

(In millions of dollars)

Description	Outlays			Receipts		
	1987 actual	1988 estimate	1989 estimate	1987 actual	1988 estimate	1989 estimate
On-budget:						
Railroad retirement trust funds	8,620	8,967	9,335	9,277	9,815	9,678
Black lung disability trust fund	643	613	729	642	610	729
Veterans life insurance trust funds	1,074	1,115	1,167	1,408	1,437	1,440
Federal employees retirement funds	26,046	27,587	29,568	44,029	46,563	48,810
Military retirement fund	18,078	19,123	20,320	31,919	33,563	35,060
Unemployment trust fund	20,527	17,500	18,500	27,613	26,200	26,100
Health insurance trust funds	81,640	87,657	94,491	90,532	102,728	117,024
Highway trust funds	13,476	14,219	14,705	14,310	15,506	15,527
Airport and airway trust fund	2,631	3,007	3,858	3,940	4,238	4,580
State and local government fiscal assistance trust fund	76	.....	.....	.....	.....	.....
Foreign military sales trust fund	9,910	8,572	8,204	8,504	8,417	8,062
Other trust funds (nonrevolving)	2,151	3,050	3,623	3,750	4,244	4,140

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Table C-6. **OUTLAYS AND RECEIPTS OF TRUST FUNDS—Continued**

(In millions of dollars)

Description	Outlays			Receipts		
	1987 actual	1988 estimate	1989 estimate	1987 actual	1988 estimate	1989 estimate
Trust revolving funds	−2,037	1,222	−830			
Subtotal	182,836	192,632	203,672	235,925	253,322	271,149
Intrafund receipts from on-budget	−10	−1	−1	−10	−1	−1
Intrafund receipts from off-budget	−2,614	−2,890	−3,009	−2,614	−2,890	−3,009
Proprietary receipts from the public	−16,656	−18,913	−20,228	−16,656	−18,913	−20,228
Total on-budget	**163,556**	**170,827**	**180,434**	**216,645**	**231,517**	**247,910**
Off-budget:						
Federal old-age, survivors, and disability insurance trust funds	208,070	220,537	234,544	227,640	257,310	279,682
Interfund receipts from on-budget	−14,205	−17,411	−21,201	−14,205	−17,411	−21,201
Proprietary receipts from the public	−33			−33		
Total off-budget	**193,832**	**203,126**	**213,342**	**213,402**	**239,899**	**258,481**
Total	**357,388**	**373,953**	**393,776**	**430,047**	**471,416**	**506,391**

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

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

[Amounts under proposed legislation are shown separately]

Description	1987 actual	1988 estimate	1989 estimate
On-budget:			
Railroad retirement trust funds:			
Social insurance taxes and contributions	3,634	3,452	3,380
Railroad debt repayment	157	142	68
Interest on Federal securities	453	599	593
Receipts from other trust funds	2,614	2,890	3,009
Other (mainly receipts of advances and Federal payments)	2,419	2,732	2,628
Subtotal, railroad retirement trust funds	9,277	9,815	9,678
Black lung disability trust fund:			
Excise taxes	572	578	603
Advances from general fund	68	30	124
Other receipts	2	2	2
Subtotal, black lung disability trust fund	642	610	729
Veterans life insurance trust funds:			
Interest on Federal securities	964	1,003	1,020
Other receipts	444	434	420
Subtotal, veterans life insurance trust funds	1,408	1,437	1,440
Federal employees retirement funds:			
Social insurance taxes and contributions	4,715	4,717	4,691
Interest on Federal securities	15,860	17,314	18,370
Federal payment as employer for employee retirement (including payment on prior year liabilities)	23,453	24,531	25,745

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

[Amounts under proposed legislation are shown separately]

Description	1987 actual	1988 estimate	1989 estimate
Other receipts	2	1	1
Proposed legislation			4
Subtotal Federal employees retirement funds	44,029	46,563	48,810
Military retirement fund:			
Federal payment as employer for employee retirement	18,288	18,353	18,577
Federal contribution	10,524	10,285	10,648
Interest on Federal securities	3,107	4,924	5,835
Subtotal, military retirement fund	31,919	33,563	35,060
Unemployment trust fund:			
Social insurance taxes and contributions	25,418	23,585	22,921
Interest on Federal securities	1,909	2,313	2,859
Advances from the general fund	285	302	320
Subtotal, unemployment trust fund	27,613	26,200	26,100
Health insurance trust funds:			
Social insurance taxes and contributions	55,992	59,718	63,405
Premiums and other charges	6,520	8,800	10,563
Interest on Federal securities	4,913	5,892	7,095
Federal payment as employer for employee retirement	1,700	1,888	1,945
Other (mainly receipts of special Federal payments)	21,407	26,430	32,641
Proposed legislation			1,375
Subtotal, health insurance trust funds	90,532	102,728	117,024
Highway trust funds:			
Excise taxes	13,032	14,332	14,298
Interest on Federal securities	1,278	1,174	1,229
Subtotal, highway trust funds	14,310	15,506	15,527
Airport and airway trust fund:			
Excise taxes	3,060	3,382	3,658
Interest on Federal securities	880	857	921
Subtotal, airport and airway trust fund	3,940	4,238	4,580
State and local government fiscal assistance trust fund: Deposits for general revenue sharing			
Foreign military sales trust fund	8,504	8,417	8,062
Other trust funds (nonrevolving):			
Current law	3,750	4,244	4,150
Proposed legislation			−10
Subtotal, other trust funds (nonrevolving)	3,750	4,244	4,140
Subtotal	235,925	253,322	271,149
Intrafund receipts from on-budget	−10	−1	−1
Intrafund receipts from off-budget	−2,614	−2,890	−3,009
Proprietary receipts from the public	−16,656	−18,913	−20,228
Total on-budget receipts	**216,645**	**231,517**	**247,910**

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

[Amounts under proposed legislation are shown separately]

Description	1987 actual	1988 estimate	1989 estimate
Off-budget:			
Federal old-age, survivors, and disability insurance trust funds:			
Social insurance taxes and contributions	213,402	239,899	258,481
Interest on Federal securities	5,290	7,271	10,136
Federal payment as employer for employee retirement	3,300	4,298	4,719
Other (mainly receipts of special Federal payments)	5,648	5,842	6,347
Subtotal, Federal old-age, survivors, and disability insurance trust funds	227,640	257,310	279,682
Interfund receipts from on-budget	−14,205	−17,411	−21,201
Proprietary receipts from the public	−33		
Total off-budget receipts	**213,402**	**239,899**	**258,481**
Total receipts	**430,047**	**471,416**	**506,391**
On-budget	(216,645)	(231,517)	(247,910)
Off-budget	(213,402)	(239,899)	(258,481)

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

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

[Amounts under proposed legislation are shown separately]

Description	1987 actual	1988 estimate	1989 estimate
On-budget:			
Railroad retirement trust funds:			
Benefit payments and claims	6,148	6,367	6,621
Repayment of benefit advances	2,417	2,540	2,651
Administrative expenses and other	55	59	63
Subtotal, railroad retirement trust funds	8,620	8,967	9,335
Black lung disability trust fund:			
Benefit payments	593	557	673
Federal administrative expenses	50	55	56
Subtotal, black lung disability trust fund	643	613	729
Veterans life insurance trust funds	1,074	1,115	1,167
Federal employees retirement:			
Benefit payments and claims	24,541	26,086	27,745
Refunds to former employees	1,451	1,443	1,757
Administrative expenses and other	54	58	67
Subtotal, Federal employees retirement	26,046	27,587	29,568
Military retirement fund	18,078	19,123	20,320
Unemployment trust fund:			
Withdrawals for benefit payments	15,535	14,138	14,865
Repayment of advances from general fund	2,433	600	900

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

[Amounts under proposed legislation are shown separately]

Description	1987 actual	1988 estimate	1989 estimate
Administrative expenses and other	2,559	2,762	2,735
Subtotal, unemployment trust fund	20,527	17,500	18,500
Health insurance trust funds:			
Benefit payments	79,736	85,584	93,329
Administrative expenses and other	1,904	2,073	2,479
Proposed legislation			−1,317
Subtotal, health insurance trust funds	81,640	87,657	94,491
Highway trust funds (mainly grants to States)	13,476	14,219	14,705
Airport and airway trust fund	2,631	3,007	3,858
State and local government fiscal assistance trust fund: Payments for general revenue sharing	76		
Foreign military sales trust fund	9,910	8,572	8,204
Other trust funds (nonrevolving):			
Current law	2,151	3,050	3,623
Proposed legislation			−*
Subtotal, other trust funds (nonrevolving)	2,151	3,050	3,623
Trust revolving funds	−2,037	1,222	−830
Subtotal	182,836	192,632	203,672
Intrafund receipts from on-budget	−10	−1	−1
Intrafund receipts from off-budget	−2,614	−2,890	−3,009
Proprietary receipts from the public	−16,656	−18,913	−20,228
Total on-budget outlays	**163,556**	**170,827**	**180,434**
Off-budget:			
Federal old-age, survivors, and disability insurance trust funds:			
Benefit payments	202,476	214,552	228,386
Payments to other trust funds	2,614	2,890	3,009
Administrative expenses and other	2,980	3,094	3,149
Subtotal, Federal old-age, survivors, and disability insurance trust funds	208,070	220,537	234,544
Interfund receipts from on-budget	−14,205	−17,411	−21,201
Proprietary receipts from the public	−33		
Total off-budget outlays	**193,832**	**203,126**	**213,342**
Total outlays	**357,388**	**373,953**	**393,776**
On-budget	(163,556)	(170,827)	(180,434)
Off-budget	(193,832)	(203,126)	(213,342)

*500 thousand or less.

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 in-

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clude both obligated and unobligated balances. The balances on a budget authority basis differ from the cash balances because, for some accounts, contract authority (a form of budget authority) has been provided to a trust fund in advance of receiving money, while unappropriated receipts are included in the cash balances but are not a part of the budget authority balances. The note to table C-9 lists these accounts and reconciles the balances on a budget authority basis with the cash balances.

For 1989, the largest net investments are expected to be those of the Federal employees retirement funds. The investments reported differ from the amounts reported by the Treasury Department. Special Analysis E, "Borrowing and Debt," provides further information.

Table C-9. **TRUST FUND BALANCES**

(In millions of dollars)

Description	As of Sept. 30			
	1986 actual	1987 actual	1988 estimate	1989 estimate
Railroad retirement trust funds	6,072	6,747	7,594	7,937
Black lung disability trust fund	3	3		
Veterans life insurance funds	10,022	10,356	10,677	10,950
Federal employees retirement funds	162,543	180,526	199,503	218,745
Military retirement fund	23,670	37,511	51,951	66,690
Unemployment trust fund	22,942	30,010	38,710	46,310
Health insurance trust funds	48,105	56,998	72,069	94,603
Highway trust funds	12,773	13,607	14,894	15,715
Airport and airway trust fund	8,625	9,935	11,167	11,888
State and local government fiscal assistance trust fund	259	183	183	183
Foreign military sales trust fund	6,507	5,100	4,945	4,803
Other trust funds (nonrevolving)	5,114	6,007	7,713	7,909
Trust revolving funds	25,695	27,732	26,510	27,367
Federal old-age, survivors, and disability insurance trust funds (off-budget)	45,870	65,440	102,212	147,351
Total	**378,200**	**450,153**	**548,128**	**660,450**
On-budget	(332,331)	(384,713)	(445,915)	(513,099)
Off-budget	(45,870)	(65,440)	(102,212)	(147,351)

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

	1986	*1987*	*1988*	*1989*
Balance available on an authorization basis	405317	476,746	572,617	683,884
Unfinanced contract authority:				
Highway trust funds	−30,784	−31,024	−31,484	−32,954
Airport and airway trust fund	−1,994	−1,651	−2,288	−2,878
Foreign military sales trust fund	−11,554	−12,365	−11,574	−10,360
Other	−61	−32	−26	−19
Unappropriated receipts:				
Available for appropriation by Congress:				
Highway trust funds	10,799	10,567	11,249	12,923
Airport and airway trust fund	5,884	7,209	8,268	8,474
Inland waterways trust fund	240	295	320	306
Aquatic resources trust fund	153	175	209	205
Hazardous substance superfund	9		444	283
Leaking underground storage tank trust fund		24	151	249
Other	186	202	237	332
Retained as permanent endowment	5	5	5	5
Balance available on a cash basis	378,200	450,153	548,128	660,450

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

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

(In millions of dollars)

Description	Offsetting collections			Gross outlays		
	1987 actual	1988 estimate	1989 estimate	1987 actual	1988 estimate	1989 estimate
Office of Personnel Management (employees' life insurance and health benefits)	8,828	11,331	13,547	8,333	10,347	12,282
Federal Deposit Insurance Corporation	6,579	5,431	5,463	5,141	7,699	5,965
All other trust revolving funds	822	857	896	719	795	829
Total trust revolving funds [1]	**16,229**	**17,619**	**19,906**	**14,193**	**18,841**	**19,076**
Receipts from the public	(8,777)	(8,443)	(9,399)			
Receipts from other accounts	(7,452)	(9,175)	(10,506)			

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

Trust fund obligations.—The obligations (net) for trust funds are estimated at $391 billion for 1989, as set forth in table C-11. This includes $229 billion in obligations (net) for transactions of the Federal old-age, survivors, and disability insurance trust funds that are off-budget.

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

(In millions of dollars)

Department or other unit	1987 actual	1988 estimate	1989 estimate
Legislative Branch	3	3	2
The Judiciary	7	3	4
Funds appropriated to the President	814	−787	−1,214
Agriculture	−26	164	50
Commerce	35	35	37
Defense—Military	12	25	23
Defense—Civil	18,262	19,493	20,833
Education	*	*	*
Energy	−3	3	
Health and Human Services, except social security	75,110	79,074	84,199
Health and Human Services, social security	203,462	215,851	229,404
Housing and Urban Development		*	*
Interior	204	276	318
Justice	2		
Labor	21,266	18,239	19,254
State	241	273	295
Transportation	16,754	18,514	18,101
Treasury	83	24	23
Environmental Protection Agency	1,052	1,492	1,680
General Services Administration			*
Office of Personnel Management	25,698	25,970	28,249

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Table C-11. **OBLIGATIONS INCURRED, NET, IN TRUST FUNDS—Continued**

(In millions of dollars)

Department or other unit	1987 actual	1988 estimate	1989 estimate
Veterans Administration	800	930	1,005
Federal Deposit Insurance Corporation	−1,209	1,705	−2,486
Railroad Retirement Board	6,178	6,203	6,484
All Other Independent Agencies	24	28	27
Undistributed offsetting receipts	−8,590	−11,569	−14,855
Total	**360,179**	**375,951**	**391,435**
On-budget	(156,717)	(160,098)	(162,029)
Off-budget	(203,462)	(215,851)	(229,404)

*500 thousand or less.

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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. This special analysis focuses on Federal investment outlays, including grants to State and local governments for investment purposes, that reflect the President's budget proposals for 1989.

A short overview of Federal investment outlays based on this special analysis is presented in Part 6c, "Federal Capital Expenditures," of the main budget volume. Data on historical trends in gross Federal outlays for public 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 1989.*

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 current services projections of Federal physical investment spending in current dollars, 5-year projections in 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 to State and local governments or for direct Federal outlays. They can be for investment in physical capital, which yields a stream of services over a period of years; and investment in research, development, education, and training, which provide less tangible long-term benefits. They can also be for lending, which yields a monetary return.

Inherent in the classification of these data are two problems, one involving grants to others, and one involving spending that could be shown in more than one category. For example:

- 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.

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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 category. 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 category that is most commonly recognized as investment. 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 of physical assets. Similarly, the purchase of equipment for research and development is included in the acquisition of equipment category, not in conduct of research and development.

This analysis is organized in four sections:

- the composition of Federal investment outlays;
- historical trends in major public physical investment;
- calculations of physical investment outlays net of depreciation; and
- detailed data tables.

COMPOSITION OF FEDERAL INVESTMENT OUTLAYS

The composition of Federal investment outlays is shown in Table D–1. These outlays are estimated to be $222.3 billion in 1989, $16.7 billion or 8 percent more than the 1988 estimate of $205.7 billion. This section discusses first physical investment, such as construction, rehabilitation, and the acquisition of major equipment, and discusses the more marginal categories (in terms of classification) at the end, such as purchases of agricultural commodities and international development activities.

Outlays for *physical investment* are estimated to be $128.5 billion in 1989, an increase of $1.8 billion above the 1988 estimate of $126.8 billion. This investment includes primarily outlays for construction, rehabilitation, and the purchase of major equipment. Investment directly by the Federal Government is estimated to be $103.7 billion in 1989 and outlays for grants to State and local governments for physical investment are estimated to be $24.9 billion.

The direct investment by the Federal Government is primarily for national defense, estimated to be $88.5 billion in 1989. Almost all of this, or an estimated $81.6 billion in 1989, is for the procurement of weapons and other military equipment, and the remainder, $6.9 billion, is primarily for construction of military bases and family housing for military personnel.

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TABLE D–1. **COMPOSITION OF FEDERAL INVESTMENT OUTLAYS**

(In billions of dollars)

	1984	1985	1986	1987	1988 estimate	1989 estimate
Physical investment:						
Direct:						
National defense	68.2	78.0	84.7	89.5	87.5	88.5
Nondefense	9.8	11.7	11.3	12.5	14.2	15.2
Subtotal, direct physical investment	78.0	89.7	95.9	102.1	101.7	103.7
Grants to State and local governments	22.7	24.9	26.3	23.8	25.1	24.9
Subtotal, physical investment	**100.7**	**114.6**	**122.2**	**125.9**	**126.8**	**128.5**
Conduct of research and development:						
National defense	25.8	30.4	35.7	37.1	36.5	39.8
Nondefense	15.2	16.9	16.5	16.2	18.1	19.8
Subtotal, conduct of research and development	41.0	47.2	52.1	53.3	54.6	59.6
Conduct of education and training:						
Direct	11.5	11.6	11.2	11.6	12.2	15.4
Grants to State and local government	10.6	11.4	12.6	12.3	13.4	14.1
Subtotal, conduct of education and training	22.1	23.0	23.7	23.9	25.6	29.5
Loans and financial investments	5.2	32.5	20.5	−2.4	−6.4	−1.2
Other (including commodity inventories) [1]	6.0	5.9	10.9	8.2	5.1	5.9
Total, Federal investment outlays	**175.0**	**223.2**	**229.5**	**208.9**	**205.7**	**222.3**
MEMORANDUM						
National defense	94.4	109.6	120.9	126.9	124.3	128.6
Nondefense	80.6	113.6	108.6	82.0	81.4	93.7

[1] Includes a small amount of outlays for private physical investment.

Outlays for direct physical investment by the Federal Government for nondefense purposes are estimated to be $15.2 billion in 1989, $0.9 billion more than the 1988 estimate. The 1989 outlays include $9.4 billion for construction and rehabilitation. These outlays are largely for water, power, and natural resources projects of the Corps of Engineers, the Department of Interior, the Tennessee Valley Authority and the power administrations, and for construction and rehabilitation of veterans hospitals and Postal Service facilities. Outlays for the acquisition of major equipment are estimated to be $5.7 billion in 1989. This is largely for the space program, the air traffic control system, energy research, the Coast Guard, and veterans hospitals.

Outlays for grants to State and local governments for physical investment are estimated to be $24.9 billion in 1989, $0.2 billion

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less than the 1988 estimate. More than half of these outlays, or $13.1 billion in 1989, are grants to assist with construction of the Interstate highway system and other major highways. Other major grants for physical investment are for sewage treatment plants, community development, airports, and mass transit. Information on grants-in-aid to State and local governments, both for investment and for other purposes, is available in Special Analysis H in this volume.

Outlays for the *conduct of research and development* [1] are estimated to be $59.6 billion in 1989, $5.0 billion more than the 1988 estimate. These outlays are devoted to increasing our basic scientific knowledge and promoting related research and development activities. They increase our national security, improve the marginal productivity of capital and labor for both public and private purposes, and enhance the quality of life. About two-thirds of the outlays for the conduct of research and development, an estimated $39.8 billion in 1989, are for national defense.

Nondefense outlays for the conduct of research and development are estimated to be $19.8 billion in 1989, $1.7 billion or 9 percent more than in 1988. This is almost entirely for direct spending by the Federal Government, and is largely for the space programs, the National Science Foundation, health research, and research for nuclear and non-nuclear energy facilities. Research and development activities are discussed in detail in Special Analysis J, "Research and Development," in this volume.

Outlays for the *conduct of education and training* [1] are estimated to be $29.5 billion in 1989, $3.9 billion more than the 1988 estimate. These outlays are classified as investment because they are intended to add to the stock of human capital by developing a more skilled and productive labor force. Grant outlays to State and local governments for this category are estimated to be $14.1 billion in 1989, almost half of the total. These are primarily for the disadvantaged and the handicapped, and for vocational and adult education. Outlays for direct education and training spending by the Federal Government are estimated to be $15.4 billion in 1989, $3.2 billion more than the 1988 estimate. Programs in this category are primarily aid for higher education through student financial assistance, guaranteed student loans, the veterans GI bill, and health training programs.

Loans and financial investments include direct loan disbursements for new loans, repayments of previous loans, the sale of loan assets, and related activities.[2] For these investments, repayments and other collections are estimated to exceed disbursements by $1.2

[1] Outlays for physical investment for these programs are included in the physical investment category.

[2] The sale of loan assets with recourse is not defined as an offsetting collection but rather as a means of financing the budget deficit other than by borrowing from the public.

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billion in 1989. Included in this category are the proceeds of loan asset sales of $5.6 billion in 1987, and estimated proceeds from loan asset sales and prepayments of $10.9 billion in 1988 and $8.5 billion in 1989. In addition, the 1987 data include $1.9 billion in proceeds from the sale of Conrail stock. The major loan activities are for the sale of military equipment to foreign countries, promotion of exports and housing, and assistance to farmers and college students. The large decrease from $20.5 billion in 1986 to —$2.4 billion in 1987 is primarily because of the asset sales in 1987 mentioned above and because of a net decrease of $8.6 billion in loans by the Commodity Credit Corporation to farmers for price support programs. These loans decreased because of increased demand for agricultural commodities, which decreased the demand for loans.

The 1989 budget includes a major credit reform proposal, which involves a restructuring of the way the Federal Government budgets and accounts for direct and guaranteed loans. This proposal and other aspects of loans and financial investments are discussed in considerable detail in Special Analysis F, "Federal Credit Programs," in this volume and in Part 6b of the main volume of the 1989 Budget.

The *other investment-type* outlays are estimated to be $5.9 billion in 1989, $0.7 billion more than the 1988 estimate. These are almost entirely for direct Federal nondefense outlays.

A major portion of outlays in this category is for the purchase or sale of agricultural products pursuant to farm price support programs. Net receipts from sales of these commodities in 1989 are estimated to be $1.4 billion. Other outlays in the category are for purchases of oil for the strategic petroleum reserve, for direct conservation activities by the Federal Government to improve agricultural and other lands, for the collection of information, such as by the Bureau of the Census, and for foreign economic assistance grants for general economic development or humanitarian needs. This category also includes the proceeds from the proposed sale of the naval petroleum reserve and power administrations, with estimated receipts of $3.3 billion in 1989.

Outlays for these investment activities are shown in greater detail in Tables D–5 through D–8.

Information on most major programs and proposals is available in Part 5 of the main volume of the 1989 budget.

Historical Trends in Major Public Physical Investment

This section presents data on physical investment for selected years from 1960 to 1989. Other sections of the budget documents contain historical information that can be used to analyze major trends in specialized segments of Federal investment-type spending. Besides the Historical Tables, historical data for education and

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training outlays are available as part of the functional tabulations in the main budget volume, 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 physical investment at 5-year intervals from 1960 to 1980 and annually from 1980 to 1989.

Table D–3 adjusts these trends for inflation by showing the data in constant fiscal year 1982 dollars, and, as an additional comparison, shows the data relative to GNP. In constant dollars, national defense investment is estimated to be $77.2 billion in 1989, an average annual increase of 8 percent from 1980 to 1989. This compares to 3 percent per year growth from 1975 to 1980, and an average decline of 10 percent per year from 1970 to 1975, as the Vietnam War was ending.

Direct nondefense investment in constant dollars is estimated to be $13.7 billion in 1989, an increase on the average of 5 percent per year from 1980 to 1989, slightly more than the 4 percent average annual rate of increase from 1970 to 1980. In contrast, grants for investment are estimated to decline in real terms 2 percent per year from 1980 to the estimated 1989 level of $20.4 billion. This compares to an average annual rate of increase of 6 percent from 1975 to 1980.

Most categories of grants for physical investment increased from 1975 to 1980 in terms of current dollars, which resulted in an increasing share of State and local capital spending financed by grants. In 1975, Federal capital grants financed 26 percent of total State and local capital spending. This share increased ten percentage points to 36 percent by 1980. In contrast, with the restraint in Federal grants since 1980 and increases in capital spending financed by State and local own source revenues, this share returned to 26 percent in 1987.

As a percent of GNP, national defense investment is estimated to be 1.8 percent in 1989, higher than the 1980 percentage of 1.2 percent but below the percentage in 1970 during the Vietnam War of 2.4 percent. Direct nondefense capital spending as a percent of GNP has remained fairly steady from 1970 to 1989.

The trends for grants as a percent of GNP are similar to the trends for grants described above. For 1989, these grants are estimated to be 0.5 percent of GNP, a decrease from the 0.8 percent in 1980. The 1980 percent was higher than the 0.7 percent in 1975.

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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	1988 estimate	1989 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	80.7	79.2	79.8
Military construction, family housing, and other	2.1	1.3	1.3	1.8	2.4	2.4	2.9	3.4	3.6	4.4	5.1	6.0	5.6	6.0
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	2.8	2.7	2.7
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	89.5	87.5	88.5
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	4.6	5.3	5.2
Other	0.8	1.5	0.8	1.4	2.7	2.8	2.8	2.5	3.3	3.5	3.7	3.8	3.9	4.2
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	4.2	5.0	5.7
Subtotal, nondefense	1.9	3.0	2.5	4.8	8.1	8.8	8.5	8.0	9.8	11.7	11.3	12.5	14.2	15.2
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	102.1	101.7	103.7
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	12.5	13.1	13.1
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	3.5	3.8	4.1
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	4.0	4.3	4.2

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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	1988 estimate	1989 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	3.0	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	0.8	0.5
All other [2]	0.1	0.2	0.6	0.5	0.2	0.2	0.3	0.2	0.3	0.4	0.4	0.3	0.4	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	23.8	25.1	24.9
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	125.9	126.8	128.5
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	89.6	87.6	88.6
Nondefense	5.2	8.0	9.6	15.7	30.5	30.9	28.6	28.5	32.5	36.6	37.5	36.3	39.2	39.9

*$50 million or less.

[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.

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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	1988 estimate	1989 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	63.2	71.9	76.9	84.0	79.1	77.2
Nondefense	5.9	8.7	6.1	8.2	9.1	9.3	8.5	8.0	9.8	11.5	11.1	12.2	13.4	13.7
Subtotal	57.6	49.1	61.9	41.3	48.7	52.1	56.4	64.9	73.0	83.4	88.0	96.2	92.6	90.0
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	13.8	14.7	15.7	14.2	14.5	14.2
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	3.6	3.7	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	3.2	2.9	2.5
All other	0.5	0.5	1.5	0.9	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.2
Subtotal grants	12.2	17.3	19.4	18.3	24.6	22.7	20.2	20.3	22.0	22.9	23.6	21.2	21.5	20.4
Total	69.8	66.4	81.3	59.6	73.3	74.8	76.6	85.3	95.0	106.3	111.5	117.4	114.0	111.4
	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	1.78	1.85	1.98	2.02	2.03	1.86	1.76
Nondefense	0.38	0.45	0.26	0.32	0.30	0.29	0.27	0.24	0.27	0.30	0.27	0.28	0.30	0.30
Subtotal	3.77	2.57	2.64	1.54	1.52	1.60	1.80	2.02	2.12	2.27	2.29	2.32	2.16	2.06

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

	1960	1965	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988 estimate	1989 estimate
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	0.36	0.36	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	0.09	0.09	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	0.08	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	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	0.54	0.53	0.49
Total	4.42	3.31	3.35	2.26	2.36	2.34	2.44	2.64	2.73	2.91	2.91	2.86	2.69	2.56

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Calculations of Physical Investment Outlays Net of Depreciation

This section presents data on physical investment in capital assets and estimates of the depreciation on these assets, which is their reduction in value due to wear and tear, obsolescence, and other factors. The difference between total, or gross investment, and depreciation is net investment. These data are presented in constant fiscal year 1982 dollars.

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. 36–38 of the November 1987 issue and the references therein.) 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 extends back to 1940. However, rough estimates of such spending were prepared extending back to 1915. These data were then converted to constant prices to approximate replacement costs and a formula was developed to estimate approximate depreciation. The product is a set of estimates of nondefense federally financed public net investment in constant dollars.

The historical budget data were adjusted to constant fiscal year 1982 dollars using price deflators for Federal nondefense capital purchases. The resulting constant dollar series is shown as gross investment in Table D–4. These are the same nondefense data as presented in the previous sections. 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; 46 years for water and power projects; 30 years for other nondefense construction and rehabilitation; and 16 years for major equipment. The difference between gross investment and depreciation is shown as net investment.

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Table D–4. **COMPOSITION OF NEW AND NET FEDERAL AND FEDERALLY FINANCED INVESTMENT IN NONDEFENSE PUBLIC PHYSICAL CAPITAL IN CONSTANT (1982) PRICES**

(In billions of dollars)

Year	Total investment			Net direct Federal investment			Investment financed by Federal grants-in-aid						
										Composition of net investment			
	Gross	Depreciation	Net	Total	Water and power	Other	Gross	Depreciation	Net	Transportation (mainly highways)	Community and regional development	Natural resources and environment	Other
1970	25.4	12.1	13.3	1.2	0.9	0.2	19.3	7.2	12.1	7.5	3.3	0.3	1.0
1971	26.5	12.6	13.9	1.8	1.5	0.3	19.8	7.7	12.2	7.0	3.6	0.9	0.7
1972	27.6	13.2	14.4	2.7	1.7	0.9	19.9	8.1	11.8	6.3	4.1	0.7	0.6
1973	27.9	13.8	14.1	2.9	1.5	1.4	19.7	8.6	11.1	6.0	3.6	1.2	0.4
1974	27.9	14.4	13.5	2.8	1.8	1.0	19.6	8.9	10.7	4.3	3.2	2.8	0.3
1975	26.4	14.9	11.5	2.5	2.1	0.5	18.2	9.3	8.9	3.3	2.5	2.9	0.3
1976	30.0	15.4	14.6	2.5	2.1	0.4	21.7	9.6	12.1	5.5	2.8	3.5	0.2
TQ	8.4	4.0	4.5	0.7	0.6	0.1	6.2	2.5	3.8	1.4	1.0	1.4	*
1977	33.5	15.9	17.6	2.8	2.5	0.3	24.7	9.9	14.8	5.0	4.6	5.0	0.2
1978	35.3	16.5	18.9	3.5	2.7	0.8	25.6	10.3	15.4	4.2	7.3	4.0	−0.2
1979	34.8	17.0	17.8	3.8	2.8	1.0	24.6	10.6	14.0	4.5	5.6	4.2	−0.3
1980	33.6	17.7	16.0	2.6	1.7	0.9	24.5	11.1	13.4	5.4	4.3	4.2	−0.5
1981	32.0	18.4	13.7	2.6	1.6	1.1	22.7	11.7	11.0	4.6	3.5	3.3	−0.5
1982	28.6	19.0	9.6	1.6	0.7	0.9	20.1	12.1	8.0	2.8	2.9	2.7	−0.4
1983	28.3	19.6	8.7	1.0	0.9	0.2	20.3	12.6	7.7	3.8	2.3	2.0	−0.5
1984	31.7	20.3	11.4	2.6	0.1	2.5	21.9	13.1	8.8	5.3	2.2	1.6	−0.4
1985	34.4	21.1	13.3	4.1	0.7	3.4	22.9	13.7	9.2	5.9	2.0	1.7	−0.4
1986	34.6	21.9	12.6	3.4	0.3	3.0	23.5	14.2	9.3	6.6	1.4	1.7	−0.4
1987	33.4	22.6	10.7	4.3	0.7	3.6	21.1	14.7	6.4	4.7	0.8	1.4	−0.4
1988 estimate	34.8	23.5	11.3	5.1	1.2	3.9	21.4	15.2	6.2	4.6	0.8	1.0	−0.3
1989 estimate	34.1	24.3	9.8	5.1	0.9	4.2	20.4	15.6	4.7	4.0	0.5	0.6	−0.4

* $50 million or less.

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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 selected sources. There are no consistent outlay data on nondefense physical capital investment for this period, and the estimates are approximations.
- *Price adjustments.*—The replacement cost of the Federal stock of nondefense physical capital has increased through time, but the rate of increase is not known exactly. For this presentation, an estimate of replacement costs in 1982 prices was made through the application of the National Income and Product Accounts deflator series for Federal, State, and local purchases of durables and structures indexed to 1982 prices. There are no specific price indices for public purchases of durables and structures for 1915 through 1939, and estimates were made on the basis of Census Bureau historical statistics on constant price public capital formation.
- *Depreciation estimates.*—The 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 public nondefense physical capital investment.

The data in Table D–4 show that net investment, measured in constant dollars, increased between 1970 and 1979 because gross 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 grew. The value of newer assets being depreciated was greater than the value of older assets being retired (and thus no longer depreciated). In the early 1980's, gross investment declined slightly and then increased. Depreciation continued to rise, because the new levels of investment were still high relative to the years before 1970. As a result, the pattern for net investment has been uneven in the 1980's, varying from $16.0 billion in 1980 to $8.7 billion in 1983.

The composition of nondefense public physical capital investment—on both a gross and a net basis—has changed substantially over time. Before the mid-1950's, direct nondefense gross investment exceeded grants for investment, on both a gross and a net basis. However, by the end of the 1950's, this had been reversed and grants-in-aid for investment substantially exceeded direct investment. This has continued on a gross basis, but the trend on a net basis has changed. With increasingly higher depreciation for assets

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financed by grants-in-aid, net investment for grants is estimated to be about the same as for net direct investment in 1989 for the first time since the mid 1950's.

Detailed Data Tables

The remaining tables in this analysis provide detail on the composition of investment spending and current outlays. They provide two basic displays of Federal spending. Table D–5 is a summary table showing the data divided between national defense spending and nondefense spending. Table D–7 provides detailed data for Table D–5. Table D–6 is a summary table identifying the grants to State and local governments separately from all other Federal outlays. Table D–8 provides detailed data for Table D–6.

The discussion of the investment data accompanied Table D–1 earlier in this Special Analyis. The following sections discuss briefly the operating or current outlays and outlays that are unclassified.

Current Outlays.—Programs that provide benefits generally in the current year are classified as current outlays. Some of these outlays may be used in part by their recipients for investment 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 benefits. Total current outlays are estimated to be $923.2 billion in 1989; $165.8 billion are for defense programs and $757.3 billion for nondefense programs.

Provision of benefits is the largest category of current outlays in the budget. These outlays are estimated to be $530.8 billion in 1989. Social security and other disability and retirement benefits constitute the largest element in this category; they are estimated to be $296.1 billion in 1989. 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 1989 are estimated to be $11.0 billion, of which $10.0 billion are for grants to State and local governments.

Aids to agriculture, commerce, and transportation include agriculture price support subsidies, transportation programs, and assistance to small businesses. Outlays for these programs are estimated to be $33.2 billion in 1989.

Outlays for the *repair, maintenance, and operation of physical assets* are estimated to be $93.3 billion in 1989. Almost all of this, or an estimated $87.9 billion, is for national defense.

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Outlays for *net interest* are estimated to be $151.8 billion in 1989.

The other categories of current outlays are for *regulation, control, and law enforcement*; *general purpose fiscal assistance*; *general administration*; and *other operating outlays.* Outlays for these categories are estimated to be $103.0 billion in 1989.

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 undistributed offsetting receipts, most payments from the Government to itself, and the associated offsetting collections. Outlays for this category are estimated to be −$51.3 billion in 1989.

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

(In millions of dollars)

	1987 actual	1988 estimate	1989 estimate
National Defense:			
Investment-type outlays:			
Construction and rehabilitation	7,225	6,803	7,047
Acquisition of major equipment and other physical assets	82,410	80,804	81,602
Conduct of research and development	37,097	36,465	39,802
Other investment-type outlays	170	253	151
Subtotal, investment-type outlays	126,902	124,325	128,602
Current outlays:			
Repair, maintenance, and operation of physical assets	80,836	85,156	87,873
Other current outlays	74,475	76,165	77,971
Subtotal, current outlays	155,310	161,321	165,844
Unclassified (primarily offsetting receipts)	−213	−223	−426
Total, national defense outlays	**281,999**	**285,423**	**294,020**
Nondefense:			
Investment-type outlays:			
Construction and rehabilitation	31,678	33,605	33,737
Acquisition of major equipment	4,190	5,016	5,714
Conduct of research and development	16,159	18,133	19,798
Conduct of education and training	23,898	25,583	29,526
Loans and financial investments	−2,410	−6,424	−1,188
Commodity inventories	1,201	−3,919	−506
Other physical assets	2,748	4,387	1,574
Other investment-type outlays	4,506	4,990	5,091
Subtotal, investment-type outlays	81,971	81,372	93,745
Current outlays:			
Provision of benefits:			
Benefits	458,152	486,308	515,901
Administrative expenses of benefit programs	13,560	14,631	14,907
Subtotal, provision of benefits	471,712	500,939	530,808
Other current programs	73,744	88,571	74,699
Net interest	138,570	147,871	151,804
Subtotal, current outlays	684,027	737,381	757,311
Unclassified (primarily offsetting receipts)	−43,411	−48,272	−50,861
Total, nondefense outlays	**722,587**	**770,481**	**800,195**
TOTAL OUTLAYS	**1,004,586**	**1,055,904**	**1,094,215**

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

(In millions of dollars)

	1987 actual	1988 estimate	1989 estimate
Grants-in-Aid:			
Investment-type programs:			
Construction, rehabilitation, & acquisition of physical assets	23,843	25,064	24,852
Conduct of research and development	464	452	359
Conduct of education and training	12,292	13,432	14,142
Other investment-type programs	8	9	10
Subtotal, investment-type programs	36,607	38,957	39,363
Current programs:			
Provision of benefits			
Benefits	52,051	55,755	58,506
Administrative expenses of benefit programs	6,512	7,085	7,349
Subtotal, provision of benefits	58,563	62,840	65,854
Other current programs	13,222	14,869	13,798
Subtotal, current programs	71,785	77,709	79,652
TOTAL, grants-in-aid	**108,392**	**116,666**	**119,015**
Direct Federal Programs:			
Investment-type outlays			
Construction and rehabilitation of physical assets	15,469	15,906	16,371
Acquisition of major equipment	86,599	85,816	87,316
Conduct of research and development	52,792	54,145	59,240
Conduct of education and training	11,624	12,160	15,395
Loans and other financial investments	−2,411	−6,424	−1,188
Acquisition of commodity inventories	1,132	−3,905	−596
Other physical assets	2,341	3,830	1,135
Other investment-type programs	4,721	5,211	5,311
Subtotal, investment-type outlays	172,266	166,739	182,984
Current outlays:			
Provision of benefits:			
Benefits	406,227	430,688	457,540
Administrative expenses of benefit programs	7,047	7,546	7,558
Subtotal, provision of benefits	413,275	438,234	465,098
Other current programs	215,707	234,889	226,601
Net interest	138,570	147,871	151,804
Subtotal, current outlays	767,552	820,993	843,503
Unclassified (primarily offsetting receipts)	−43,624	−48,495	−51,287
Total, direct Federal outlays	**896,194**	**939,238**	**975,200**
TOTAL OUTLAYS	**1,004,586**	**1,055,904**	**1,094,215**

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

(In millions of dollars)

	1987 actual	1988 estimate	1989 estimate
National Defense:			
Investment-type outlays:			
Construction and rehabilitation of physical assets:			
Military construction	5,630	5,188	5,438
Family housing	487	548	645
Atomic energy defense activities and other	1,108	1,067	964
Subtotal, construction & rehabilitation of physical assets	7,225	6,803	7,047
Acquisition of major equipment:			
Procurement	80,763	79,170	79,820
Atomic energy defense activities	444	454	494
Subtotal, acquisition of major equipment	81,207	79,624	80,314
Other physical assets	1,203	1,180	1,286
Conduct of research and development			
Defense military	34,732	33,951	37,117
Atomic energy and other	2,365	2,513	2,685
Subtotal, defense research and development	37,097	36,465	39,802
Other investment-type outlays	170	253	153
Subtotal, investment-type outlays	126,902	124,325	128,602
Current outlays:			
Repair, maintenance, and operation of physical assets:			
Department of Defense, Military	78,478	82,711	85,296
Other	2,358	2,445	2,577
Subtotal, repair, maintenance & operation of physical assets	80,836	85,156	87,873
Other current outlays:			
Military personnel	70,884	74,629	77,006
Other national defense	3,591	1,535	965
Subtotal, other current outlays	74,475	76,165	77,971
Subtotal, current outlays	155,310	161,321	165,844
Unclassified (primarily offsetting receipts)	−213	−223	−426
Total, national defense outlays	**281,999**	**285,423**	**294,020**
Nondefense:			
Investment-type outlays:			
Construction and rehabilitation of physical assets:			
Highways	12,497	13,088	13,119
Mass transportation	2,551	2,801	2,984
Rail transportation	105	113	57
Air transportation	963	1,018	1,160
Water transportation	167	184	134
Community development block grants	2,967	3,037	3,015
Urban development acton grants	354	400	366
Other community and regional development	778	998	880
Pollution control and abatement	3,156	2,897	2,867
Water resources	2,150	2,640	2,749
Other natural resources and environment	815	935	818
Energy	2,559	2,834	2,518
Veterans hospitals and other health	763	813	763

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

(In millions of dollars)

	1987 actual	1988 estimate	1989 estimate
Other programs	1,853	1,849	2,307
Subtotal, construction & rehabilitation of physical assets	31,678	33,605	33,737
Acquisition of major equipment:			
Transportation	1,208	1,337	1,307
Space flight, control and data communications	1,689	2,103	2,280
General science and basic research	118	128	626
Postal Service	188	245	255
Other	987	1,202	1,245
Subtotal, acquisition of major equipment	4,190	5,016	5,714
Conduct of research and development:			
General science, space and technology			
NASA	2,693	3,373	4,115
NSF	1,426	1,508	1,634
Other general science	576	640	279
Subtotal, general science, space, technology	4,695	5,521	6,029
Energy	2,321	2,305	2,407
Transportation			
Department of Transportation	347	395	379
NASA	557	589	704
Subtotal,transportation	905	984	1,083
Health			
NIH	4,942	5,643	6,181
All other health	869	1,030	1,564
Subtotal, health	5,811	6,673	7,745
Agriculture	796	833	834
Natural resources and environment	886	989	920
All other research and development	745	828	780
Subtotal, conduct of research and development	16,159	18,133	19,798
Conduct of education and training:			
Department of Education:			
Higher education	7,453	8,037	11,153
Elementary, secondary, and vocational education	7,529	8,244	9,007
Other	263	291	240
Subtotal, Department of Education	15,246	16,573	20,401
Veterans readjustment benefits	746	625	579
Training and employment programs	3,656	3,773	3,896
Health training	1,054	974	1,035
Other education and training	3,196	3,638	3,616
Subtotal, conduct of education and training	23,898	25,583	29,526
Loans:			
International affairs	552	−2,994	−248
Agriculture	2,227	−3,455	−2,491
Mortgage credit and deposit insurance	−1,671	1,047	−1,381
Aids to commerce	−246	−230	−731
Transportation	73	38	−31
Disaster relief	−498	−389	−708
Other community and regional development	−965	−1,052	−413

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

(In millions of dollars)

	1987 actual	1988 estimate	1989 estimate
Education	−81	296	457
Federal credit direct loan revolving fund			3,217
Other	−480	−1,084	−316
Subtotal, loans	−1,088	−7,823	−2,645
Other financial investments:			
International development	468	1,248	1,298
Other	−1,790	152	159
Subtotal, other financial	−1,322	1,400	1,457
Commodity inventories:			
Agriculture	685	−4,292	−1,417
Other	516	374	910
Subtotal, commodity inventories	1,201	−3,919	−506
Other physical assets:			
Sale of the naval petroleum reserves and other assets			−3,325
Other physical assets	2,748	4,387	4,899
Subtotal, other physical assets	2,748	4,387	1,574
Other investment-type outlays			
Collection of information	1,703	2,026	2,208
International development	2,803	2,963	2,883
Subtotal, other investment-type outlays	4,506	4,990	5,091
Subtotal, investment-type outlays	81,971	81,372	93,745
Current outlays:			
Provision of benefits:			
Benefits:			
Retirement, survivor, and disability benefits:			
Social security	202,476	214,566	228,379
Civil service	24,277	25,734	27,364
Military retirement	18,080	19,128	20,324
Railroad retirement and disability benefits	6,411	6,606	6,839
Veterans disability benefits	10,665	10,551	11,177
Other retirement and disability benefits	1,731	1,808	1,996
Subtotal, retirement, survivor, and disability benefits	263,641	278,393	296,080
Other benefits:			
Veterans pension benefits	3,793	3,836	3,864
Medicare	79,741	85,605	92,414
Medicaid	26,032	29,070	31,068
Other health benefits	1,162	1,285	1,412
Unemployment compensation	15,657	14,297	14,905
Housing programs	11,150	12,159	13,677
Food and nutrition programs	18,631	19,694	19,536
Supplemental security income	9,923	11,441	11,368
Family support payments to States	8,543	8,592	8,576
Other assistance payments	10,154	11,359	12,335
Subtotal, other benefits	184,788	197,339	209,155
Direct provision of services:			
Hospital and medical care for veterans	8,448	8,966	9,177
Other health	1,120	1,338	1,375

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

(In millions of dollars)

	1987 actual	1988 estimate	1989 estimate
Other	156	272	113
Subtotal, direct provision of services	9,723	10,576	10,665
Subtotal, benefits	458,152	486,308	515,901
Administrative expenses of benefit programs:			
Social security retirement and disability (off-budget)	2,280	2,236	2,359
Medicare and medicaid	3,130	3,475	3,484
Unemployment compensation, assistance payments, & other	8,150	8,919	9,064
Subtotal, administrative expenses of benefit programs	13,560	14,631	14,907
Subtotal, provision of benefits	471,712	500,939	530,808
Social service and related programs:			
Human development services	1,833	2,240	2,298
Employment training programs	1,422	1,438	1,306
Social services block grant	2,688	2,685	2,700
Other	3,690	5,313	4,654
Subtotal, social service and related programs	9,632	11,676	10,958
Aids to agriculture, commerce, and transportation:			
Agriculture	21,357	27,287	23,329
Postal Service	281	1,211	−516
Small business assistance	622	847	1,033
Mortgage credit & thrift insurance	−402	−140	1,450
Ground transportation	1,512	1,387	548
Air transportation	2,707	3,003	3,253
Water transportation and waterways	2,271	2,045	2,299
Other	2,521	2,784	1,833
Subtotal, aids to agriculture, commerce and transportation	30,869	38,423	33,229
Repair, maintenance, and operation of physical assets:			
Natural resources:			
Water resources	621	507	470
Conservation and land management	−963	−1,002	−1,021
Recreational resources and other	604	1,056	1,557
Subtotal, natural resources	262	561	1,006
Energy (net of offsetting receipts)	−2,398	−3,014	−3,048
Other, net	5,589	6,285	7,496
Subtotal, repair, maintenance & operation, physical assets	3,453	3,833	5,454
General purpose fiscal assistance:			
General purpose grants-in-aid	757	669	638
Shared revenues	1,360	1,380	1,453
Subtotal, general purpose fiscal assistance	2,117	2,049	2,091
Regulation, control, and law enforcement:			
Regulatory and inspection activities:			
Natural resources and environment	1,279	1,303	1,384
Transportation	1,013	1,034	1,124
Health	1,103	1,177	1,204
Energy	461	381	456
Agriculture	344	362	334
Deposit insurance institutions	3,388	4,176	1,385
Tax collection	1,177	1,513	1,506

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

(In millions of dollars)

	1987 actual	1988 estimate	1989 estimate
Other	829	909	898
Subtotal, regulatory and inspection activities	9,593	10,855	8,290
Law enforcement activities:			
Federal law enforcement	4,006	4,798	5,049
Federal litigative and judicial	2,457	2,780	3,249
Federal correctional activities	611	713	917
Other law enforcement assistance	183	296	232
Subtotal, law enforcement activities	7,258	8,588	9,446
Subtotal, regulation, control, and law enforcement	16,851	19,442	17,737
General administration:			
International affairs	3,002	3,878	4,237
Legislative branch	1,507	1,630	1,807
Federal credit direct and guaranteed loan revolving funds			−9,499
Other general government	3,283	4,475	4,405
Other	1,476	1,052	752
Subtotal, general administration	9,269	11,036	1,702
Other operating outlays:			
International security assistance	3,809	4,010	4,321
Other	−2,256	−1,898	−794
Subtotal, other current outlays	1,553	2,112	3,528
Net interest:			
Interest on the public debt	195,249	210,052	220,262
Interest received by on-budget trust funds	−29,662	−34,321	−38,240
Interest received by off-budget trust funds	−5,290	−7,271	−10,136
Other interest	−21,727	−20,590	−20,082
Subtotal, net interest	138,570	147,871	151,804
Subtotal, current outlays	684,027	737,381	757,311
Unclassified:			
Employer share, employee retirement			
On-budget	−27,259	−28,670	−29,038
Off-budget	−3,300	−4,298	−4,719
Subtotal, employer share, employee retirement	−30,559	−32,968	−33,757
Offshore oil receipts	−4,021	−3,155	−3,920
Other unclassified:			
On-budget	−11,411	−15,040	−16,193
Off-budget	2,582	2,891	3,009
Subtotal, Unclassified (primarily offsetting receipts)	−43,411	−48,272	−50,861
Total, nondefense outlays	**722,587**	**770,481**	**800,195**
TOTAL OUTLAYS	**1,004,586**	**1,055,904**	**1,094,215**

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

(In millions of dollars)

	1987 actual	1988 estimate	1989 estimate
Grants-in-Aid:			
Investment-type programs:			
Construction and rehabilitation of physical assets:			
Highways	12,478	13,069	13,097
Mass transportation	2,551	2,801	2,984
Rail transportation	19	25	16
Air transportation	917	979	1,110
Pollution control and abatement	2,961	2,682	2,544
Other natural resources and environment	211	207	114
Community development block grants	2,967	3,037	3,015
Urban development action grants	354	400	366
Other community and regional development	675	862	786
Other construction	299	441	381
Subtotal, construction & rehabilitation of physical assets	23,434	24,503	24,413
Equipment and other physical assets	409	561	439
Conduct of research and development	464	452	359
Conduct of education and training:			
Employment and training assistance	2,929	3,014	3,066
Elementary and secondary education	7,181	7,957	8,684
Other	2,181	2,462	2,392
Subtotal, conduct of education and training	12,292	13,432	14,142
Collection of information	8	9	10
Subtotal, investment-type programs	36,607	38,957	39,363
Current programs:			
Benefits:			
Medicaid	26,032	29,070	31,068
Nutrition and food programs	8,205	8,327	8,190
Assistance payments	10,670	10,361	9,961
Housing payments and related activities	5,992	6,723	7,885
Other	1,152	1,275	1,401
Subtotal, benefits	52,051	55,755	58,506
Administrative expenses of benefit programs:			
Unemployment compensation	1,560	1,656	1,675
Medicaid	1,403	1,594	1,664
Nutrition and food programs	1,553	1,644	1,652
Assistance payments	1,996	2,191	2,357
Subtotal, administrative expenses of benefit programs	6,512	7,085	7,349
Social service and related programs:			
Employment programs	1,143	1,147	1,006
Human development services	1,771	2,150	2,206
Social service and child welfare services	3,471	3,664	3,713
Other	2,557	3,787	3,060
Subtotal, social service and related programs	8,942	10,748	9,986
Aids to agriculture, commerce, and transportation:			
Transportation	869	870	518
Other	8	2	.....
Subtotal, aids to agriculture, commerce, & transportation	877	872	518

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

(In millions of dollars)

	1987 actual	1988 estimate	1989 estimate
Repair, maintenance, and operation of physical assets	425	317	347
General purpose fiscal assistance:			
General revenue sharing	76		
Shared revenues	1,360	1,380	1,453
Other	749	742	713
Subtotal, general purpose fiscal assistance	2,185	2,122	2,166
Regulation, control, and law enforcement:			
Law enforcement assistance	132	192	124
Other	559	555	582
Subtotal, regulation, control, and law enforcement	691	747	706
Other current programs	102	63	74
Subtotal, current programs	71,785	77,709	79,652
Total, grants-in-aid	**108,392**	**116,666**	**119,015**
Direct Federal Outlays:			
Investment-type outlays:			
Construction and rehabilitation of physical assets:			
National defense	7,118	6,675	6,934
Water resource projects	2,025	2,502	2,686
Other natural resources and environment	923	1,081	1,089
Energy	2,559	2,834	2,518
Transportation	318	330	247
Veterans hospitals and other health facilities	737	780	728
Postal Service	1,110	750	916
Other construction	680	953	1,253
Subtotal, construction & rehabilitation of physical assets	15,469	15,906	16,371
Acquisition of major equipment:			
National defense	82,408	80,800	81,602
NASA, nondefense	1,689	2,103	2,280
Postal Service	188	245	255
Other	2,314	2,668	3,178
Subtotal, acquisition of major equipment	86,599	85,816	87,316
Conduct of research and development	52,792	54,145	59,240
Conduct of education and training:			
Assistance to veterans	829	788	783
Higher education	7,364	8,009	11,110
Elementary and secondary education	634	514	563
Employment and training assistance	670	696	735
Health training	1,047	939	1,013
Other	1,080	1,216	1,191
Subtotal, conduct of education and training	11,624	12,160	15,395
Loans & financial investments			
Loans:			
International affairs	552	−2,994	−248
Energy supply	−357	−1,193	−288
Agriculture	2,227	−3,455	−2,491
Commerce and housing credit	−246	−230	−731
Mortgage credit and deposit insurance	−1,671	1,047	−1,381
Transportation	73	38	−31

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

(In millions of dollars)

	1987 actual	1988 estimate	1989 estimate
SBA disaster loan fund	−498	−389	−708
Education	−81	296	457
Veterans	241	307	192
Low-rent public housing	−37	−39	−42
Federal credit direct loan revolving fund			3,217
Other	−1,293	−1,210	−591
Subtotal, loans	−1,089	−7,823	−2,645
Financial investments	−1,322	1,400	1,457
Subtotal, loans and financial investments	−2,411	−6,424	−1,188
Commodity inventories:			
Strategic Petroleum Reserve	513	374	910
Commodity Credit Corporation	685	−4,292	−1,417
Other commodity inventories	−67	14	−90
Subtotal, commodity inventories	1,132	−3,905	−596
Other physical assets:			
Sale of the naval petroleum reserves and other assets			−3,325
Other physical assets	2,341	3,830	4,460
Subtotal, other physical assets	2,341	3,830	1,135
Collection of information	1,695	2,017	2,198
International development	3,026	3,193	3,113
Subtotal, investment-type outlays	172,266	166,739	182,984
Current outlays:			
Benefits:			
Social security retirement and disability (off-budget)	202,476	214,566	228,379
Other retirement and disability benefits	65,084	67,797	71,709
Medicare	79,741	85,605	92,414
Medical care for veterans	8,448	8,966	9,177
Other health	1,130	1,349	1,386
Unemployment compensation	15,657	14,297	14,905
Food and nutrition programs	10,541	11,492	11,426
Housing payments and related activities	8,053	8,442	8,726
Supplemental security income	9,923	11,441	11,368
Earned income tax credit	1,410	2,893	3,897
Other	3,764	3,840	4,153
Subtotal, benefits	406,227	430,688	457,540
Administrative expenses of benefit programs:			
Social security retirement and disability (off-budget)	2,280	2,236	2,359
Medicare	1,727	1,882	1,820
Unemployment compensation, assistance payments and other	3,041	3,428	3,380
Subtotal, administrative expenses of benefit programs	7,047	7,546	7,558
Social service and related programs	690	929	972
Aids to agriculture, commerce, and transportation:			
Agriculture	21,357	27,287	23,329
Postal Service	281	1,211	−516
Small business assistance	622	847	1,033
Mortgage credit and deposit insurance	−402	−140	1,450
Ground transportation	647	522	34

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

(In millions of dollars)

	1987 actual	1988 estimate	1989 estimate
Air transportation	2,707	3,003	3,253
Water transportation and waterways	2,271	2,045	2,299
Other	2,509	2,777	1,829
Subtotal, aids to agriculture, commerce, & transportation	29,992	37,552	32,710
Repair, maintenance, and operation of physical assets:			
National defense	80,830	85,156	87,873
Other (includes offsetting collections)	3,033	3,516	5,107
Subtotal, repair, maintenance, & operation of physical assets	83,863	88,672	92,980
Regulation, control, and law enforcement	16,161	18,695	17,031
Other current programs:			
Military personnel	70,884	74,629	77,006
Other national defense	3,397	1,328	745
Federal credit direct and guaranteed loan revolving funds			−9,499
Other	10,720	13,085	14,655
Subtotal, other current programs	85,001	89,042	82,907
Net interest:			
On-budget	143,860	155,142	161,940
Off-budget	−5,290	−7,271	−10,136
Subtotal, net interest	138,570	147,871	151,804
Subtotal, current outlays	767,552	820,993	843,503
Unclassified:			
Employer share, employee retirement:			
On-budget	−27,259	−28,670	−29,038
Off-budget	−3,300	−4,298	−4,719
Subtotal, employer share, employee retirement	−30,559	−32,968	−33,757
Offshore oil receipts	−4,021	−3,155	−3,920
Other unclassified:			
On-budget	−11,625	−15,262	−16,619
Off-budget	2,582	2,891	3,009
Subtotal, other unclassified	−9,043	−12,371	−13,610
Subtotal, unclassified (primarily offsetting receipts)	−43,624	−48,495	−51,287
Total, direct Federal outlays	**896,194**	**939,238**	**975,200**
TOTAL OUTLAYS	**1,004,586**	**1,055,904**	**1,094,215**

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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 1989.*

The data for borrowing and debt during 1985–87 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–23 to E–32 discusses these revisions, a change in the treatment of the proceeds from the sale of loan assets with recourse, and the treatment of zero-coupon bonds.

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

[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 1986 data were published in the winter (1st quarter) issue, 1987, pp. 119–127.

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sponsored enterprises. 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 1989 Federal budget.

Borrowing and Repaying Debt

The Federal Government issues debt for two principal reasons. First, it sells 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 that are 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 some other 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

[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.

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public, despite the significance of this distinction, because the Federal Reserve's open market operations depend on future economic developments and on policy decisions not yet made.

Table E-1 summarizes Federal borrowing from 1987 through 1993. In 1987 the increase in gross Federal debt—i.e., the total issuances of new securities less the total redemptions of existing securities—was $225.2 billion. The issue of debt to Government accounts was $73.5 billion, and the sale of debt to the public was $151.7 billion. The Federal Reserve Banks increased their holdings of Federal debt by $21.2 billion, so the increase in debt held by the rest of the public was $130.5 billion. As a result of this borrowing, Federal debt held by the public increased to $1,897.8 billion at the end of 1987. Gross Federal debt was $2,355.3 billion. As noted previously, these data reflect revisions beginning in 1985, which are discussed in a later section of this special analysis.

Table E-1. **FEDERAL BORROWING**

(In billions of dollars)

Description	Borrowing or repayment (−) of debt							Debt outstanding, end of year	
	1987 actual	1988 estimate	1989 estimate	1990 estimate	1991 estimate	1992 estimate	1993 estimate	1989 estimate	1993 estimate
Gross Federal debt:									
Treasury debt	225.0	224.1	242.2	227.3	216.0	199.4	185.5	2,816.6	3,644.8
Agency debt	0.3	2.2	1.5	0.4	0.1	−*	−*	8.7	9.2
Gross Federal debt	225.2	226.3	243.7	227.7	216.1	199.3	185.6	2,825.3	3,654.0
Less debt held by Gov. accounts:									
Treasury debt	73.6	100.0	116.7	NA	NA	NA	NA	673.1	NA
Agency debt	−0.1	−0.9	*	NA	NA	NA	NA	0.1	NA
Debt held by Gov. accounts [1]	73.5	99.0	116.7	124.1	137.5	148.9	162.9	673.2	1,246.5
Total, debt held by public	151.7	127.2	127.0	103.6	78.7	50.5	22.6	2,152.1	2,407.5
Composed of:									
Debt held by the Federal Reserve Banks	21.2	NA	NA	NA	NA	NA	NA	NA	NA
Debt held by others	130.5	NA	NA	NA	NA	NA	NA	NA	NA

* $50 million or less.
[1] Investment by Government accounts during 1990–93 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. In the early part of this decade, 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 following three years the recovery helped to restrain the growth of borrowing, but the level of borrowing did not diminish. In 1987, however, borrow-

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ing from the public decreased to $151.7 billion, though in part this was due to the transitional effects of the Tax Reform Act of 1986.

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 3b of the *Budget*, "The Economic Outlook."

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. These favorable economic factors have continued to the present, a period that has now become the longest peacetime expansion in American history.

The estimated deficits and borrowing during the forecast period are reduced by the steady and strong economic expansion assumed in this budget. As explained in Part 3b of the *Budget,* real GNP is estimated to increase at an average annual rate of 3.3% from 1987 to 1993, and the total unemployment rate is estimated to decline to 5.2%. The estimated deficits and borrowing are also reduced by the deficit reduction policies proposed in this budget, consistent with the Bipartisan Budget Agreement negotiated in November 1987. These economic conditions and deficit reduction policies are together estimated to reduce substantially the Federal deficit and the borrowing from the public. As shown in table E–1, borrowing from the public is estimated to decrease from $151.7 billion in 1987 to $127.0 billion in 1989 and $22.6 billion in 1993.

The estimated borrowing based on the policies proposed in this budget may be compared with the estimated borrowing based on the current services deficit. The current services estimates of the budget, as explained in Special Analysis A, "Baseline Estimates,"

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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).[3] As shown in table E-2, they also show a substantial downward trend in borrowing, though not as great as under the policies proposed in this budget.

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

(Dollar amounts in billions)

Description	1988 estimate	1989 estimate	1990 estimate	1991 estimate	1992 estimate	1993 estimate
Borrowing from the public:						
Current services	128.0	135.9	110.5	85.5	62.3	38.4
Policy	127.2	127.0	103.6	78.7	50.5	22.6
Debt held by the public:						
Current services	2,025.8	2,161.8	2,272.2	2,357.7	2,420.0	2,458.4
Policy	2,025.1	2,152.1	2,255.7	2,334.4	2,384.9	2,407.5
Debt held by the public as percentage of GNP:						
Current services	43.0	43.0	42.1	40.9	39.5	38.0
Policy	43.0	42.8	41.9	40.5	39.0	37.2

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.[4] Since they had a large combined surplus in 1987 and are estimated to have large and growing surpluses during 1988–93, they reduce the requirements for Treasury to borrow from the public by a substantial amount.

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-23, together with their effect on the means of financing;
- seigniorage, which is the face value of minted coins less the cost of their production; and

[3] Further discussion of the current services concept is presented in Part 6a of the *Budget*, "Alternative Budget Baselines."

[4] Off-budget Federal entities are discussed in the *Budget*, Part 6d, "Perspectives on the Budget."

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

(In millions of dollars)

Description	1987 actual	1988 estimate	1989 estimate	1990 estimate	1991 estimate	1992 estimate	1993 estimate
Surplus or deficit (–)	**–150,444**	**–146,741**	**–129,542**	**–104,185**	**–79,268**	**–51,053**	**–23,266**
On-budget	*–170,014*	*–183,514*	*–174,680*	*–162,460*	*–149,148*	*–130,963*	*–116,158*
Off-budget [2]	*19,570*	*36,773*	*45,139*	*58,275*	*69,880*	*79,910*	*92,891*
Means of financing other than borrowing from the public:							
Decrease or increase (–) in Treasury operating cash balance	–5,052	16,436					
Increase or decrease (–) in:							
Checks outstanding, etc. [3]	5,154	2,265	2,619				
Deposit fund balances [4]	–1,840	–280	–896				
Seigniorage on coins	458	375	528	556	578	597	618
Proceeds from the sale of loan assets with recourse		698	270				
Total, means of financing other than borrowing from the public	–1,280	19,494	2,521	556	578	597	618
Total, requirements for borrowing from the public	–151,724	–127,247	–127,021	–103,629	–78,690	–50,456	–22,648
Change in debt held by the public	**151,724**	**127,247**	**127,021**	**103,629**	**78,690**	**50,456**	**22,648**

[1] Several amounts have been assumed to be zero during 1989–93 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, and profit on sale of gold.
[4] Does not include investment in Federal debt by deposit funds classified as part of the public.

- proceeds from the sale of loan assets with recourse, a new category for this table, which is explained on pages E–29 to E–30.

Except for seigniorage and the proceeds from the sale of loan assets, all of these other means of financing can be either positive or negative. They are changes in the Government's balance sheet, either its asset or its liability accounts, and can move in either direction. 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 1987, the Government borrowed $151.7 billion from the

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public. Most of this amount, $150.4 billion, was used to finance the Government deficit. The remaining $1.3 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.

As a whole, these other accounts did not require much borrowing from the public in 1987 in order to be financed. In 1988, on the other hand, they are themselves estimated to finance $19.5 billion of the deficit. This is due mostly to the large initial Treasury operating cash balance. Because the $36.4 billion cash balance on September 30, 1987, was more than the $20 billion needed for normal operations at that time of year, Treasury estimates a $16.4 billion decrease in cash balance during 1988. Since a decrease in cash balance is a means of financing the Government, this will allow borrowing in 1988 to be appreciably less than the size of the deficit. As a result, the estimated borrowing from the public is $24.5 billion less in 1988 than in 1987, whereas the estimated deficit is $3.7 billion less.

In 1989, with the initial cash balance assumed to be normal, the "other means of financing" are estimated to finance only $2.5 billion of the deficit. This is very much less than in 1988, and the difference has to be made up by additional borrowing from the public. Consequently, whereas the estimated deficit decreases by $17.2 billion, the estimated borrowing from the public decreases by only $0.2 billion.

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).

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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 1986–89 are compared in the table below (in billions of dollars):

	1986 actual	*1987 actual*	*1988 estimate*	*1989 estimate*
Investment by Government accounts in Federal debt	66.3	73.5	99.0	116.7
Total trust fund surplus	61.8	72.7	97.5	112.6

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.[5]

Size and Growth of Federal Debt

Gross Federal debt has risen substantially over the past half century, from $16.9 billion in 1929 to $2,355.3 billion at the end of 1987. 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 and debt held by the public increased by eight to nine times, and the amount of debt held in Federal Government accounts (primarily trust funds) rose by nearly ten times. 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 15.0% from 1980 to 1987. It is estimated to grow at the much slower rate of 4.0% from 1987 to 1993.

[5] 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."

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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	3,687.6	35.6
1985	1,827.5	317.6	1,509.9	169.8	1,340.1	3,943.6	38.3
1986	2,130.0	383.9	1,746.1	190.9	1,555.3	4,192.4	41.6
1987	2,355.3	457.4	1,897.8	212.0	1,685.8	4,408.7	43.0
1988 estimate	2,581.6	556.5	2,025.1	NA	NA	4,705.8	43.0
1989 estimate	2,825.3	673.2	2,152.1	NA	NA	5,023.3	42.8
1990 estimate	3,053.0	797.3	2,255.7	NA	NA	5,387.8	41.9
1991 estimate	3,269.2	934.7	2,334.4	NA	NA	5,758.6	40.5
1992 estimate	3,468.5	1,083.6	2,384.9	NA	NA	6,119.3	39.0
1993 estimate	3,654.0	1,246.5	2,407.5	NA	NA	6,464.8	37.2

[1] Data from 1940 to 1993 in millions of dollars are published in *Historical Tables, Budget of the United States Government, Fiscal Year 1989,* 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.

NA = Not available.

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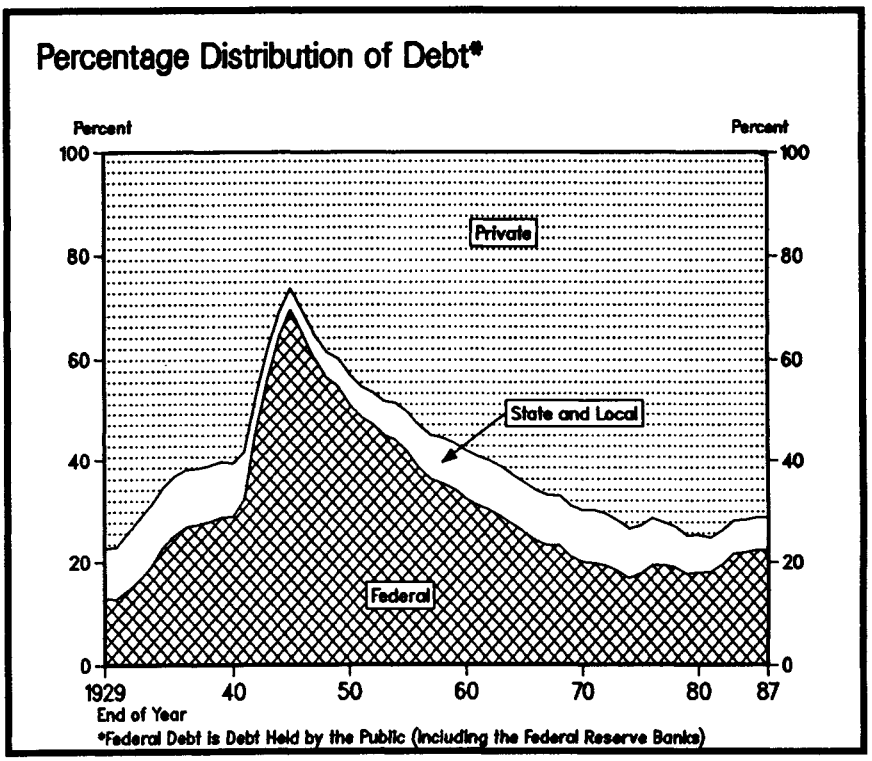
During the depression of the 1930's and during World War II, Federal debt held by the public increased greatly, not only in absolute amount but also, as shown in the chart below, as a proportion of the total credit market debt owed by nonfinancial sectors of the economy: Federal, State and local, and private.[6] 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.



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

[6] 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.

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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 1974. 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, Federal debt held by the public increased year-by-year from 17.6% of credit market debt in 1979 to 22.9% in 1986. This was the highest percentage since 1968. The counterpart to a higher proportion of Federal debt was a lower proportion of private debt. In 1987, as a result of the much lower deficit, Federal debt declined slightly to 22.7% of total credit market debt. Private debt, in turn, rose slightly as a proportion.

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, it rose very sharply from 26.6% of GNP to 29.6%, and it continued to rise significantly in the following years. In 1987, despite the declining deficit, it increased further to 43.0%. This percentage is higher than in any other year since 1963. The reductions in borrowing estimated for 1988 and 1989 are only enough to maintain debt held by the public at about 43% of GNP, but thereafter the ratio declines steadily to 37.2% in 1993.

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 step-by-step to 5.8% in 1987. Consequently, whereas the Federal debt held by the public increased by over eight times between 1955 and 1987, table E-5 shows that the interest paid on this debt increased by thirty times.

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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	
		Paid to					
			The public				
	Total[1]	Federal Government accounts	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	16.3	139.1	3.71	15.70
1987	197.1	39.6	157.5	NA	NA	3.57	15.68
1988 estimate	212.2	46.3	165.9	NA	NA	3.53	15.72
1989 estimate	222.0	53.1	168.9	NA	NA	3.36	15.44

[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 very approximate. They are estimated as the average of calendar year amounts or as an adjustment to deposits of earnings.

[3] Includes off-budget outlays. Historical series of outlays are published in the *Budget*, Part 6g, table 24.

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

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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 3.6% in 1987, despite large Federal borrowing, because of a decrease in market interest rates. It is estimated to fall somewhat further in 1988 and 1989.

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 and 15.7% in 1986 and 1987. It is estimated to remain at 15.7% in 1988 but then decrease to 15.4% in 1989. The importance of interest on the debt relative to either GNP or Federal outlays is thus much more now than in earlier years, although it has now leveled off or is declining to a small extent.

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, 1987, the amount of notes outstanding with an original maturity over 5 years was $509.7 billion, of which $324.2 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 11 steps. The last increase to the exemption was from $250 billion to $270 billion, enacted in December 1987. As of December 31, 1987, $279.8 billion of the bonds outstanding had been sold since the change of law in 1971, whereas only $2.7 billion of bonds issued in earlier years were

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still outstanding. The public exclusive of the Federal Reserve Banks held $249.3 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 5¾ 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 financial assets acquired in the United States largely took the form of U.S. Government securities.

In the early 1980's, both of these factors were reversed. Foreign countries drew down on their reserves to support their currencies against the dollar in the exchange markets, and the aggregate OPEC current account surplus shifted to a deficit. However, these reversals were more than offset by the large amount of private

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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	253.4	236.3	43.6	155.4	22.3
1987	1,897.8	267.3	151.7	13.9	157.5	23.5

[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.

capital inflow that accompanied the growing deficit in the U.S. current account. The net result was a large increase in holdings of dollar assets by foreigners, and this was reflected in the further increase in the Federal debt held by foreigners.

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. This contrasts with the late 1970's, when almost all of the Federal debt held by foreign residents was owned by foreign central banks and other official institutions. In part, the increase in foreign private holdings may be attributable to the repeal in 1984 of the withholding tax on the interest paid to non-resident aliens on U.S. Government and corporate securities. In fiscal year 1987, however, foreign commercial banks and other private investors reduced their holdings of Treasury securities. At the same time, foreign central banks increased

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their holdings considerably, using for this purpose part of the proceeds from their intervention in the foreign exchange market that was intended to support the dollar. At the end of 1987, private investors owned about 29% of the Federal debt held by foreign residents. 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 1987 foreign holdings of Treasury debt had reached $267.3 billion, which was 14% 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 16% of borrowing from the public. This percentage was higher during the 1970's than the 1980's, being 30% in the earlier period compared to 12% later. In 1987, the $13.9 billion of Federal securities purchased by foreign residents was only 9% 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 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 1987–89. During 1987 more debt was newly issued than was repaid, due to the new types of notes issued by the Federal Savings and Loan Insurance Corporation. Over the

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period as a whole total agency debt increases by $4.0 billion. The agency debt outstanding is less than 1.0% of gross Federal debt.

Table E-7. **AGENCY BORROWING**

(In millions of dollars)

Description	Borrowing or repayment (−) of debt			Debt end 1989 estimate
	1987 actual	1988 estimate	1989 estimate	
Borrowing from the public:				
Agriculture: Farmers Home Administration [1]	−3	−138		
Defense	−17	−12	−1	9
Education:				
College housing loans [1]	−3	−239		
Higher education facilities [1]	−14	−47		
Health and Human Services [1]		−5		
Housing and Urban Development:				
Federal Housing Administration	56	68	143	299
Housing for elderly or handicapped [1]		−52		
Government National Mortgage Association [1]	−39	−202		
Revolving fund (liquidating programs) [1]	−11	−32		
Interior	−2	−5		8
Small Business Administration:				
Participation certificates: SBIC and section 505 development company	7			74
Participation certificates: Other [1]	−67	−25		
Veterans Administration [1]		−309		
Export-Import Bank	−6			
Federal Deposit Insurance Corporation	−242	503	−233	470
Federal Savings and Loan Insurance Corporation	920	3,586	1,600	6,106
Postal Service				250
Tennessee Valley Authority	−245			1,380
Total, borrowing from the public	**332**	**3,090**	**1,509**	**8,597**
Borrowing from other funds:				
Agriculture: Farmers Home Administration [1]	3	−121		
Defense	−*	−*		
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	−12	4	81
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	**−56**	**−928**	**4**	**81**
Total, agency borrowing included in gross Federal debt	**276**	**2,161**	**1,514**	**8,678**
ADDENDUM				
Borrowing from Federal Financing Bank:				
Export-Import Bank	−1,805	−1,843	−1,367	9,254
National Credit Union Central Liquidity Facility	6	25	25	102
Postal Service	1,499	1,239	1,380	6,972
Tennessee Valley Authority	1,309	1,075	694	18,155
United States Railway Association	−84			
Total, agency borrowing from Federal Financing Bank	**925**	**496**	**732**	**34,542**

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

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As implied by the addendum to table E–7, the amount of agency borrowing has been profoundly affected by the Federal Financing Bank (FFB).[7] 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 $0.9 billion from the FFB in 1987 and are estimated to borrow $0.5 billion in 1988 and $0.7 billion in 1989. 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 14 years or is scheduled to take place in the future except for borrowing that is inherent in the operation of certain programs. Because the latter reason for borrowing was not relatively important until 1986, the change in agency debt from the establishment of the FFB to 1986 was generally 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 1989, $1.6 billion of agency debt, or nearly one-fifth 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, $34.4 billion in debt will be owed to the FFB by these

[7] The operations of the FFB are discussed further in Special Analysis F.

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two agencies together with the Export-Import Bank, which has now repaid all its borrowings from the public. The Small Business Administration issued $74 million of participation certificates in 1986 and 1987 but does not plan to issue any more. A further $9 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 $2.0 billion of agency debt at the end of 1987 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 1988.

The remaining agency debt at the end of 1988—four-fifths of the total—will have been issued by four 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 four 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 has 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 $381 million of debentures outstanding at the end of 1989 (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 $8 million of monetary credits will be outstanding at the end of 1989.

The Federal Deposit Insurance Corporation (FDIC) began to issue notes in 1986 as part of some agreements with prospective purchasers to buy failing banks. An estimated $470 million of these notes will be outstanding at the end of 1989 (5% of total agency debt). The Federal Savings and Loan Insurance Corporation (FSLIC) has likewise issued notes to help resolve the financial problems of troubled thrift institutions. FSLIC is estimated to borrow $6.1 billion during 1987–89 in the course of these operations, with the result that by the end of 1989 the FSLIC notes alone will comprise 70% of total agency debt. The budgetary treatment of the FDIC

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and FSLIC notes is discussed further in a following section on pages E-25 to E-26.

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 $73.5 billion in 1987 and, as shown in table E-8, it is estimated to reach $116.7 billion in 1989.

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 (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 expanding economy, these trust funds as a whole now have large surpluses and invest increasing amounts each year—a cumulative total of $149.2 billion during 1987-89, which constitutes 52% of the total estimated investment by Government accounts.

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

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

(In millions of dollars)

Description	Investment or disinvestment (–)			Holdings end of 1988 estimate
	1987 actual	1988 estimate	1989 estimate	
Investment in Treasury debt:				
Overseas Private Investment Corporation	80	103	108	1,321
Defense—Civil: Military retirement trust fund	9,768	15,228	14,740	60,605
Energy: Nuclear waste fund	84	134	260	1,900
HHS: Federal old-age and survivors insurance trust fund [1]	21,408	36,028	44,229	138,613
Federal disability insurance trust fund [1]	–1,143	35	910	8,138
Federal hospital insurance trust fund	12,489	15,603	19,652	85,629
Federal supplementary medical insurance trust fund	–3,258	–78	2,881	8,969
Housing and Urban Development:				
Federal Housing Administration	957	445	434	7,361
Government National Mortgage Association	–79	–2,164		
Other	–125	50	2,117	3,760
Interior: Outer Continental Shelf deposit funds	–2,764	–345	–896	
Labor:				
Unemployment trust fund	6,677	8,091	7,068	43,076
Pension benefit guaranty corporation	70	571	504	1,555
State: Foreign Service retirement and disability trust fund	534	454	493	4,421
Transportation:				
Highway trust fund	1,192	2,203	821	15,715
Airport and airway trust fund	1,341	1,220	721	11,878
Treasury: Exchange stabilization fund	2,454	176	168	3,279
Environmental Protection Agency: Hazardous response trust fund	363	1,599	258	2,495
OPM: Civil Service retirement and disability trust fund	22,704	18,685	18,737	214,170
Other trust funds	465	1,013	1,264	11,565
Veterans Administration:				
National service life insurance trust fund	357	479	293	10,763
Other trust funds	57	56	55	1,446
Federal funds	19	20	14	662
Federal Deposit Insurance Corp.: Trust fund	1,184	–1,765	–735	14,540
Federal Home Loan Bank Board: FSLIC	–3,891	1,852	649	3,327
National Credit Union Adm.: Share insurance fund	180	295	320	2,172
Postal Service fund	785	–1,288	1,050	4,350
Railroad Retirement Board trust funds	690	897	343	7,929
Other Federal funds	480	–48	26	966
Other trust funds	539	408	222	2,498
Other deposit funds [2]	–35			
Total, investment in Treasury debt	**73,581**	**99,956**	**116,707**	**673,103**
Investment in agency debt:				
HHS: Federal hospital insurance trust fund	–50	–405		
Housing and Urban Development:				
Federal Housing Administration	–*	–134		
Government National Mortgage Association	6	–24	4	81
OPM: Civil Service retirement and disability trust fund		–175		
Veterans Adm.: National service life insurance trust fund		–135		
Federal Home Loan Bank Board: FSLIC	–12	–54		
Total, investment in agency debt	**–56**	**–928**	**4**	**81**
Total, investment in Federal debt	**73,525**	**99,028**	**116,712**	**673,184**
MEMORANDUM				
Investment by Federal funds	1,008	–68	5,655	30,733
Investment by trust funds (on-budget)	55,051	63,378	66,814	495,700
Investment by off-budget Federal entities (trust funds)	20,265	36,063	45,140	146,751
Investment by deposit funds [2]	–2,799	–345	–896	

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

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21% of the total investment by Government accounts during 1987–89, and the latter accounts for 14%. Altogether, these two retirement funds and the three funds financed by the social security payroll tax account for 86% of the estimated investment by Government accounts during 1987–89.

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 $673.2 billion at the end of 1989. This will comprise 24% of the gross Federal debt. One major trust fund—the civil service retirement and disability trust fund—will account for 32% of total holdings, and the three trust funds financed by the social security tax will account for 35%. All the trust funds together will account for 95% 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

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assumed that the remaining disputes will be settled and the amounts distributed by the end of 1989.

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, Debt, and Means of Financing

As stated previously in this special analysis, the actual data for debt held by the public, debt held by Government accounts, and gross Federal debt for 1985 and 1986 have been revised from the figures previously published in the budget and by Treasury. The actual data for 1987 have also been revised from the figures previously published by Treasury. The budget a year ago made some of these revisions. The present budget changes some of those revisions and makes others.

Table E-9 displays the differences in borrowing and debt. There is no fully satisfactory baseline for this comparison, because some of the revisions a year ago have been altered and because Treasury

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Table E-9. **BRIDGE FROM AMOUNTS ORIGINALLY REPORTED BY THE TREASURY TO AMOUNTS CURRENTLY REPORTED IN THE BUDGET** [1]

(In millions of dollars)

	Outstanding, end of 1985	Change in 1986	Outstanding, end of 1986	Change in 1987	Outstanding, end of 1987
Gross Federal debt:					
Amount originally reported	1,827,470	302,052	2,129,522	224,322	2,354,286
Revisions:					
FDIC notes		[2] 442	[2] 442	([3])	([3])
FSLIC notes				920	920
SBA participation certificates		67	67	7	74
Total, increase in amount		510	510	927	994
Current budget amount	1,827,470	302,562	2,130,031	225,249	2,355,280
Debt held by Government accounts:					
Amount originally reported	317,612	66,307	383,919	74,252	458,172
Revision:					
Reclassification of Thrift Savings Fund				−727	−727
Current budget amount	317,612	66,307	383,919	73,525	457,444
Debt held by the public:					
Amount originally reported	1,509,857	235,745	1,745,602	150,070	1,896,114
Revisions:					
FDIC notes		[2] 442	[2] 442	([3])	([3])
FSLIC notes				920	920
SBA participation certificates		67	67	7	74
Reclassification of Thrift Savings Fund				727	727
Total, increase in amount		510	510	1,654	1,721
Current budget amount	1,509,857	236,255	1,746,112	151,724	1,897,836

[1] These revisions do not affect the amount of debt recorded as subject to the statutory debt limitation.
[2] Treasury currently reports this amount in debt outstanding at the end of 1986. It reflects a $30 million correction from the figure published in the 1988 budget.
[3] Treasury's original report and the budget both record $200 million of FDIC debt outstanding at the end of 1987.

data for 1987 include the effect of one of the revisions. For the sake of convenience, table E-9 uses the amounts originally published by Treasury as a baseline.[8] The net effect of the changes from this baseline is to increase debt held by the public by $1.7 billion at the end of 1987 and gross Federal debt by $1.0 billion. The amount of debt subject to statutory limit is not affected.

The revisions in debt are of three kinds: the definition of certain securities as agency debt, the budgetary classification of the Thrift Savings Fund, and measurement of the debt held by two Government accounts in the Department of Defense. This section explains these differences. It also explains two other subjects concerning the measurement of debt: the classification of loan asset sales with recourse, which affects the means of financing the deficit beginning in 1988; and the measurement of zero-coupon bonds, which are assumed to be sold in 1988. At the end of the latter section, a brief discussion is given of Treasury plans to add a new measure of Federal borrowing and debt to its present published series. Some of the subjects in this section were discussed more extensively in the

[8] See table 6 in the September issues of the *Monthly Treasury Statement of Receipts and Outlays of the United States Government.*

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corresponding section of Special Analysis E in last year's budget.[9] This section is more technical than most of this special analysis.

FDIC and FSLIC 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 simultaneously outlays and borrowing. The debentures or other special instruments are accordingly classified as debt.[10]

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 FHA debentures and Interior Department monetary credits serve to pay the Government's bills and thus are equivalent to cash transactions. These transactions are therefore classified as outlays and borrowing, and the instruments are classified as agency debt.

Last year the budget reported that the Federal Deposit Insurance Corporation (FDIC) borrowed $472 million in 1986 by issuing notes as part of some agreements with prospective purchasers to buy failing banks. That amount had not been reported to the Treasury. Special Analysis E last year explained why these transactions were FDIC borrowing and outlays, just as were the issuances of FHA debentures and Interior Department monetary credits. In a subsequent report to Treasury, FDIC corrected the 1986 borrowing figure to $442 million, which is $30 million less than recorded in last year's budget. This budget and the current Treasury reports all use the corrected figures for FDIC borrowing, debt, and outlays in 1986.[11]

[9] See pages E-24 to E-30.

[10] The definition of outlays and the relationship of outlays to obligations, budget authority, and borrowing are discussed in Part 6e of the *Budget*, "The Budget System and Concepts."

[11] Due to a technical error, the outlays for 1986 that were published in the 1988 *Budget* and *Budget Supplement* did not include these transactions. This type of transaction was, however, included in the outlays for all other years, in the borrowing and debt for all years, and in the outlays and other data shown in the FDIC schedules in the *Budget Appendix*. The outlays for 1986 in the present budget include these transactions.

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The Federal Savings and Loan Insurance Corporation (FSLIC) has been issuing notes akin to the FDIC notes as part of some agreements with prospective purchasers to buy troubled thrift institutions. FSLIC ordinarily tries to arrange for the private sale of troubled thrifts rather than liquidate them and pay off the depositors, in general because merger assistance is usually less expensive to the Government. When a buyer is not found, FSLIC often arranges for the assumption of the troubled thrift's deposit liabilities by another institution. In several cases, FSLIC has issued notes in place of cash to cover the deposits transferred.

Recently FSLIC also began to resolve the problems of troubled thrifts by the new technique of asset-backed transfers. FSLIC charters a new thrift, which assumes the insured deposits of a troubled thrift, and provides it with cash and notes that in combination equal the value of the deposits. Because the new thrift is not designed to be viable in the long-term standing alone, FSLIC attempts to arrange its purchase by an institution in better financial condition. As part of the inducement, FSLIC may restructure the note (such as by increasing its amount). These notes are subsequently redeemed by FSLIC either paying cash or transferring assets that it had acquired through receivership of failed thrifts.

The issuance of notes under these arrangements 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 FSLIC 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 from 1987 onwards to record outlays and borrowing at the time when the notes are issued. As shown in table E–9, this increases the debt held by the public and gross Federal debt by $920 million at the end of 1987. As shown previously in table E–7, estimated FSLIC borrowing by means of these notes is $3.6 billion in 1988 and $1.6 billion in 1989.

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 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

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sale of participation certificates be classified as borrowing by the agency that issues them instead of being classified as an offset to the outlays of the agency.[12] 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 and 1987 data in the budget for outlays, borrowing, and debt have been revised to show these transactions as outlays and borrowing. SBA has restructured the way in which it conducts these types of transactions so they will not give rise to further Federal outlays and borrowing.

Thrift Savings Fund.—The Federal Employees' Retirement System Act of 1986 established the Thrift Savings Fund as part of the new retirement system for Federal employees. This fund receives contributions both from the employee and from the Federal Government as employer. When the fund was established in 1987, it was classified as a Federal account and its transactions were included in the budget.

Upon further examination, however, it was concluded that the Thrift Savings Fund is not part of the Federal Government. This part of the Federal retirement system is a defined contribution plan, not a defined benefit plan. Each participating employee has his own separate account. His contributions to the fund, the employing agency's matching contributions (if any), and the earnings on these contributions are vested immediately; the remaining agency contributions are vested after two or three years of service. The employee decides whether to contribute any of his salary at all to the fund, and, if so, how much to contribute (up to a limit). The employee who is a member of the Federal Employees' Retirement System has options for choosing how the amount in his account is to be invested. An employee may borrow from his own accumulated contribution for certain specified purposes. If the employee leaves the Government before retirement, the balance in his account belongs to him, and he may either leave his balance in the fund for

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

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later use or exercise specified options to withdraw it immediately. If the employee retires from the Government, his benefits are determined not by law or regulation but solely by his previous contributions, the agency contributions (which are largely determined on the basis of a match to his own contributions), his investment decisions, and the rates of return on these investments. For these and other reasons, the employee exercises substantial control over his account in the fund, receives the benefits from the balances in his account, and therefore owns it. The Government's role is strictly that of a fiduciary.

The Thrift Savings Fund, which consists of the individual accounts, has therefore been reclassified in this budget as part of the public instead of the Federal Government. All of its transactions have correspondingly been reclassified as non-budgetary. This classification distinguishes it from off-budget Federal entities (currently social security). They are federally owned and controlled and do not operate in a fiduciary capacity, but their transactions have been excluded from the budget totals under provision of law.

During 1987, its first year of operation, the fund acquired $727 million of Federal debt securities. These were recorded in the Treasury reports as debt held by Government accounts, based on the fund's budgetary classification at the time. Because the fund is now considered to be part of the public, these holdings have been reclassified retroactively in this budget as being debt held by the public instead of debt held by Government accounts. This increases the recorded borrowing from the public in 1987 by $727 million. The non-budgetary surplus of the fund, which was $736 million in 1987, has been removed from the budget, which raises the recorded budget outlays and deficit by $736 million in 1987.

The Federal Retirement Thrift Investment Board, which manages the Thrift Savings Fund in a fiduciary role, remains in the budget, because it is a Federal agency, neither owned nor controlled by the participating employees. As a result, the Board's administrative expenses are included in budget outlays. The budget also includes the offsetting receipts that the fund pays to the Board to reimburse the Board for its expenses.

Measurement of debt held by Government accounts.—The budget a year ago requantified the investments by the Department of Defense military retirement and education benefits trust funds. During 1985 these two new trust funds began to buy significant amounts of market-based Treasury securities at relatively large premiums or discounts. Treasury followed its standard convention of recording these securities at par, whereas the budget a year ago requantified them at purchase price. As a result, the budget showed an additional $2.9 billion of debt held by Government ac-

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counts and gross Federal debt at the end of 1986. (Debt held by the public and debt subject to statutory limitation were not affected.)

In the *Mid-Session Review of the 1988 Budget* (August 17, 1987), the budget data on borrowing and debt were revised to agree with the Treasury convention. The amount of unamortized premiums and discounts is, however, shown in the *Budget Appendix* as part of the trust funds' assets together with their cash and Government securities (at par). The budget continues to calculate interest for these two trust funds by amortizing the premiums and discounts over the lives of the securities, and Treasury follows the same method of calculating interest for securities purchased in 1987 and later years.

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.

However, the sale of individual loans with recourse—i.e., with a Government guarantee attached—has some characteristics that are functionally equivalent to borrowing.[13] 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 may be deemed to turn 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 budget last year said that all new loan asset sales with recourse would be classified as agency borrowing as of 1987 with the exception of sales made by two programs already in existence—the Veterans Administration (VA) 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 were not exempted for 1988 or

[13] Technically, the functional equivalent of borrowing may be deemed to be 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 proceeds received from a sale with recourse will be treated in the same way.

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later years. No other programs planned to sell loans with recourse in 1987.

Subsequently, however, it was concluded in large part for practical accounting reasons that the sale of loan assets with recourse should instead be classified as a "means of financing the deficit other than borrowing from the public." Under this classification, as under the classification announced last year, the sale of loan assets with recourse does not offset outlays and reduce the deficit, as such sales formerly did (and as sales without recourse and as loan repayments will continue to do). Instead, the proceeds from the sale of loan assets with recourse are classified together with the decrease in the Treasury cash balance, seigniorage, and the other transactions that are means for the Government to finance its deficit but that do not constitute borrowing from the public. The proceeds of sales with recourse are thus shown under "means of financing other than borrowing from the public" in tables E–3 and E–11 and in the corresponding tables in the *Budget.*

The budget does not show any loan asset sales with recourse in 1987 except for the two programs that were exempted from reclassification for that single year. GNMA's final sales under the tandem plan and VA's last use of recourse for its vendee loan sales are both scheduled for 1988. One-time sales with recourse under two other GNMA and FHA programs are scheduled for 1988 and 1989. The estimated total proceeds from the loan asset sales with recourse are $698 million in 1988 and $270 million in 1989. No loan asset sales with recourse are planned after 1989.[14]

Zero-coupon bonds.—A plan was announced in December 1987 to reduce Mexico's debt to commercial banks. As part of the plan, Treasury would sell Mexico zero-coupon bonds of up to $10 billion in par value and with a 20-year maturity. Zero-coupon bonds, as the term implies, do not pay any cash interest on a periodic basis over the term of the security. They are sold at a discount from the par value (or face value) of the bond, which is the principal amount due at maturity. Zero-coupon bonds pay their entire interest through the periodic amortization of the discount over the term of the security. Although this is unlike standard bonds, it is the same method as used to pay interest on Treasury bills, whose maturities are one year or less. The periodic amortization of the difference between the initial sales price and par value is also a normal part of the effective interest on any security that pays cash interest on a periodic basis.

The budget assumes that Treasury will sell zero-coupon bonds with a par value of $10 billion at a cash price of $2 billion, although the actual amounts cannot be known at the present time.

[14] Loan asset sales are discussed in Special Analysis F, section X.

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The debt subject to statutory limitation, which is discussed in the next section, is defined by law to be recorded at par for all securities except savings bonds. Therefore, the sale of these bonds is estimated to raise the debt subject to statutory limit by $10 billion.

Until now, the debt held by the public and gross Federal debt have also been measured at par value except for savings bonds. However, this concept is not a meaningful measure of borrowing and debt for economic or budgetary analysis. In the case of these zero-coupon bonds, Treasury raises $2 billion of cash, and this cash finances $2 billion of the budget deficit; Treasury assumes a liability having a market value of $2 billion at the time of the transaction, and Mexico buys bonds having a market value of $2 billion; the impact on the credit market and saving flows is $2 billion. The difference between the initial sales price and the par value is not so great for other Treasury securities, and neither is the effect on year-to-year changes in the measure of Federal debt held by the public. However, the assumed $8 billion difference in this case is very large. Therefore, the budget measures the initial borrowing from the public at purchase price, assumed to be $2 billion. Debt held by the public increases $2 billion; and, because gross Federal debt is defined to be the sum of debt held by the public and debt held by Government accounts, gross Federal debt also increases by $2 billion.

The interest outlays on public issues of Treasury debt are measured on the basis of when the interest accrues, not when the interest is paid in cash. The interest on the zero-coupon bonds will be measured in this standard way. The accrual of interest, as explained above, is simply the periodic amortization of the assumed $8 billion discount between the par value and the initial cash price of the bonds.

For the purpose of measuring debt held by the public and gross Federal debt at dates after the initial sale, the value of the debt is measured consistently with the accrual of interest. At any time, the value of the debt is the initial cash price plus the interest that has accrued up to that time (or, in other words, the initial cash price plus the amount of the discount that has been amortized up to that time). On the assumptions used for this budget, the amount of debt held by the public that is composed of zero-coupon bonds is estimated to be $2.1 billion at the end of 1988 rather than the initial $2.0 billion. The unamortized discount is correspondingly estimated to be $7.9 billion rather than the initial $8.0 billion.

There is thus a corresponding relationship between the accrual of interest outlays on the zero-coupon bonds and the measured value of the debt. As the interest outlays accrue, adding to the deficit, debt held by the public increases by an identical amount. The Government therefore finances the interest outlays automati-

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cally by implicitly borrowing an identical amount from the public. The budgetary accounting for zero-coupon bonds and the financing of their accrued interest are the same as employed for savings bonds.

As a result of these methods of measurement, the unamortized discount on zero-coupon bonds constitutes a difference in the method of measuring debt for the purposes of calculating debt subject to statutory limit and debt held by the public (or gross Federal debt). At the time when the bonds are sold, debt subject to statutory limit rises by $8 billion more than debt held by the public or gross Federal debt. Table E–10 shows the relationship between gross Federal debt and debt subject to statutory limit. It includes the unamortized discount on zero-coupon bonds as one of the reasons for the difference. Because this table shows debt at the end of the year, the unamortized discount shown for 1988 is slightly less than $8 billion. Table E–11 shows the relationship between the Federal funds deficit and the change in debt subject to statutory limit. It includes the change in unamortized discount as one of the factors affecting this relationship. These relationships are also shown in the corresponding tables in the *Budget.*

With the advent of these zero-coupon bonds, the Treasury Department plans to add a new measure of Federal borrowing and debt to its present published series. This measure will equal the par value of debt held by the public less the net amount of unamortized premiums and discounts on all Treasury securities held by the public. The adjustment will thus include the unamortized discount on the zero-coupon bonds projected to be sold to Mexico, but it will not be limited to these securities alone. Only the adjustment for zero-coupon bonds in 1988, however, is expected to have a major effect on year-to-year changes in the level of the debt. It is expected that future budgets will apply this adjustment to their measures of debt held by the public and gross Federal debt. However, the data are not available to make this change for the present budget except for the projected sale of zero-coupon bonds to Mexico.

Limitations on Federal Debt

Definition of debt subject to limit.—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

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Federal debt outstanding. The latter type of limitation has been in effect since 1941.[15] 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[16] 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, the pressure from the debt limit 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. This enabled Treasury to raise needed cash by selling securities to the public that were subject to the debt limit. These FFB securities matured on June 30, 1986. In August and September 1986, because of new pressure from the debt limit, the Treasury issued $15.0 billion of FFB securities to the civil service retirement and disability trust fund. The $5.0 billion of FFB securities that subsequently matured on June 30, 1987, were rolled over into new FFB securities, and a small amount was redeemed in the course of normal disinvestment on October 1, 1987. Of the $14.8 billion of FFB securities that remain outstanding, $4.8 billion mature on June 30, 1988, and $5.0 billion mature on June 30 of each of the next two years.

The only other Treasury debt not subject to limit consists almost entirely of currencies no longer being issued, such as silver certifi-

[15] 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 1989,* 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.

[16] 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.

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cates 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			
	1986 actual	1987 actual	1988 estimate	1989 estimate
Federal debt held by the public	1,746,112	1,897,836	2,025,083	2,152,104
Federal debt held by Government accounts	383,919	457,444	556,473	673,184
Total, gross Federal debt	**2,130,031**	**2,355,280**	**2,581,556**	**2,825,288**
Deduct:				
Treasury debt not subject to limit:				
Federal Financing Bank	15,000	15,000	10,000	5,000
Other	601	600	599	599
Agency debt not subject to limit:				
Department of Defense	40	22	10	9
Department of Interior	15	13	8	8
Export-Import Bank	6			
Small Business Administration	67	74	74	74
Postal Service	250	250	250	250
Federal Deposit Insurance Corp.	442	200	703	470
Federal Savings and Loan Insurance Corp.		920	4,506	6,106
Tennessee Valley Authority	1,625	1,380	1,380	1,380
Participation certificates [1]	1,030	830		
Total, Federal debt not subject to limit	**19,076**	**19,289**	**17,530**	**13,896**
Gross Federal debt subject to statutory limit	2,110,955	2,335,991	2,564,026	2,811,392
Unamortized discount on zero-coupon bonds			7,904	7,728
Other debt subject to limit, and adjustments	22	23	23	23
Total, debt subject to statutory limit	**2,110,975**	**2,336,014**	**2,571,954**	**2,819,143**

* $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 as amended. The only categories now included are the debentures issued by the Federal Housing Administration and the participation certificates sold in 1968. These securities comprised 26% of all agency debt at the end of 1987. However, because the participation certificates will mature during 1988 and because the Federal Deposit Insurance Corporation and Federal Savings and Loan Insurance Corporation have begun to borrow in large amounts, the agency securities subject to statutory limit are estimated to comprise only 4% of total agency debt at the end of 1989.

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 outstanding. Subsequently, in order to enable TVA to finance

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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 final significant portion of the debt subject to statutory limit is the unamortized discount on zero-coupon bonds. As explained on pages E-30 to E-32, it is assumed that this year the Treasury will sell zero-coupon bonds to Mexico with a par value of $10 billion at a cash price of $2 billion. For calculating debt held by the public and gross Federal debt, these bonds will be measured in the budget at their initial cash price plus the amortized discount. For calculating debt subject to statutory limit, however, it is required by law that they be counted at par. Therefore, these bonds increase the debt subject to limit relative to the other debt aggregates by an amount equal to the difference in valuation, i.e., by the unamortized discount. As shown in table E-10, it is assumed that the unamortized discount decreases from $8,000 million at the time of sale to $7,904 million at the end of 1988 and to $7,728 million at the end of 1989.

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 $2,336.0 billion at the end of 1987 and is estimated to rise to $2,819.1 billion by the end of 1989. 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 FFB debt, the unamortized discount on zero-coupon bonds, and the FSLIC notes.

Methods of changing the debt limit.—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 1980–87 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

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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 and issuances of new securities, including 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 the 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 several 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.

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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.[17] 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 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 numerous times since the new procedure went into effect.

Recent changes in the debt limit.—The statutory debt limit was raised to $2,111 billion on August 21, 1986. This was sufficient for the Treasury to keep the trust funds fully invested at the beginning of September. At the end of September, however, as at the same time in the two previous years, Treasury could not fully invest the trust funds. In anticipation of this problem, Treasury had postponed or reduced the auctions of some securities. It had also made further use of the Federal Financing Bank (FFB). As explained previously, FFB debt is not subject to the general statutory debt limitation, so on several occasions beginning a year earlier Treasury had reduced the amount of debt subject to limit by issuing FFB securities to the civil service retirement and disability trust fund in place of regular Treasury securities. This enabled Treasury to raise cash by selling to the public an equal amount of securities that were subject to the debt limit. In September 1986 the Treasury issued FFB debt up to FFB's own statutory limit of $15 billion. The FFB securities had the same interest rates and maturity dates as the regular Treasury securities that they replaced.

On the last day of September 1986, however, as at the same time in the two previous years, Treasury was not able to invest the trust funds fully. An amount of $17.9 billion was supposed to be invested for the civil service retirement and disability trust fund; during the first three days of October additional funds were supposed to be invested for the social security trust funds, the military retirement

[17] 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.

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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.

The course of the debt limit legislation during 1987 was closely tied to efforts by the Congress and the Administration to control the budget deficit. Specifically, it was an outgrowth of the Gramm-Rudman-Hollings Act of 1985 (the Balanced Budget and Emergency Deficit Control Act of 1985). The Gramm-Rudman-Hollings proposal was designed to eliminate the deficit in a series of steps over several years by setting annual deficit targets and establishing a mechanism to enforce them. During the fall of 1985 this proposal was offered as an amendment to the debt limit bill before the Congress at that time. After lengthy consideration the debt limit bill was enacted incorporating a revised version of this amendment, but subsequently the Supreme Court declared a key part of the enforcement mechanism to be unconstitutional. Proposals were made to develop a substitute, and debt limit legislation again provided a vehicle.

The first critical date in 1987 was May 15, the expiration date for the temporary increase of the debt limit from $2,111 billion to $2,300 billion. Until that time the Treasury was able to conduct its normal debt financing operations, and on that date a new law was enacted temporarily increasing the limit to $2,320 billion through July 17.

On June 24, 1987, Congress enacted a budget resolution for fiscal year 1988. The resolution stated that the appropriate level of debt subject to limit was $2,565.1 billion. A joint resolution specifying this amount as the debt limit was deemed to have passed the House and was sent to the Senate for its consideration. This joint resolution became the vehicle for subsequent proposals to revise the budget process.

In the absence of further legislation, the debt limit dropped to $2,111 billion on July 18. Treasury had to suspend the auction of bills and notes; to stop the sales of bills, notes, savings bonds, special issues of the State and local government series, and all

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other securities; and to cease the investment of trust funds and all other U.S. Government accounts. Treasury bills that matured thus had to be redeemed with cash. In order to provide more time to consider budget control measures, Congress passed a bill on July 29 restoring the debt limit to $2,320 billion through August 6. The President signed the bill on July 30, and the Treasury immediately rescheduled a large amount of auctions in order to raise needed cash.

Congressional deliberations on budget control were not completed in time to prevent this temporary debt limit increase from expiring. On August 7, 1987, the debt limit again reverted to $2,111 billion. On the same day Congress voted to raise the debt limit to $2,352 billion through September 23, and the President signed the legislation on August 10. Treasury thus had to suspend the sales of all securities very briefly. Treasury had previously not scheduled certain major auctions because of the uncertainty about the debt limit but scheduled them as soon as the temporary legislation was enacted.

On September 24 the temporary debt limit expired, and the limit fell for a third time to $2,111 billion. As before, Treasury had to postpone the auctions and sales of all securities. However, on that same day, Congress passed the joint resolution on the debt limit amended to incude several changes to the budget process. The principal provision—the Balanced Budget and Emergency Deficit Control Reaffirmation Act of 1987—revised the annual deficit targets and established a new enforcement mechanism in place of the one declared unconstitutional. The new debt limit itself was changed from the amount specified in the congressional budget resolution. Instead of the $2,565.1 billion declared appropriate for fiscal year 1988, the joint resolution was amended to raise the limit to $2,800 billion in order to carry the Government into 1989. This limit has no expiration date. The President signed the legislation on September 29, 1987.

The new limit of $2,800 billion is more than the $2,572.0 billion of debt subject to statutory limit that is estimated to be outstanding at the end of 1988. The limit is, however, less than the $2,819.1 billion estimated to be outstanding at the end of 1989. It is thus estimated that calendar year 1988 will be the first calendar year since 1968 that Congress will not have to enact new debt limit legislation. However, it is estimated that a further increase in the limit will be necessary during fiscal year 1989 in order for the Federal Government to meet its obligations.

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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.[18] 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 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 the 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 unaffected. An increase in 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 borrowing from the public). Federal funds borrowing is unchanged.

Federal funds borrowing consists almost exclusively of the Treasury issuing 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

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

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

(In millions of dollars)

Description	1987 actual	1988 estimate	1989 estimate	1990 estimate	1991 estimate	1992 estimate	1993 estimate
Federal funds surplus or deficit (–)	**–223,103**	**–244,204**	**–242,157**	**–228,282**	**–216,720**	**–199,916**	**–186,183**
Means of financing other than borrowing:							
Decrease or increase (–) in Treasury operating cash balance	–5,052	16,436	.....	.....	.....	.....	.....
Increase or decrease (–) in:							
Checks outstanding, etc[2]	2,497	287	3,281	.....	.....	.....	.....
Deposit fund balances[3]	–1,840	–280	–896	.....	.....	.....	.....
Seigniorage on coins	458	375	528	556	578	597	618
Proceeds from the sale of loan assets with recourse	.....	698	270	.....	.....	.....	.....
Total, means of financing other than borrowing	**–3,937**	**17,516**	**3,183**	**556**	**578**	**597**	**618**
Decrease or increase (–) in Federal debt held by Federal funds and deposit funds[4]	1,791	413	–4,759	.....	.....	.....	.....
Increase or decrease (–) in Federal funds debt not subject to limit	213	–1,759	–3,634	–4,601	150	–41	40
Total, requirements for Federal funds borrowing subject to debt limit	**–225,037**	**–228,036**	**–247,365**	**–232,327**	**–215,993**	**–199,358**	**–185,524**
Increase or decrease (–) in unamortized discount on zero-coupon bonds	.....	7,904	–176	–190	–206	–224	–242
Increase in other debt subject to limit but not part of Federal debt, and in adjustment	1	.....	.....	.....	.....	.....	.....
Increase in debt subject to limit	**225,038**	**235,940**	**247,189**	**232,137**	**215,787**	**199,134**	**185,282**
ADDENDUM							
Debt subject to statutory limit	2,336,014	2,571,954	2,819,143	3,051,280	3,267,067	3,466,201	3,651,483

* $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, and profit on sale of gold.

[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.

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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).[19] A small portion may be financed by certain Federal funds (or certain deposit funds[20]) selling their holdings of Federal debt. Another small portion may be financed by certain Federal funds selling debt that is not subject to the statutory limit. The remainder of the Federal funds deficit can only be financed by selling debt subject to the statutory limit. This ordinarily comprises most of the total amount to be financed. In addition to this financing, the debt subject to limit may also increase because of an increase in the unamortized discount on zero-coupon bonds, as explained previously on pages E-30 to E-32 and pages E-34 to E-35. However, zero-coupon bonds were not issued in past years and, as shown in table E-11, the change in unamortized discount is assumed to be significant only in 1988. Consequently, the Federal funds deficit approximately determines the increase in debt subject to statutory limit.

In 1987, for example, the total Federal funds deficit to be financed was $223.1 billion. The "means of financing other than borrowing" required an additional $3.9 billion of financing, primarily because of the increase in Treasury cash balances. Certain Federal funds and deposit funds decreased their holdings of Federal debt by $1.8 billion, which reduced the need for still further borrowing; and certain Federal funds increased their debt outstanding that was not subject to limit by $0.2 billion, which replaced an equal amount of debt that was subject to limit. Therefore, a total of $225.0 billion had to be borrowed subject to the debt limit. The increase in debt subject to limit in 1987 was thus approximately equal to the Federal funds deficit.

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 never have any 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

[19] 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.

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

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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 1986 (just as it also had not been normal at the ends of 1984 and 1985). The statutory debt limit prevented Treasury from fully investing this trust fund on the last day of 1986 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 $5.2 billion at the end of 1986. In terms of table E-11, this uninvested cash balance provided $5.2 billion to finance the Federal funds deficit by an increase in checks outstanding, etc., instead of borrowing. Consequently, the debt subject to limit at the end of 1986 was $5.2 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 $5.2 billion.

The full investment of the trust fund occurred by October 1986. This was accomplished by issuing $5.2 billion of securities subject to the debt limit, which would have been issued in the previous fiscal year under normal circumstances. The counterpart to this was a decrease in checks outstanding, etc., by $5.2 billion compared to the amount it would have been under normal circumstances. Thus, the increase in debt subject to limit during fiscal year 1987 was $5.2 billion higher compared to the Federal funds deficit than it would have been under normal circumstances. The issuance of these securities early in fiscal year 1987 cancelled out the effect on the level of debt of not having been able to issue them at the end of fiscal year 1986. As a result, the amount of debt subject to limit at the end of 1987 was not affected by the delay in fully investing the civil service retirement trust fund at the end of 1986.

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 1988 and 1989 the debt subject to limit is estimated to

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increase by $483.1 billion, whereas the debt held by the public is estimated to increase by $254.3 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 other items shown). In order for the debt subject to limit to remain 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 Federal Government deficit of zero 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 achieve a balance in the Federal funds alone than it is to achieve 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 1993 that are shown in tables E–3 and E–11. In 1993 the Federal Government as a whole is estimated to have a $23.3 billion deficit, which requires it to borrow $22.6 billion from the public. Nevertheless, the debt subject to limit increases by $185.3 billion, which is several times greater. The reason is that the Federal funds have a deficit of $186.2 billion. The Federal Government as a whole is able to have a relatively small deficit, because the trust funds have a surplus of $162.9 billion, which is almost as large as the Federal funds deficit.

The same conclusion can alternatively be illustrated by comparing the trends in borrowing from the public and borrowing subject to the debt limit. From 1987 to 1993, Table E–3 shows that annual borrowing from the public decreases by $129.1 billion. This is in line with the $127.2 billion decrease in the total Government deficit. Table E–11 shows, however, that the annual rise in the debt subject to limit decreases only by $39.8 billion. This difference of $89.3 billion is mostly because of a $90.3 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 pertains to the difficulty in preventing a continual rise in the gross Federal debt. Gross Federal debt is nearly

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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. The Federal Government also exempts the interest on some obligations from income taxation.

Government-guaranteed borrowing.—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 $60.4 billion in 1987 and is estimated to be $20.8 billion in 1988 and $17.0 billion in 1989. Special Analysis F, "Federal Credit Programs," presents detailed data on guaranteed loans and estimates the subsidies that are provided by loan guarantees. Part 6b of the *Budget*, "Federal Credit," also discusses Federal credit and explains the Administration's reform proposal for the control of Federal credit.

Government-sponsored enterprise borrowing.—The other type of federally assisted borrowing is borrowing by Government-sponsored enterprises (GSEs), which are discussed in Special Analysis F. These enterprises were established and chartered by the Federal Government to perform specific credit functions but are now, with one exception, entirely privately owned. The guidance for 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, set forth several criteria for determining whether an activity should be included in the budget.

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Based on the characteristics of the GSEs that existed in 1967, the Commission recommended that the budget exclude those GSEs that are entirely privately owned.[21] Thus, the transactions of these enterprises are not included within the Federal budget, and their debt is not part of gross Federal debt. However, because they represent Federal programs, the Commission also recommended that their loans and borrowing be included at a prominent place in the budget documents and that their complete financial statements be published in the *Budget Appendix.*

Seven GSEs were created some years ago as financial intermediaries to assist private borrowers in housing, agriculture, and higher education. 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 Mortgage Association, the Federal Home Loan Banks, and the Student Loan Marketing Association are required to obtain Treasury approval of the terms and timing of specific offerings. The Farm Credit System, composed of three GSEs regulated by the Farm Credit Administration—the Banks for Cooperatives, Federal Intermediate Credit Banks, and Federal Land Banks—borrows by issuing consolidated Farm Credit bonds and notes rather than securities under each enterprise's separate name.

Six other GSEs have been created in the past three years, some of which are also financial intermediaries. The College Construction Loan Insurance Association was established to insure loans made for college construction and renovation, a purpose similar to the purposes of the earlier GSEs though to be accomplished by a different method of assistance. The others, however, were primarily established to assist either a Federal agency or previously existing GSEs. The Financing Corporation (FICO) was created to recapitalize the Federal Savings and Loan Insurance Corporation, a Federal agency that insures deposits in savings and loan associations and has had severe financial problems of its own because of the financial problems of the thrift industry. Four others were created to assist the Farm Credit System, which has had severe financial problems because of the financial problems of the farm sector. The Farm Credit System Capital Corporation, however, established under 1985 legislation, had its charter revoked by the legislation signed by the President in January 1988 that created three new GSEs. These are the Farm Credit System Financial Assistance

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

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Corporation, the Farm Credit System Insurance Corporation, and the Federal Agricultural Mortgage Association.

Government sponsorship of these enterprises has traditionally 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 have included 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; their securities are eligible as collateral for public deposits; they are exempt from Federal, State, and local corporate income taxation; the interest on their debt securities is exempt from State and local income taxation; they are exempt from SEC registration; and they have authority to borrow from the Federal Government in amounts that range up to $4 billion. In particular instances, one or another GSE may have a further specific benefit such as partial Federal or GSE ownership, a Federal guarantee of its securities, or the Federal Government paying part of the interest on its debt. Because of these specific advantages and the overall Federal sponsorship, the enterprises have been perceived by the securities market to have a special relationship with the Federal Government. As a result of all these factors and despite the absence of Federal guarantees (with one exception), the GSEs have borrowed at lower interest rates than they would otherwise have had to pay.

The operations of the GSEs are not subject to the Federal budget review process; and the economic assumptions on which their borrowing estimates are based for 1988–89 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 for the sector 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. Except for the Financing Corporation (FICO), the borrowing of the newly created GSEs is not available for this year's budget and thus is not shown in table E–12.

GSE borrowing 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 with only one interruption to $64.1 billion in 1985. Borrowing increased significantly again in 1986, reaching $103.3 billion, and was $124.8 billion in 1987. The GSEs estimate that it will be around $97 billion in 1988 and 1989.

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Table E–12. **BORROWING BY GOVERNMENT-SPONSORED ENTERPRISES** [1]

(In billions of dollars)

Description	Borrowing or repayment (–)				Debt outstanding end 1989 estimate
	1986 actual	1987 actual	1988 estimate	1989 estimate	
Education: Student Loan Marketing Association	2.9	5.8	6.1	6.6	34.0
Housing and Urban Development: Federal National Mortgage Association	37.5	45.2	27.6	27.0	277.8
Farm Credit Administration: [2]					
Banks for cooperatives	0.4	0.4	–0.2	0.3	9.0
Federal intermediate credit banks	–2.6	–2.7	–0.1	0.3	10.4
Federal land banks	–3.6	–7.3	–0.5	–0.5	34.3
Federal Home Loan Bank Board:					
Federal home loan banks	14.5	17.0	9.9	13.0	128.0
Financing Corporation		0.5	3.9	3.8	8.1
Federal Home Loan Mortgage Corporation	54.0	65.6	51.0	47.0	323.4
Total	**103.1**	**124.4**	**97.7**	**97.4**	**825.0**
Less increase in holdings of debt issued by Government-sponsored enterprises	–0.2	–0.4	–*	–*	0.8
Total, borrowing by Government-sponsored enterprises	**103.3**	**124.8**	**97.7**	**97.4**	**824.2**

* $50 million or less.

[1] Because data are unavailable, this table excludes College Construction Loan Insurance Association, Farm Credit System Capital Corporation, Federal Agricultural Mortgage Corporation, Farm Credit System Financial Assistance Corporation, and Farm Credit System Insurance Corporation.

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

The major Government-sponsored borrowers are currently 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 1987 they borrowed $110.8 billion altogether; during 1988–89 they are estimated to borrow $74–79 billion each year. For these three years combined, their borrowing is 82% of total GSE borrowing. 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 GSE purchases 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 1989, FHLMC and FNMA are estimated to have raised their combined share of total Government-sponsored debt from 42% in 1980 to 73%.

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 thereby also support the housing sector. The Student Loan Marketing Association is also estimated to borrow significantly.

In contrast, the three GSEs that comprise the Farm Credit System contracted their net lending and borrowing in 1986 and

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1987. As a group, they are estimated to neither expand nor contract much during 1988 and 1989. These past results and projections of the future reflect in part the recent economic difficulties of the farm sector and of the Farm Credit System itself. However, the three new GSEs designed to support the Farm Credit System and other agricultural lenders are expected to begin operation during this period. Estimates of their borrowing are not available to include in table E–12, but the Farm Credit System Financial Assistance Corporation is expected to borrow about $2 billion in the next two years.

Tax exemption.—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, comprised over half of all new long-term, tax-exempt issues from 1979 through 1985. In 1987 the total tax-exempt borrowing (net of repayments) estimated in the Federal Reserve flow-of-funds accounts was $30.1 billion. This was down from the $115.6 billion borrowed in 1986, which was abnormally high due to transitory reasons, and also below the borrowing during 1982–85. 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 (GSEs) are presented both as total amounts for the sector as a whole and as net amounts. The net amounts include 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 GSE 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 GSE borrowed in order to finance its purchase.

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Table E–13. **FEDERAL AND FEDERALLY ASSISTED BORROWING**

(In billions of dollars)

Description	Borrowing or repayment (–)			Debt outstanding end 1989 estimate
	1987 actual	1988 estimate	1989 estimate	
Federal borrowing from the public [1]	**151.7**	**127.2**	**127.0**	**2,152.1**
Guaranteed borrowing (net) [2] [3]	59.9	20.7	16.6	544.8
Less increase in guaranteed loans held by Federal agencies: [3]				
Government National Mortgage Association	–0.4	–0.1	–0.4	*
Primary guaranteed borrowing [4]	**60.4**	**20.8**	**17.0**	**554.8**
Borrowing by Government-sponsored enterprises [5]	124.8	97.7	97.4	824.2
Less increase in holdings of Federal debt	3.3	–1.5	0.5	4.2
Less increase in Government-sponsored debt held by Federal agencies:				
Federal Financing Bank	–*	–*		4.9
Tennessee Valley Authority				0.1
Less increase in holdings of guaranteed loans:				
Student Loan Marketing Association [6]	3.6	3.9	4.3	21.0
Federal National Mortgage Association	4.2	–0.9	0.4	31.3
Farm Credit Banks	–*	–*		*
Federal Home Loan Banks	1.1	–0.4	0.2	3.9
Federal Home Loan Mortgage Corporation	–2.3			0.8
Government-sponsored borrowing	**115.0**	**96.7**	**92.0**	**757.9**
Total, Federal and federally assisted borrowing	**327.1**	**244.7**	**236.0**	**3,454.8**

* $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. Excludes GSEs listed in footnote 1 to that table.

[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 latter amount is subtracted out above as an increase in Government-sponsored debt held by Federal agencies.

Federal borrowing from the public to finance the deficit comprises nearly half of total Federal and federally assisted borrowing in 1987 and a little over half in 1988 and 1989. While Federal borrowing declines from 1987 to 1988, GSE borrowing and guaranteed borrowing also decline, and they decline even more in total. The decline in GSE borrowing is largely due to a slowdown in the rapid expansion of the FNMA and FHLMC programs of mortgage-backed securities; the decline in guaranteed borrowing is largely due to a much smaller increase in Federal Housing Administration (FHA) insured loans. Borrowing by all three sectors is about the same in 1989 as in 1988. GSE borrowing is the major part of federally assisted borrowing during 1988 and 1989. As an average of the two years, GSE borrowing is $94.3 billion whereas guaranteed borrowing is $18.9 billion.

The following chart depicts the trends in Federal and federally assisted borrowing from 1968 to 1989. The series are volatile, and

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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 times strongly related to the pattern of recession and recovery.

Total Federal and federally assisted borrowing increased steadily and substantially during periods of recession from $80.8 billion in 1979 to $280.5 billion in 1983. With a subsequent lower deficit as the economy recovered and with federally assisted borrowing not rising very much, the total was lower in 1984 and 1985. However, in 1986 Government-sponsored borrowing rose by $45.3 billion, Federal borrowing by $39.0 billion, and guaranteed borrowing by $13.0 billion, for a combined increase of $97.3 billion. This produced a record $374.0 billion of Federal and federally assisted borrowing in 1986. In 1987 a sharp decrease in Federal borrowing brought down the total by $46.9 billion despite an increase in GSE and guaranteed borrowing. The total is estimated to decrease another $82.3 billion or 25% in 1988 and to maintain about the same level in 1989.

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 1980–87 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 estimates for 1988 and 1989 in table E–13 suggest that the upward trend of relative Federal participation in the credit market may no longer be continuing.

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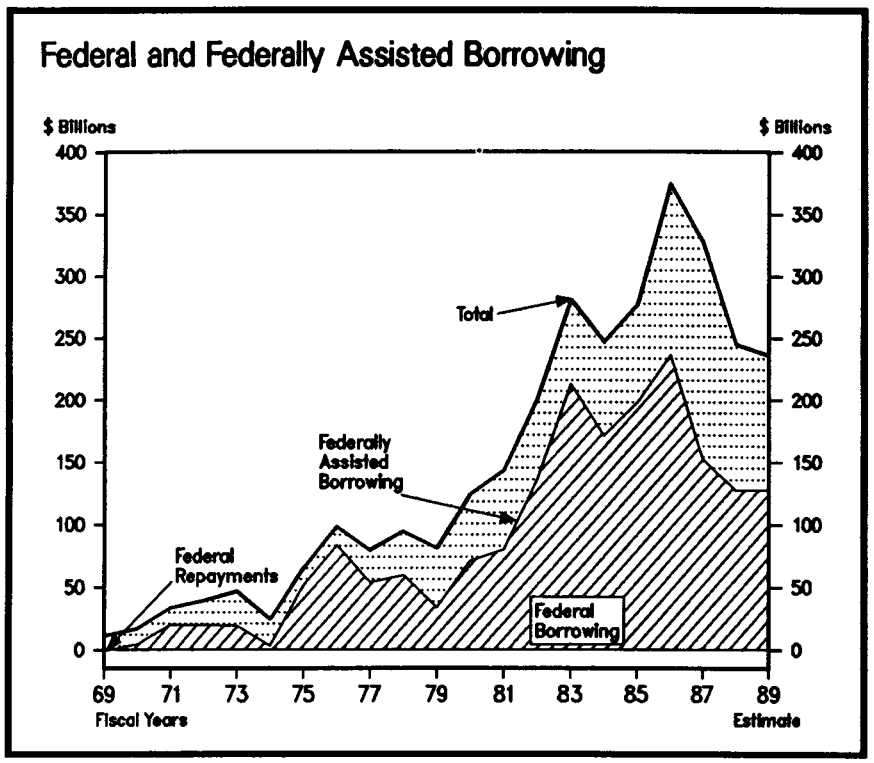

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Table E–14. **FEDERAL GOVERNMENT FINANCING AND DEBT**

(In billions of dollars)

	1987 actual	Estimate					
		1988	1989	1990	1991	1992	1993
FINANCING							
Surplus or deficit (–)	–150.4	–146.7	–129.5	–104.2	–79.3	–51.1	–23.3
On-budget	(–170.0)	(–183.5)	(–174.7)	(–162.5)	(–149.1)	(–131.0)	(–116.2)
Off-budget	(19.6)	(36.8)	(45.1)	(58.3)	(69.9)	(79.9)	(92.9)
Means of financing other than borrowing from the public:							
Decrease or increase (–) in Treasury operating cash balance	–5.1	16.4	.....	.....	.....	.....	.....
Increase or decrease (–) in:							
Checks outstanding, etc. [1]	5.2	2.3	2.6	.....	.....	.....	.....
Deposit fund balances	–1.8	–.3	–.9	.....	.....	.....	.....
Seigniorage on coins	0.5	0.4	0.5	0.6	0.6	0.6	0.6
Proceeds from the sale of loan assets with recourse	.....	0.7	0.3	.....	.....	.....	.....
Total, means of financing other than borrowing from the public	–1.3	19.5	2.5	0.6	0.6	0.6	0.6
Total, requirements for borrowing from the public	–151.7	–127.2	–127.0	–103.6	–78.7	–50.5	–22.6
Change in debt held by the public	**151.7**	**127.2**	**127.0**	**103.6**	**78.7**	**50.5**	**22.6**
DEBT, END OF YEAR							
Gross Federal debt:							
Debt issued by Treasury	2,350.3	2,574.4	2,816.6	3,043.9	3,259.9	3,459.3	3,644.8
Debt issued by other agencies	5.0	7.2	8.7	9.1	9.2	9.2	9.2
Total, gross Federal debt	2,355.3	2,581.6	2,825.3	3,053.0	3,269.2	3,468.5	3,654.0
Held by:							
Government accounts	457.4	556.5	673.2	797.3	934.7	1,083.6	1,246.5
The public	1,897.8	2,025.1	2,152.1	2,255.7	2,334.4	2,384.9	2,407.5
Federal Reserve Banks	212.0	.....	.....	.....	.....	.....	.....
Others	1,685.8	.....	.....	.....	.....	.....	.....

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Table E–14. **FEDERAL GOVERNMENT FINANCING AND DEBT—Continued**

DEBT SUBJECT TO STATUTORY LIMITATION, END OF YEAR

(In billions of dollars)

	1987 actual	Estimate					
		1988	1989	1990	1991	1992	1993
Debt issued by Treasury	2,350.3	2,574.4	2,816.6	3,043.9	3,259.9	3,459.3	3,644.8
Treasury debt not subject to limitation [2]	−15.6	−10.6	−5.6	−.6	−.6	−.6	−.6
Agency debt subject to limitation	1.3	0.3	0.4	0.4	0.4	0.4	0.4
Unamortized discount on zero-coupon bonds		7.9	7.7	7.5	7.3	7.1	6.9
Total, debt subject to statutory limitation [3]	**2,336.0**	**2,572.0**	**2,819.1**	**3,051.3**	**3,267.1**	**3,466.2**	**3,651.5**

[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, and profit on sale of gold.

[2] Consists of Federal Financing Bank debt and other Treasury debt not subject to statutory limitation.

[3] The statutory debt limit is $2,800 billion.

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SPECIAL ANALYSIS F

FEDERAL CREDIT PROGRAMS

I. Introduction

The Federal Government is the Nation's largest financial intermediary. At the end of 1987, it held loans with a face value of $234 billion in its direct loan portfolio, which was 75 percent larger than the loan assets of the largest commercial bank in the United States. The Federal Government also had guaranteed loans with an outstanding balance of $507 billion at the end of 1987. Government-sponsored enterprises had an additional $581 billion of loans outstanding at the end of the year. Thus, directly or indirectly, the Federal Government had influenced the allocation of $1.3 trillion of outstanding credit to farmers, homeowners, small businesses, exporters, utilities, shipbuilders, and State, local, and foreign governments. The accompanying chart compares the pattern of new lending over the last two decades with the most recent patterns and with estimates of future trends through 1993.

Federal credit is designed to meet various social or economic goals that, for whatever reason, the private sector does not meet on its own. 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 for credit programs, does not take into account explicitly the most important aspect of Federal credit—the economic subsidy offered to borrowers. 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 and appropriations process the subsidies provided by credit programs. The credit reform proposal is outlined in Part 6b, "Federal Credit," of the *Budget of the United States Government, FY 1989.*

This special analysis presents data and information on the broad spectrum of Government credit programs and policies from 1987

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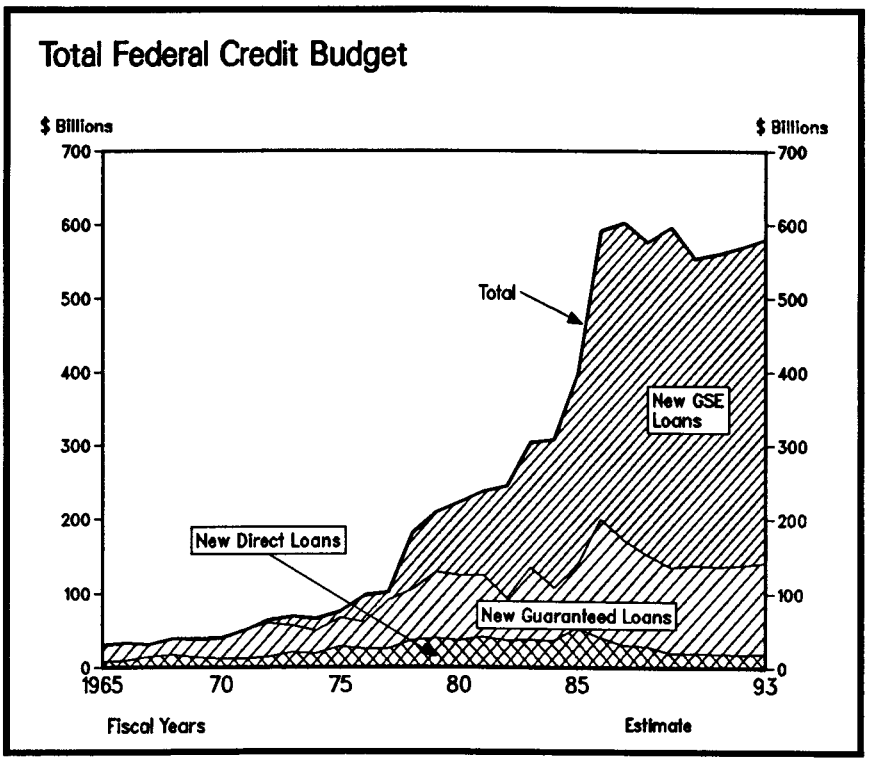

through 1993. It examines some of the problems in controlling Federal credit programs through existing budgetary processes and summarizes how the administration's credit reform proposal would address those problems. This document discusses the basis of the credit budget and how the credit budget relates to appropriation act limitations on direct loan obligations and guaranteed loan commitments. The direct and guaranteed loan transactions of the Government are presented in detail. It also outlines the credit activity of Government-sponsored enterprises, describes trends in Federal credit, presents estimates of Federal credit subsidies, and includes discussions of other credit-related 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.

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In some cases, the Government offers credit to borrowers for whom no private source of credit is available. Compared to fully private loans, the terms and conditions of Federal loans 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 to screen loan applications in a manner common 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.

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 if they have little, zero, or even negative 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. Moreover, the budget treatment can be different even for otherwise similar accounts because of differing congressional practices. For all these reasons, the appropriations process does not normally control directly the amount of new direct loans extended.

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Second, guaranteed loan commitments, an important form of credit, do not constitute outlays and are not reflected in the unified budget except to the extent that defaults occur. 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. The credit budget was a significant step forward because it provided a method of controlling new activity; however, even 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.

OMB Circulars.—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. The circular places 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

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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 for recommendation to the Congress to change the legislation so the programs will conform to standards enunciated in Circular A-70.

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 management improvement program.

Credit Reform Initiative.—Part 6b of the Budget 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.

Two new Federal credit revolving funds would be established within the Department of the Treasury—one for the financing of direct loans and the other for guaranteed loan insurance. Agencies would continue to originate and close direct loans and make loan guarantees as they do now. As they make obligations and commitments, information about their terms and conditions would be sent to Treasury, which would oversee the subsidy estimate.

As borrowers draw down the obligated direct loans, the agency would pay the subsidy component of the loan into the direct loan revolving fund. This fund would provide the balance of the loan, or non-subsidized financing portion, through borrowing from Treasury. The original borrower would pay interest and repayments of principal to the lending agency, which in turn would pass these amounts through to the direct loan revolving fund to repay the financing portion. For loan guarantees, fees from the borrower and the appropriated subsidy would be paid to the loan guarantee revolving fund, which would assume responsibility to cover defaults. Excess balances of this fund would be available for use in lieu of borrowing from Treasury.

Credit Vouchers.—The use of credit vouchers as an alternative means for controlling Federal credit programs continues to be explored by the administration. Credit vouchers represent grants equal to the subsidy portion of Federal credit programs. Individual credit program recipients could receive a voucher for financial assistance that could be used to obtain privately originated credit instead of a Federal direct or federally guaranteed loan. For exam-

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ple, vouchers could be used to lower the amount borrowers would need to obtain from private sources (compared with what an individual would need without Federal assistance) and thereby lower borrowing costs. Alternatively, a voucher could be used to buy private loan insurance that, in turn, would enable a borrower to get a private loan at a lower cost.

The use of vouchers to provide congressionally mandated subsidies is not new—various types of housing voucher programs for rental subsidies have been in effect since the early 1970s. Government housing support through vouchers may be preferable to other producer or consumer subsidies because of the perception that this type of assistance is less costly to the taxpayer and offers recipients a wider range of housing choices.

Federal credit vouchers could allow a direct subsidy similar to the proposal to appropriate the subsidy component of Federal loans—credit voucher amounts could be budgeted and appropriated on an equal basis with other Federal grants, transfers, and purchases—and the Federal Government could remove itself from the rest of the process. As a result, vouchers would provide assistance to targeted borrowers while simultaneously encouraging the maximum amount of private sector involvement through private origination, risk bearing, and servicing of loans. However, unless vouchers are specifically tailored to the needs of individual borrowers, they may be regressive in their impact. That is, if two borrowers, one more creditworthy than the other, are given vouchers with the same value, the less creditworthy individual would not be able to obtain the same amount of credit as the more creditworthy recipient.

Using private sector expertise in the origination and servicing of loans is more efficient for the Government in two ways. First, private sector review of applicants' creditworthiness will ensure that the least risky among those eligible for subsidies will receive credit. This selection process will result in the least distorted allocation of credit as possible consistent with providing Federal assistance. Also, from the Government's perspective, vouchers are more efficient than making direct loans and loan guarantees that typically have high administrative and servicing costs.

From the perspective of the recipient of Federal credit assistance, borrowers are able to choose the least costly loan in a competitive environment. More importantly, borrowers are able to establish relationships with private lenders that could help them obtain unsubsidized credit in the future.

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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 direct 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. In the unified budget, budget authority for direct loan programs is required only when collections are insufficient to finance new loans for those programs funded through revolving funds; budget authority for loan guarantees is needed only to pay for defaults when other resources are insufficient to fund those costs. In contrast, credit authority is measured on a gross basis and does not reflect repayments of loans or defaults on loan guarantees. As a result, credit authority is a needed tool because subsidies are incurred for all new direct loans and loan guarantees, regardless of the extent to which new loans are offset by repayment of 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 Veterans Administration runs the home loan guaranty program, which is one of the largest credit programs that offers a guaranty for less than the full value of the loan. As the result of recently enacted legislation, the Federal Government's amount of guaranty, and therefore contingent liability, changed to: (1) 50 percent for loans of $45,000 or less; (2) the lesser of 40 percent or $36,000 is guaranteed (with a minimum of $22,500) for loans greater than $45,000; and (3) the lesser of 40 percent or $20,000 is guaranteed for manufactured homes. In approximately 75 percent of all VA guaranty loan foreclosures, VA acquires the property from the lender instead of paying the amount of the guaranty. This has the effect of limiting the lenders risk to less than the amount of the stated guaranty.

In the aggregate, of the $507 billion of guaranteed loans outstanding in 1987, the Government's contingent liability was $419

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billion or 83 percent. Excluding the VA, the contingent liability was $354 billion for $361 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)

	1987 actual	1988 estimate	1989 estimate
Veterans Administration mortgage guarantees:			
Contingent liability	65.4	65.6	66.8
Full principal	146.3	147.0	150.0
All other loan guarantee programs:			
Contingent liability	353.6	372.1	383.6
Full principal	360.7	380.8	394.9
Total outstanding:			
Contingent liability	419.0	437.7	450.4
Full principal	507.0	527.8	544.8

Table F-2 provides the credit budget totals for 1985 through 1990. It also shows the major direct loan programs and loan guarantee programs.

For 1989, the administration proposes that the credit budget decrease by $12 billion, or 8 percent below the 1988 totals. The programmatic reasons for the changes in the credit budget totals since 1987 are discussed below in the sections on direct loans and guaranteed loans.

B. Congressional Credit Budget Controls

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 1989 budget proposes limitations for programs whose funding amounts to 74 percent of the credit budget totals. Approximately 38 percent of direct loan obligations and 80 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 shows the breakdown of loans subject to, and exempt from, appropriations act limitation.

The first stage of congressional action on the credit budget is the budget resolution. The congressional budget requires functional allocations for direct loan obligations and primary loan guarantee

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Table F–2. **CREDIT BUDGET TOTALS**

(In billions of dollars)

	Actual			Estimate		
	1985	1986	1987	1988	1989	1990
Direct loan obligations:						
Farmers Home Administration	7.9	5.0	3.6	3.3	0.9	0.7
Foreign military sales	4.9	5.0	4.1	4.1	4.5	4.5
Commodity Credit Corporation	10.4	17.7	16.6	15.0	10.7	10.9
Rural Electrification Administration	4.0	3.1	1.2	2.0	0.2	0.2
Veterans Administration	1.0	1.0	1.0	1.1	1.0	0.7
Export-Import Bank	0.7	0.6	0.7	0.7	0.7	0.7
Low-rent public housing	14.1					
All other	9.6	8.9	2.6	2.6	2.0	2.2
Total obligations	52.6	41.3	29.8	28.8	20.0	19.9
Guaranteed loan commitments:						
Federal Housing Administration	47.4	102.6	80.0	59.8	61.8	63.9
Veterans Administration housing	12.1	34.3	34.9	18.3	17.9	17.0
Guaranteed student loans	8.9	8.6	9.7	9.6	10.0	10.5
Export-Import Bank	7.8	5.5	6.8	14.6	10.2	10.4
Commodity Credit Corporation	2.7	2.5	3.0	5.5	3.5	3.5
Small Business Administration	2.8	2.8	3.4	3.7	3.6	3.6
Farmers Home Administration	1.2	1.6	1.7	2.9	3.7	3.9
Rural Electrification Administration			0.6	2.0	1.3	1.4
Foreign military sales				5.2	2.3	3.3
All other	1.8	1.3	2.0	1.6	1.0	0.6
Total commitments [1]	84.7	159.2	142.1	123.2	115.3	118.1
Total credit budget	137.6	200.6	172.1	147.2	135.6	138.0
MEMORANDUM						
Secondary guaranteed loan commitments	54.6	138.0	140.0	83.4	83.6	84.5

[1] 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.

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

(In millions of dollars)

	Direct loan obligations			Guaranteed loan commitments		
	1987	1988	1989	1987	1988	1989
Limitations enacted	12,807	11,987	7,664	114,651	114,147	92,331
Less: Unused balance of limitation, expiring	−2,259	−1,000	−456	−25,847	−35,876	−13,210
Loan subject to limitation	10,548	10,987	7,208	88,804	78,270	79,121
Loans exempt from limitation	19,269	17,830	12,797	53,260	45,404	36,185
Total	29,817	28,817	20,005	142,064	123,333	115,306
ADDENDUM						
Secondary guarantees subject to limitation				139,976	83,355	83,609

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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 23 of the 31 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: (1) is a *1-year* limitation; (2) sets a *ceiling* on direct loan obligations and/or guaranteed loan commitments; and (3) 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 1987 and 1988, and proposed limitations in 1989 for credit programs.

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

(in millions of dollars)

	Actual 1987	Estimate	
		1988	1989
Limitations on direct loan obligations:			
Foreign military sales credit	4,053	4,049	4,460
Overseas Private Investment subsidies	.....	.....	17
Overseas Private Investment Corp	23	23	.....
AID, Private sector loan subsidies	.....	.....	5
AID, Private sector revolving fund	15	12	.....
Agricultural credit insurance subsidies	.....	.....	600
Agricultural credit insurance fund	1,817	1,625	.....
Rural housing programs (FmHA)	1,919	1,715	.....
Rural development insurance subsidies	.....	.....	300
Rural development insurance fund (FmHA)	426	426	.....
Rural electrification and telephone revolving fund	2,155	1,794	.....
Rural telephone bank subsidies	.....	.....	177
Rural telephone bank	185	177	.....
Education	60	62	.....
PMA, Bonneville fund	10	.....	.....
Health resources and services	1	1	*
FHA loan subsidies	.....	.....	103
FHA fund	74	79	.....
Housing for elderly or handicapped subsidies	.....	.....	333
Housing for elderly or handicapped	593	566	17
Nonprofit sponsor assistance	1	1	.....
Nonprofit sponsor assistance subsidies	.....	.....	1
Bureau of Reclamation, Loan program	44	32	18

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Table F–4. **CREDIT APPROPRIATIONS ACTS LIMITATIONS—Continued**

(in millions of dollars)

	Actual 1987	Estimate	
		1988	1989
Bureau of Indian Affairs	16		13
Highways and mass transportation	48	45	48
VA, Income security			1
VA, Mortgage insurance and other housing	1	1	
Export-Import Bank subsidies			705
Export-Import Bank	680	693	
SBA, Business loan and investment fund	86	85	
SBA, Disaster loan fund			265
National Credit Union Administration, Central liquidity fund	600	600	600
Total, limitations on direct loan obligations	12,807	11,987	7,664
Limitations on guaranteed loan commitments:			
Overseas Private Investment Corporation subsidies			175
Overseas Private Investment Corp	200	200	
AID private sector loan subsidies			100
AID housing and other loan subsidies			100
AID housing and other guarantee programs	145	125	
Agricultural credit insurance subsidies			3,600
Agricultural credit insurance fund	2,498	2,793	
Rural development insurance subsidies			96
Rural development insurance fund (FmHA)	115	96	
Rural electrification and telephone subsidies			1,319
Economic development assistance	188	188	
Health education assistance subsidies			100
FHA loan subsidies			75,000
FHA fund	100,000	96,000	
Community development and other	150	144	
Bureau of Indian Affairs			45
Export-Import Bank subsidies			10,200
Export-Import Bank	11,355	14,601	
SBA, Business loan subsidies			3,596
SBA, Business loan and investment fund			*
Total, limitations on guaranteed loan commitments	114,651	114,147	92,331
ADDENDUM			
Secondary guaranteed loan commitments:			
GNMA, Guarantees of mortgage-backed securities	139,976	83,355	
GNMA, Guarantees of mortgage-backed securities subsidies			83,609

*$500,000 or less.

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) consistently exceeded the actual demand for loans between 1983 and 1986. In 1987, however, the Congress reduced the limitation on direct loans to better reflect actual program usage. The accompanying chart illustrates the used and unused portions of the enacted limitations for 1983–1987.

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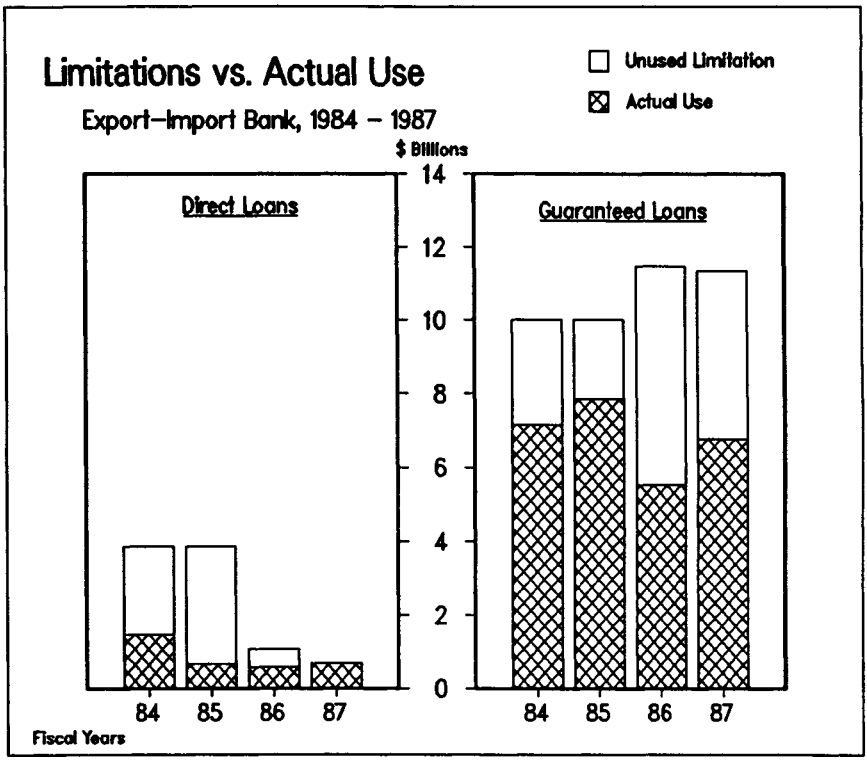

There are several programs for which demand is often below the enacted limitation. Table F-5 compares the proposed and enacted limitations to the actual level of direct loan obligations and guaranteed loan commitments in 1987 for several credit programs for which the limitations exceeded use.

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.

For some programs, appropriations limitations on annual activity are 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.

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Table F-5. **COMPARISON OF ENACTED LIMITATIONS WITH ACTUAL LOAN LEVELS FOR SELECTED PROGRAMS IN 1987**

(In millions of dollars)

	Enacted limitation	Acutal loan level	Unused balance of limitation
Direct loan obligations:			
Agricultural credit insurance fund (FmHA)	1,817	1,493	324
Rural housing programs (FmHA)	1,919	1,716	203
Rural electrification and telephone revolving fund	2,155	1,033	1,123
Bonneville power administration fund	10	.....	10
Housing for the elderly or handicapped fund	593	574	19
National Credit Union Administration, Central liquidity fund	600	106	494
Guaranteed loan commitments:			
Agricultural credit insurance fund	2,498	1,565	933
Economic development assistance	188	.....	188
Federal Housing Administration fund	100,000	79,995	20,005
GNMA, Guarantees of mortgage-backed securities	150,000	139,976	10,024
Export-Import Bank	11,355	6,754	4,601

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. The effective point of control is earlier, at the time of the original guaranteed loan commitment.

Third, loan limitations are unnecessary for programs where other types of limitations exert effective control. For example, the appropriation language for the P.L. 480 food assistance loan program (Title I) sets a limitation on the total program level, allowing for a portion of the cost of shipping the commodities financed to be paid for with program funds. The program limitation serves as an effective ceiling on new loans while accommodating other requirements of the authorizing legislation.

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.

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Direct loan obligations in a given year do not result in an equal volume of new direct loan disbursements in the same year for two major 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 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 many loans 4 to 7 years or longer 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 or because the time to draw down the funds has expired.

As shown in Table F-6, direct loan obligations are proposed to decline between 1987 and 1989 from $29.8 billion to $20.0 billion. Overall, the agricultural and business sectors will receive 63 percent and 30 percent, respectively, of the 1989 credit budget. Table F-18 in the back of this special analysis presents data for Federal direct loan programs from 1987 through 1993. 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					
	1986	1987	1988	1989	1990	1991	1992	1993
Obligations	41.3	29.8	28.8	20.0	19.9	19.2	18.3	19.1
Loan disbursements	42.2	35.2	34.5	27.7	25.6	24.4	23.2	23.0
Change in outstandings	11.2	−19.0	−16.2	−10.6	−8.3	−2.4	−3.6	−4.4
Outstandings	251.6	234.2	218.0	207.4	199.1	196.7	193.1	188.7

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 support loan rate. When market prices are below the price support 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 from $16.6 billion in 1987 to an estimated $15.0 billion in 1988, loan obligations remain at high levels following sustained increases in

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agricultural production that resulted in lower crop prices and, hence, higher Federal crop support outlays. In 1989, commodity loan obligations are estimated to decrease to $10.7 billion. The decrease is projected to result from the administration's plan to set support prices closer to market clearing levels. The reduction of artificially high price supports should reduce 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 price support loan rates closer to market prices. This provision was intended to reduce the demands for Government price support loans.

The Farmers Home Administration (FmHA) makes loans for purchasing and operating farms, disaster assistance, improving rural housing, and developing rural community facilities. In 1989, FmHA direct loan obligations are proposed to total $900 million, which is significantly below the 1987 total of $3.6 billion. This 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 replace the FmHA housing programs with housing assistance provided through a voucher program similar to the program now administered by the Department of Housing and Urban Development. Rural housing loans have proven to be a costly form of assistance. In many cases recipients are financially able to secure private credit and are, by definition, not the neediest rural residents. Vouchers would be targeted to low income residents and would give them a wider range of housing choices and a portable sudsidy.

The Export-Import Bank (Eximbank) provides direct loans to finance U.S. exporters in meeting competition supported by foreign official export credit agencies. The successful negotiations within the Organization for Economic Cooperation and Development (OECD) to reduce export subsidies have reduced the demand for Eximbank credits in recent years. The proposed level in 1989 is $705 million, a 2 percent increase above the 1988 enacted level. Within the $705 million ceiling, Eximbank offers long-term loans ($435 million), medium-term loans ($250 million) and small business loans ($20 million).

Rural Electrification Administration (REA) direct lending to rural electric cooperatives is proposed to be terminated in 1989. The administration proposes to increase the reliance of rural electric and telephone systems on private financing through the use of partial REA guarantees of privately originated loans because the goals of the REA program have largely been accomplished and direct lending to financially healthy borrowers is very costly to the taxpayer.

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Starting in 1989, the administration proposes to accomplish this goal by making 80 percent guarantees of private loans to power supply borrowers instead of the 100 percent guaranteed REA loans disbursed by the FFB. In addition, starting in 1989, direct loans previously made at 5 percent from the rural electrification and telephone revolving fund would be made by private lenders with a 70 percent REA guarantee. Electric and telephone borrowers that serve largely urban, suburban, or recreation areas, and telephone borrowers who are subsidiaries of major telecommunications holding companies would not be eligible for such lending assistance. Also, the administration proposes to take the necessary steps to privatize the Rural Telephone Bank by 1995. This includes charging interest rates adequate to set aside $30 million per year to repurchase Treasury-owned Class A stock of over $500 million (that pays only a 2 percent annual dividend) and paying its administrative expenses.

In addition, the administration encourages privatization by proposing that any borrower with outstanding REA guaranteed loans disbursed by the FFB have the opportunity to prepay them using an 80 percent REA guarantee and without paying the required prepayment premium. Further, outstanding direct loans of the revolving fund could be prepaid at a discount if the borrower agrees not to seek REA assistance in the future. Overall, the administration's proposed reforms would result in outlay savings of $2.3 billion in 1989, while continuing to provide a comparable level of REA guarantees of private loans consistent with the direct lending programs in 1988.

Foreign military sales (FMS) credit provides financing to foreign governments and international organizations for procurement of U.S. military equipment and services. The program increased from $4.0 billion in 1988 to $4.5 billion in 1989. The increased level of aid will enable foreign countries and international organizations to procure additional military equipment and services. All of these loans will be forgiven, thereby reducing debt service problems that many countries receiving U.S. military aid are trying to resolve.

Proposed direct loan obligations for elderly or handicapped housing decrease from $574 million in 1987 to $350 million in 1989. 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 1989 budget proposes to rely on SBA's guaranteed loan programs to assist small

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businesses for business credit needs. Therefore, the budget proposes to terminate new direct business lending in 1989.

The budget proposes to restrict eligibility for SBA direct loans to those who are unable to qualify for credit elsewhere. As a result of this change, the level of direct disaster loans is expected to decrease from $350 million in 1988 to $265 million in 1989.

The Veterans Administration (VA) offers direct loan financing with a minimal down payment, called a vendee loan, to creditworthy individuals purchasing properties that VA has acquired through the default of a guaranteed home loan. The vendee loan program is similar to real estate owned programs managed by many banks and lending institutions that acquire properties from foreclosed mortgages. In 1989, the level of such loans is estimated to be $959 million.

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 something approximating a Government direct loan financed by Government borrowing. 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 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

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coupon 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. 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 loans as widely available as they are currently without Federal guarantees because of the inherent, and significant, uncertainty about many borrowers' future income stream. In this case, the subsidy will be quite large and will have a dramatic effect on the reallocation of credit. 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 estimate demand and supply elasticity effects.

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 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 Government assistance, and increases the interest rates on financing available to these borrowers.

Loan guarantees are used in a wide variety of programs. Loan guarantees 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.

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Data for guaranteed loans for 1987 through 1993 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 in the back of this special analysis provides data for guaranteed loan programs for 1987 through 1993.

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

(In billions of dollars)

	Actual		Estimated					
	1986	1987	1988	1989	1990	1991	1992	1993
Commitments	159.2	142.1	123.2	115.3	118.1	117.0	119.9	122.9
New guaranteed loans	89.6	151.7	100.1	95.2	100.8	99.7	102.3	105.4
Change in outstandings	34.6	60.4	20.8	17.0	18.3	14.7	16.0	12.5
Outstandings	449.8	507.0	527.8	544.8	563.1	577.8	593.8	606.3

Guaranteed loan commitments are estimated to decline from $142 billion in 1987 to $115 billion in 1989. Further, composition of the guaranteed loan portion of the credit budget is proposed to change. Housing programs accounted for 81 percent of guaranteed loan commitments in 1987, and are expected to drop to 69 percent by 1989. The major programmatic changes are discussed below.

Guaranteed loan commitments in 1987 for the Federal Housing Administration (FHA) decreased by 22 percent over 1986. Commitments, which were $80 billion in 1987 compared to $103 billion in 1986, are expected to decline further to $60 billion in 1988, but then rise slightly to $62 billion in 1989.

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 1987 were $34.9 billion and are expected to be $18.3 billion in 1988. As with the FHA loans, VA loan activity is returning to pre-1987 levels; the 1987 levels rose due to low interest rates and refinancing. In 1989, new commitments are estimated to remain at about $17.9 billion.

The Commodity Credit Corporation (CCC) provides loan guarantees for export sales that might not otherwise occur without Federal credit assistance. CCC guaranteed loan commitments for U.S. exports are estimated to rise from $3.0 billion in 1987 to $5.5 billion in 1988. The increase is a result of the Food Security Act of 1985 which established the CCC loan program level at $5.5 billion. For 1989, the amount requested has been lowered to $3.5 billion, reflecting a general weakness in demand for those loans.

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The guaranteed student loan program (GSL) provides guarantees of education loans to graduate and undergraduate students and to parents of dependent students. Commitments for the program increased by $1.2 billion from 1986 to 1987 due to unanticipated administrative problems involving the processing of student aid applications that pushed some borrowing into 1987 that would otherwise have occurred in 1986. This has led to a projected decline in 1988 commitments from 1987 levels due to the one-time borrowing surge in 1987. The level of GSL commitments is estimated at $9.6 billion in 1988, a decrease of $0.2 billion from 1987.

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 $1.5 billion per year. The administration is proposing to increase risk-sharing with lenders and State guarantee agencies to reduce the incidence of default and reduce the cost of defaults that do occur.

The Export-Import Bank (Eximbank) provides guarantees to facilitate U.S. exports. Guaranteed loan commitments rose from $5.5 billion to $6.8 billion between 1986 and 1987. In 1988, Eximbank estimates that commitments will be $14.6 billion, as risk protection continues to be important to U.S. exporters. The proposed level in 1989 is $10.2 billion. Within the $10.2 billion ceiling, Eximbank offers long-term financial guarantees ($2.9 billion), medium-term guarantees ($0.8 billion) and short and medium-term export insurance ($6.5 billion), which is provided by the Foreign Credit Insurance Association (FCIA). Eximbank is the sole owner of the FCIA and approves most of FCIA's policy decisions.

The Rural Electrification Administration (REA) reform proposal would make available a new program of 80 percent REA guarantees of private loans for power generation starting in 1989. Existing 100 percent REA guaranteed FFB direct loans would be phased out at the end of 1988. In addition, a new program of 70 percent REA guarantees of private loans would be available in 1989 to replace the existing direct loan program which will be phased out at the end of 1988. Total guaranteed loans of $1.3 billion are requested for REA programs in 1989.

Foreign military sales (FMS) credit guarantees (that finance the same activities as FMS direct loans discussed above) are being refinanced at lower interest rates. Commercial financial institutions are expected to provide the funds to prepay foreign countries' FMS guarantees held by the FFB; new 90 percent guarantees will be issued to cover the commercial loans. In 1988, $5.2 billion guarantees will be refinanced; in 1989, the estimate is $2.3 billion.

The Maritime Administration has the authority to provide guarantees for construction mortgage loans to build U.S.-flag vessels in

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the United States; however, no new commitments were made in 1987. The administration proposes that this program be terminated starting in 1988. The proposed termination 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 1989, 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 SBA share of the loan guarantee will be reduced, allowing for lower Federal costs to provide the same amount of loans. The budget proposes a total of $3.6 billion in SBA guaranteed loans in 1989, including $2.9 billion in guaranteed general business loans; $450 million for development company loans; $167 million for Small Business Investment Companies (SBIC) obligations; and $40 million in new authority for Minority Enterprise Small Business Investment Companies.

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 $138 billion in 1986 to $140 billion in 1987. A decrease to about $83 billion is estimated for 1988 and beyond.

The administration is proposing to deregulate the fee GNMA mortgage-backed issuers earn servicing FHA and VA mortgages underlying GNMA's securities. The servicing fee issuers currently earn is set by GNMA at 44 basis points per annum (44/100 of one percent) of the outstanding mortgage amount. This minimum fee was originally established to assure that lenders could profitably service the GNMA mortgage pools. However, the fee may be in excess of that needed to protect the Government's interest and may in fact lead to higher mortgage rates for borrowers. The administration proposes to deregulate the fee and increase minimum capital requirements for issuers to protect the Government against issuers defaulting on their mortgage pools.

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IV. Government-Sponsored Enterprises

The Federal Government influences the allocation of credit in many different ways: through direct loans; loan guarantees; insurance for deposits in commercial banks, savings and loans, and mutual savings banks; and various other methods. One of the primary methods of influencing the allocation of credit has been through the creation and use of Government-sponsored enterprises (GSEs). GSEs typically act as financial intermediaries directing capital to particular sectors of the economy. Due to their perceived "special relationship" with the Federal Government, GSEs historically have been able to borrow in the credit markets at yields carrying only slight premiums above those of Treasury securities of comparable maturity. The special relationship has arisen both from the intangible nature of Government sponsorship and through direct benefits that have been available to most GSEs. Table F-8 lists some of the benefits that have historically been available to GSEs.

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Table F–8. **SOME BENEFITS ENJOYED BY GOVERNMENT-SPONSORED ENTERPRISES**

Type of Benefit	FHLB	FHLMC	FNMA	FCS	SLMA	CCLIA	FAMC	FCSIC	FCSFAC	FICO
Line of credit at Treasury	Yes	Yes [1]	Yes	Yes	Yes	No	Yes	No	Yes	No
Exemption of corporate earnings from Federal income tax	Yes	No	No	Yes [2]	No	No	No	Yes	Yes	No
Exemption of interest income of investors from State and local income taxes	Yes	No	No	Yes	Yes	n/a [3]	n/a [3]	n/a [3]	Yes	Yes
Eligibility for Federal Reserve open market purchases	Yes	Yes	Yes	Yes	Yes	n/a [3]	n/a [3]	n/a [3]	n/a [3]	n/a 3
Equal standing with Treasury debt as investments for most banks	Yes	Yes	Yes	Yes	Yes	n/a [3]	Yes	n/a [3]	Yes	Yes
Exemption from SEC registration and various State banking laws	Yes	Yes	Yes	Yes	Yes	n/a [3]	No [4]	n/a [3]	Yes	Yes
Eligibility as collateral for public deposits	Yes	Yes	Yes	Yes	Yes	n/a [3]	Yes	n/a [3]	Yes	Yes

[1] Indirect line of credit through the FHLBs.
[2] Federal Land Banks, Federal Intermediate Credit Banks, and Federal Land Bank Associations.
[3] Entity newly created; data not available.
[4] Mortgage-backed securities may be exempt from State banking laws.

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Five new entities created within the past 3 years have been preliminarily designated as GSEs in the 1989 budget. This designation may change, however, for one or more of these entities as they are more closely examined both as to their structure and as to their actual operations. Including these newly created entities in the GSE category makes no assumption as to what the special relationship will mean in the future.

The financial transactions of GSEs are not included in either the unified budget or the credit control aspects of the budget. However, since they were designed to further Government objectives and since most continue to enjoy special benefits not received by other privately owned financial intermediaries, their financial statements are shown, to the extent feasible, in Part IV of the Budget Appendix. Table F-9 summarizes the lending and borrowing of GSEs for 1987-1989; Table F-20 in the back of this analysis presents details of their activity. The new entities, however, in most cases will have only a narrative description with limited or no financial information for this budget.

Table F-9. **SUMMARY OF LENDING AND BORROWING BY GOVERNMENT-SPONSORED ENTERPRISES**

(In billions of dollars)

	Actual	Estimate	
	1987	1988	1989
Total net lending:			
Obligations	427,518	425,093	462,161
New transactions	414,092	420,571	453,983
Net change	107,785	92,277	88,355
Outstandings	581,073	673,352	761,706
Total borrowing:			
Net change	115,046	96,681	91,994
Outstandings	569,212	665,893	757,887

GSEs have traditionally operated in three major areas: (1) to assist farmers and associated rural borrowers to have better access to the credit markets, (2) to facilitate credit operations for the housing industry, and (3) to facilitate the financing of higher education. While the focus on these areas has not changed in the past few years, the contingent liability of the Federal Government has grown dramatically, due to the greater governmental involvement in the newly created GSEs.

Agricultural Assistance.—The Federal Farm Credit System (FCS) has traditionally been composed of four elements: the Farm Credit Administration, a Federal agency, and three separate sets of GSEs that constituted the FCS. Only the Farm Credit Administration, which is the regulatory arm of the System, is included in the unified budget. It is financed by user charges assessed on the banks

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that it regulates. Since 1933, the FCS has been composed of three kinds of financial intermediaries:

- The *Banks for Cooperatives,* which provide loans to farmer-owned marketing, supply, and service cooperatives;
- The *Federal Intermediate Credit Banks,* which provide short and intermediate term farm loans;
- The *Federal Land Banks,* which provide long-term loans secured by real estate.

Each System bank operates through regional banks. The banks obtain funds through the sale of securities to investors in the private credit markets. This borrowing is aggregated by the Farm Credit System Funding Corporation, which in turn acts as a conduit through which the System Banks issue FCS debt to the credit markets. These securities are "joint and several," meaning that default by one System bank requires all others to honor the obligations of the security. As of September 30, 1987, there were $54.4 billion in outstanding consolidated, systemwide notes and bonds.

In recent years the depressed condition of farming in many areas has led to massive losses incurred by the FCS—$1.9 billion in calendar year 1986, and $197 million for the first nine months of calendar year 1987. However, the System was and still is able to borrow at rates substantially lower than those that would have been charged to other privately owned intermediaries with similar low net worth.

Legislation enacted in 1985 attempted to remedy the unequal erosion in asset quality experienced by some of the System banks due to the persistent agricultural crisis. The Act established the Farm Credit System Capital Corporation, a GSE which was never recognized as such in the budget, to provide assistance to troubled FCS banks. The Corporation was to provide technical assistance as well as administer a controversial asset sharing plan, whereby available surplus capital and reserves were to be transferred from strong banks to insolvent or nearly insolvent banks to improve their balance sheets. Mandatory assessments were imposed on System Banks to fund the Corporation's activities. However, the functioning of the Capital Corporation had been significantly impaired due to lawsuits challeging the asset sharing requirement.

As a result of the inadequacies of the 1985 legislation as well as continuing problems plaguing the farm sector, the Farm Credit System formally submitted a request to Congress for financial assistance on May 6, 1987. The request was spurred by the continuing decline in System surplus funds, perceived erosion of borrower confidence, and widening spreads on System obligations over comparable Treasury issues.

The goal of the legislation was to provide a long-term solution to a persistent agricultural crisis. On January 6, 1988, the President

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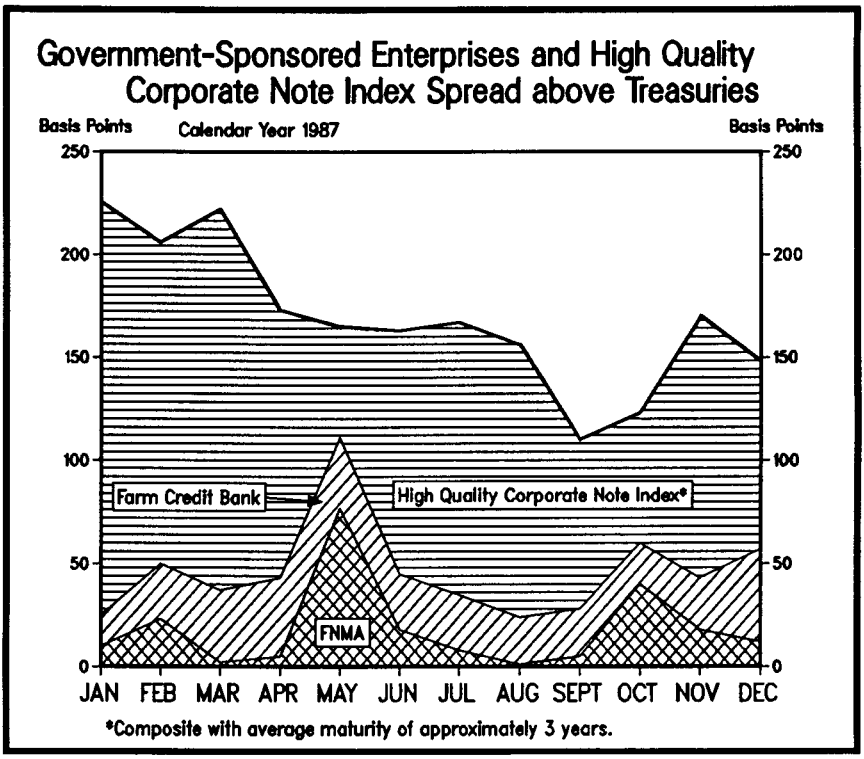

signed a law which requires sweeping changes in the System. The charter of the Farm Credit System Capital Corporation has been revoked. The Farm Credit System Assistance Board has been chartered to assume some of the Capital Corporation's duties, chiefly to assist in restoring FCS institutions to economic viability and permitting such institutions to continue to provide credit. The Board is also charged with carrying out a program to provide assistance to, and protect the stock of borrowers of the institutions of the Farm Credit System. Additionally, the Act created three new GSEs:

- The *Farm Credit System Financial Assistance Corporation (FCSFAS)*, was created to provide the financing mechanism through which the System will raise needed capital. System obligations issued by the Assistance Corporation will carry the guarantee of the Federal Government and Treasury will pay all or part of the interest cost on the Corporation's debt for the next ten years.
- The *Federal Agricultural Mortgage Corporation (FAMC)*, was created to guarantee the timely repayment of principal and interest on pools, or obligations backed by, pools of qualified loans.

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- The *Farm Credit System Insurance Corporation (FCIS)*, was created to insure the timely payment of principal and interest on notes, bonds, debentures, and other obligations issued by System banks.

In 1988, the Farm Credit System Financial Assistance Corporation will begin to issue U.S. guaranteed 15-year bonds. It is anticipated that $2 billion of the bonds will be issued over the next 2 years.

The U.S. Treasury is obligated to pay the entire interest cost on the bonds during the first five years, and half of the interest cost during the second five years with the System responsible for the remainder. The System is responsible for the interest cost for the last five year period as well as the full repayment of principal. The Farm Credit banks are required to repay to the U.S. Treasury any amount exceeding $2 billion, when they are financially able to do so. System institutions, which are financially able to do so, will be required to make a one-time Assistance Corporation stock purchase as a downpayment on the retirement of the noncallable 15-year bonds; at maturity the participating banks will be required to contribute to repay principal on the basis of a formula using performing loan volume per bank as a measure of percentage responsibility in the entire obligation. The board of directors and employees of the existing Federal Farm Credit Banks Funding Corporation will be those designated to oversee and staff the new Assistance Corporation.

The purpose of the Federal Agriculture Mortgage Corporation, which some have dubbed Farmer Mac, is to establish a secondary market for farm mortgages and certain rural housing loans similar to the role created for the Government National Mortgage Association in the late 1960s. Farmer Mac will offer stock to banks, insurance companies, System institutions and other financing entities to raise initial capital. The Corporation will have available $1.5 billion from the U.S. Treasury should it become necessary. Ongoing operations will be financed through assessments for its guarantees on participating institutions and occasional additional stock offerings. The loan pools guaranteed by Farmer Mac will be originated by Farm Credit System banks, commercial banks, thrifts, insurance companies and other qualified lenders.

The Farm Credit System Insurance Corporation, will insure all bonds, notes, debentures, and other obligations issued by system institutions. The Insurance Corporation will be capitalized initially with funds from the Farm Credit System and subsequently through the use of assessments charged for the insurance. During 1989, the farm credit revolving fund, an on-budget fund, will be transferred to the Insurance Corporation. Those banks wishing to maintain

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their Federal charter must purchase insurance from the corporation.

Restructuring of the System's banks was also mandated by the Act. The Federal Land Banks and Federal Intermediate Credit Banks in each district are required to merge; the 12 district Banks for Cooperatives are required to vote on whether to merge into one entity; and the 12 districts are required to vote on whether to merge into six. Additionally, the Act strengthens the value of existing borrower stock, improves borrowers rights, and expands procedures for restructuring loans.

Housing Assistance.—Three GSEs have been providing assistance to the housing sector for many years: the Federal Home Loan Banks, the Federal Home Loan Mortgage Corporation, and the Federal National Mortgage Association. A fourth GSE, the Financing Corporation, was created in 1987 to provide assistance in funding the operations of the Federal Saving and Loan Insurance Corporation, an on-budget, federally-owned corporation.

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 charge 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), an independent agency in the executive branch, has served primarily as the regulator of the system. The Bank Board and the 12 regional Federal Home Loan Banks (FHL Banks) comprised the original system. Subsequently, the Federal Savings and Loan Insurance Corporation (FSLIC), a Government agency, and the Federal Home Loan Mortgage Corporation were added to the system in 1934 and 1970, respectively. The most recent additions to the System are the Federal Asset Disposition Association (FADA), wholly-owned by FSLIC and created in 1985, and the Financing Corporation.

The primary purpose of the Federal Home Loan Banks is to ensure the liquidity of member savings and loans and mutual savings banks which historically have lent primarily to the housing market. The FHL Banks accomplish this infusion of liquidity by providing advances to help individual institutions meet short term liquidity needs and by providing longer term loans to enable institutions to expand long-term lending historically associated with housing loans. 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 least expensive source of funds available after savings deposits. Each of the 12 FHL Banks is

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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 much lesser extent, by accepting both demand and time deposits from member institutions and through the issuance of additional capital stock. As of September 30, 1987, $105.1 billion of these debt securities were outstanding.

Federal insurance for the deposits made to the member savings and loans and mutual savings banks is provided by FSLIC, which is overseen by the FHLBB and is authorized to borrow up to a limit of $750 million outstanding at any one time from the U.S. Treasury, should it become necessary. An explanation and examination of FSLIC is detailed in Chapter V of this analysis. However, due to persistent losses experienced by FSLIC-insured institutions and the necessary intervention by FSLIC in providing cash infusions to either keep institutions open or to liquidate them, FSLIC was technically bankrupt at the end of calendar year 1986. In 1987, expenses exceeded revenues by $12.5 billion.

The FSLIC Recapitalization Act, which was passed in 1987, created a new GSE to provide a financing mechanism for FSLIC. The Financing Corporation (FICO) was created to assist in raising capital in the credit markets. FICO has the authority to borrow up to slightly more than $10.8 billion through the issuance of debt obligations to the public and in turn to purchase stock in FSLIC. The repayment of principal on FICO debt is guaranteed through the use of a segregated account within the corporation which invests funds in non-interest bearing eligible securities (zero-coupon bonds) whose face value at maturity is equal to the face value of the newly issued bonds at maturity. These funds are provided by the FHL Banks through a mandatory FICO stock purchase plan. Interest payments on the debt will be paid by an assessment-sharing plan with FSLIC and, if necessary, a special assessment on FSLIC-insured institutions. In calendar year 1987, FICO issued $1.2 billion of these bonds. The authorizing statute specifically states that the bonds are *not* direct obligations of the United States Government. FICO is controlled and staffed by the FHLBB and the FHL Banks. All administrative expenses are paid by the FHL Banks.

Federal Home Loan Mortgage Corporation (FHLMC, or Freddie Mac).—Freddie Mac was created in 1970 by Congress to provide mortgage lenders with an organized national secondary market in which to sell conventional mortgages and to obtain additional funds to meet new demands for mortgages. Freddie Mac serves as a conduit to facilitate the flow of investment dollars from capital market investors to mortgage lenders. Freddie Mac is a publicly-chartered corporation whose preferred stock is owned by savings institutions across the Nation. Typically, Freddie Mac purchases

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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 most of its purchases of mortgage loans by pooling the mortgages together and issuing pass-through certificates backed by these loans. It guarantees the timely repayment of interest at the certificate rate and the ultimate repayment of principal on the mortgages. 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 private businesses greatly understate Freddie Mac's participation in the secondary market.

Federal National Mortgage Association (FNMA, or Fannie Mae).—Fannie Mae was established by Congress in 1938 to provide supplementary assistance to the secondary market for home mortgages by supplying a degree of liquidity for mortgage investment capital available for home financing. In 1968, it became a privately owned corporation, and its stock is now fully transferable and is listed on major stock exchanges.

Fannie Mae performs functions similar to Freddie Mac, purchasing mortgages from originators. These mortgages are then either packaged, guaranteed by Fannie Mae, and sold to investors; or, unlike Freddie Mac, kept by Fannie Mae in its portfolio for investment purposes. Because Fannie Mae finances the purchases of mortgages by issuing its own debt, Fannie Mae's profitability is much more sensitive to movements in interest rates than is Freddie Mac's. In recent years, the company has attempted to decrease its sensitivity to interest rate fluctuations by using various methods, including matching more closely the duration of the securities it holds in portfolio with the duration of its debt issues; increasing fee income; increasing the issuance of its guaranteed mortgage-backed securities; and repurchasing some high coupon debt.

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 firms have begun to issue mortgage-backed securities, in competition with Fannie Mae and Freddie Mac. Privatization of Fannie Mae and Freddie Mac would eliminate major hurdles private mortgage-backed securities issuers face in playing a significant role in the Nation's housing credit markets. The administration is proposing legislation to mitigate the effects of this unfair competition.

Educational Assistance.—The Student Loan Marketing Association, created in 1972, provides the major secondary market for student loans. In 1987, the College Construction Loan Insurance

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Association was created to provide insurance for facilities loans to post-secondary institutions.

Student Loan Marketing Association (SLMA or Sallie Mae).—Sallie Mae was created 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 nonprofit agencies.

One method that Sallie Mae uses to provide liquidity is the operation of a secondary market for student loans through its purchase of existing insured student loans from lenders. Another method is through the provision of "warehousing" advances—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 the Federal Financing Bank (FFB), an arm of the U.S. Treasury, from May 1974 until January 1982; since then, all of Sallie Mae's new borrowings have been in the private credit markets. As of December 30, 1987, Sallie Mae had borrowed $16.4 billion in those credit markets. It will borrow an estimated $6.2 billion in 1988. 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. Since student loans are guaranteed to yield the holder of the loan 325 basis points over 3-month Treasury bills, 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. Like Fannie Mae and Freddie Mac in the secondary mortgage market, Sallie Mae's dominance of the secondary market for guaranteed student loans can apparently be attributed partly to the low-cost source of funds it enjoys as a GSE and, more importantly, to significant economies of scale.

College Construction Loan Insurance Association (CCLIA or Connie Lee).—Connie Lee was authorized by Public Law 99-498 and incorporated in February 1987. It was organized as a private, for-profit insurance corporation to guarantee and insure loans and bonds made for college construction and renovation. The authoriz-

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ing statute explicitly states that "no obligation which is insured, guaranteed, or otherwise backed by the corporation, shall be deemed to be an obligation which is guaranteed by the full faith and credit of the United States." In order to provide the initial capitalization, the Secretary of Education, the Student Loan Marketing Association, and other investors are authorized to purchase stock in Connie Lee. The Secretary of Education purchased $19 million in stock using funds appropriated for this purpose in 1988. Sallie Mae purchased $22 million of Connie Lee's stock in 1987.

Initially, the Board of Directors will comprise eleven members, four of whom are appointed by the Federal Government, three by Sallie Mae, and the rest by the voting stockholders. The statute authorizes the Secretary of Education to sell the Department's stock in Connie Lee after five years, and requires the Secretary to offer the stock to Sallie Mae prior to offering it to any other party. If the Federal Government sells its stock in Connie Lee and if Sallie Mae owns more than 50 percent of the voting common stock, the entire eleven members would be elected by the voting stockholders.

V. Contingent Liabilities and Federal Deposit Insurance

Contingent Liabilities.—The Federal Government provides guarantees and insurance against several types of risk for many sectors of the economy. If a given situation occurs, such as borrower default or natural disaster, the Government frequently 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-10 shows the current contingent liability of the Federal Government. Unlike an annual corporate financial statement, the data presented in the table do not represent the Government's expected loss contingency for 1988 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.

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-10 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 insur-

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Table F-10. **CONTINGENT LIABILITY OF THE FEDERAL GOVERNMENT**

(In billions of dollars)

Program or activity	1986 actual	1987 actual
Government-sponsored enterprises:		
Farm Credit System Financial Assistance Corporation [1]	NA	NA
Deposit insurance:		
Federal Deposit Insurance Corporation [2]	1,673.2	1,605.7
Federal Savings and Loan Insurance Corporation	817.2	836.1
National Credit Union Administration	130.0	152.9
Subtotal, deposit insurance	2,620.4	2,594.7
Other:		
Loan guarantee programs [3]	691.9	816.5
National flood insurance	133.8	159.0
Overseas Private Investment Corporation insurance program	9.6	9.4
Federal crop insurance	7.2	6.3
Pension Benefit Guaranty Corporation	4.5	3.8
Subtotal, other	847.0	995.0
Total, contingent liabilities	3,467.4	3,589.7

[1] Newly created GSE; data not yet available.
[2] Data as of June 30, 1987.
[3] Gross basis.

ance programs not in the table that increase the Federal contingent liability.

Deposit Insurance.—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 (NCUA). 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-10, the value of insured deposits at the end of 1987 was nearly $2.6 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.

The Federal Deposit Insurance Corporation was created by the Banking Act of 1933 to provide protection for bank depositors and to foster sound banking practices. In order to accomplish its varied

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functions, the corporation is authorized to promulgate and enforce rules and regulations relating to the supervision of insured banks and to perform other regulatory and supervisory duties consistent with its responsibilities as insurer. The major portion of the corporation's operations consists of the examination of State banks that are not members of the Federal Reserve System and liquidation activities attendant to insured banks that have closed.

The insurance fund is supported by an authorization to borrow up to $3 billion from the U.S. Treasury should it become necessary; however, no borrowing under this authorization has been made to date. Income of the corporation is derived principally from insurance assessments paid by insured banks and interest on investments in U.S. Government securities.

The Federal Savings and Loan Insurance Corporation is authorized under Title IV of the National Housing Act to insure savings in all Federal savings and loan associations, Federal mutual savings banks, and in State-chartered institutions of the savings and loan type which apply and qualify for insurance. This protection may be provided either through the prevention of default or the payment of insurance to savings account holders, up to the maximum insured amount of $100 thousand per depositor in the event of liquidation. Preventing default, which protects each investor regardless of the amount in his account, is accomplished by making contributions or by purchasing all or part of an association's assets. Additionally, the corporation is authorized to make loans to institutions in financial difficulty. In the event liquidation is necessary, the corporation acts as receiver, or co-receiver.

FSLIC operates under the direction of the Federal Home Loan Bank Board, which provides administrative services. The expenses of the board and its staff offices are paid from assessments made on the Corporation and the Federal Home Loan Banks. FSLIC has continuing authority to borrow from the U.S. Treasury for insurance purposes, up to a limit of $750 million outstanding at any one time. No borrowing under this authorization has ever taken place.

The record number of thrift failures has severely strained the resources of the FSLIC both in manpower and finances in the past few years. In an attempt to facilitate the liquidation of assets acquired by FSLIC from failed member institutions and maximize the return on those assets, the Federal Home Loan Bank Board chartered the Federal Asset Disposition Association (FADA) in 1985. FADA was initially capitalized with $25 million from FSLIC. FADA finances ongoing operating expenses through consulting and management fees charged to FSLIC, its only client. The goal of FADA was the creation of an independent entity, outside of Federal pay constraints, which would be able to attract highly qualified people expert in real estate management and sales. They would

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thus negotiate the highest prices possible for assets sold increasing the return on liquidated assets to FSLIC. FADA has not been entirely successful in funding operations solely through its consulting fees, however, and plans to ask FSLIC for an additional capital infusion.

Despite the injection of $25 million in 1986 by FSLIC, an on-budget entity, the 1989 budget documents display FADA for the first time. It will appear in the FSLIC section of the Budget Appendix. FADA was unable to supply data on a fiscal year basis for this budget, so its financial statements are presented for calendar year 1987 only and are not included in the budget totals. In subsequent budgets, actual data for the prior year, and estimates for the current and fiscal years will be presented. The budgetary treatment of FADA may change in the future; its status will be reassessed over the next year.

Federal credit unions and privately owned, cooperative associations are organized for the purpose of promoting thrift among their members and creating a source of credit. They are authorized by the Federal Credit Union Act of 1934, as amended. The National Credit Union Administration regulates these credit unions, provides liquidity assistance to member credit unions, and insures depositors' accounts. The NCUA insurance fund is used to carry out a program of insurance for member accounts in Federal credit unions and State-chartered credit unions, which apply and qualify for insurance.

The administration's activities consist of: (1) chartering new Federal credit unions; (2) supervising established Federal credit unions; (3) making periodic examinations of their financial condition and operating practices; and (4) providing administrative services.

The fund is structured to be entirely self supporting through assessments paid by member credit unions. The monies received plus the income generated from their investment are expected to cover all administrative and financial costs, as well as increase the fund balance proportionate to insured share growth. The fund has $100 million in borrowing authority from the U.S. Treasury for use in unforeseen emergencies.

VI. 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 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

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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 activities. 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 each year. The net amount of Federal and federally assisted lending was $149.2 billion in 1987. The supply of credit is the net increase in the holdings of various investor groups. In 1987, this was $642.7billion. The participation ratio of Federal and federally assisted lending to total lending, therefore, was 23.2 percent in 1987. This represents a new peak for the decade.

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

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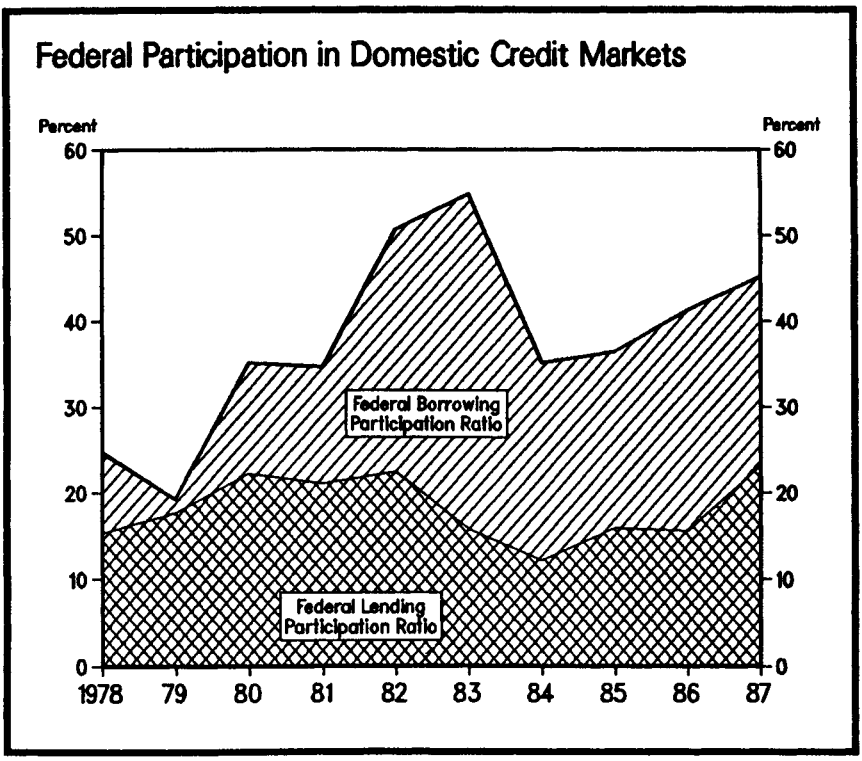

lending participation ratios do not distinguish between a dollar of guaranteed loans and a dollar of direct loans; they weigh both dollars equally.

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 1987 was $327.1 billion. In 1987, the total funds borrowed (excluding the financial section and equities) in U.S. credit markets was $723.8 billion. The borrowing participation ratio, therefore, was 45.2 percent in 1987. As shown in the accompanying chart, the borrowing participation ratio is more volatile than the lending participation ratio, ranging from 19.3 percent to 54.8 percent of total borrowing between 1978 and 1987. The volatility is due

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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 analysis provides additional details on participation ratios.

Table F-11 summarizes outstanding Federal and federally assisted loans from 1986 to 1989. Total direct loans outstanding at the end of 1987 were $234.2 billion and total guaranteed loans outstanding were $507.0 billion. In 1987, Federal and federally assisted loans outstanding increased by 15 percent over 1986. Increases of 7 percent in both 1988 and in 1989 are estimated.

Table F-11. **SUMMARY OF OUTSTANDING FEDERAL AND FEDERALLY ASSISTED CREDIT**

(In billions of dollars)

	Actual		Estimate	
	1986	1987	1988	1989
Direct loans	251.6	234.2	218.0	207.4
Primary guaranteed loans	449.8	507.0	527.8	544.8
Loans by Government-sponsored enterprises	453.3	581.1	673.4	761.7
Total, Federal and federally assisted loans	1,154.7	1,322.3	1,419.2	1,513.9
Federal debt held by the public	1,746.1	1,897.8	2,025.1	2,152.1
Primary guaranteed debt (same as guaranteed loans above)	449.8	507.0	527.8	544.8
Debt of Government-sponsored enterprises	458.1	569.2	665.9	757.9
Total, Federal and federally assisted debt	2,654.0	2,974.0	3,218.8	3,454.8

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.

VII. Federal Credit Subsidies

Federal credit programs provide more favorable terms than borrowers could otherwise obtain 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; and availability of funds to borrowers for purposes for

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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 willing to lend to the guaranteed borrower at rates lower than the market rate since no premium, or less than a normal premium, for default risk is required.

In many cases, large interest rate subsidies may be intended. The economic support fund, for example, previously extended 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 not 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. But while the cost of long-term Treasury borrowing has varied through the years, REA's lending rate for its direct loans, proposed to be terminated by 1989, increased only to 5 percent.

However, 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. 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 (direct loan obligations and guaranteed loan commitments) are summarized in the credit budget.

The administration's credit reform proposal, summarized above and in Part 6b of the budget, would estimate the subsidy cost of Federal credit programs, require the appropriation of those subsidies, and incorporate them in the unified budget. Under this proposal, subsidies would be estimated using the same method used to estimate subsidies in this special analysis. 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 estimate of the interest rate and other terms on which a private lender would have lent to a representative borrower from that Federal program.

To derive the rate of return on a representative private loan, estimates have been made of the private loan terms according to

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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. A simplifying assumption used in these calculations is that a single example can adequately represent the array of loans in a given program. This assumption is not always a good approximation. Several agencies (e.g., the Export-Import Bank or the Small Business Adminstration) have programs where loans are made to a variety of borrowers with widely dissimilar risk characteristics.

The discount rate used to evaluate the present value of the Government 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.

Excluding CCC priced support loans and FMS forgiven loans, table F-12 shows subsidy values for 95 percent of the obligations that direct loan programs are estimated to make in 1989. The present value of the total estimated subsidies is $0.9 billion.

The method of evaluating direct loan subsidies, as explained above, measures the cost of Federal credit by comparing the terms and conditions of a similar loan from the private sector. This method is therefore the same as evaluating the subsidy as the difference between the face value of the loan and the proceeds from promptly selling the loan without recourse in the market. This difference measures the subsidy as the equivalent of a grant that the Government provides to the borrower. The subsidy is therefore equivalent to direct budget outlays for grants made to individuals or businesses. In this manner the economic or programmatic effects of direct loans can be reasonably compared to the effects of budget outlays.

Another measure of subsidy that has been proposed calculates cost based on the Treasury borrowing rate, which is always less than the method used here for two reasons. First, the Treasury'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, which provides safety to Treasury securities, and also due to the great liquidity of the enormous market for these securities. Second, the Government does not need to hold any reserves against its loan guarantees or any capital against direct loan defaults, which makes the Government less averse than is the private sector to the level and variance of risk inherent in the credit it grants.

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Table F-12. **ESTIMATED SUBSIDY COSTS FOR 1989 DIRECT LOAN OBLIGATIONS**

Agency and program	Present value of subsidy	
	Percent of direct loan obligations	Millions of dollars
Funds Appropriated to the President:		
AID private sector revolving fund	8.3	0.4
OPIC	14.5	2.5
Agriculture:		
ACIF:		
Emergency disaster	18.9	18.9
Farm operating	11.2	55.8
RDIF	13.6	40.9
Public Law 480 export credits	70.0	517.1
REA:		
Rural Telephone Bank	15.2	26.9
Health and Human Services:		
Health resources and services	22.0	0.1
Housing and Urban Development:		
Housing for the elderly and handicapped	21.7	72.5
Federal Housing Administration	3.1	3.2
Nonprofit sponsor assistance	22.1	0.1
Interior:		
Bureau of Reclamation	61.0	11.1
Bureau of Indian Affairs	24.4	3.2
Transportation:		
MarAd federal ship financing fund	1.8	0.1
Veterans Administration:		
Vendee loans	16.0	0.2
Direct loans	1.6	0.2
Vocational rehabilitation	11.9	0.1
Export-Import Bank	11.6	82.0
FSLIC	3.0	2.1
National Credit Union Adminstration:		
Central liquidity facility	3.0	4.3
Share insurance fund	50.0	2.5
Small Business Administration:		
Disaster loans	14.2	37.7
Tennessee Valley Authority:		
Power program	5.0	2.7
Total, direct loan subsidies	.....	884.7

If the Treasury borrowing rate were adopted instead of the method used here to estimate the present value of the subsidies, distortions would be created. The subsidy would be smaller than the equivalent of a grant to the borrower. Thus, the budget would continue to favor credit programs over direct spending programs. It would not give policymakers and the public the information they

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need to compare fairly those two kinds of programs and to determine which form of assistance is more cost effective. Furthermore, using the Treasury rate would not take full account of the loan's riskiness, which would skew the allocation of resources toward the most risky loans 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 a few 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 instances, the subsidy can be measured by calculating the present value of the difference in the fees charged by the Federal Government and the fees that a private insurer would have charged 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; sometimes, 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 those the private insurer would charge. In these circumstances, the subsidy is calculated in terms of the interest rate and fees a private lender would have charged the borrower in the absence of a Federal guarantee.

In both of these cases, as in the case of direct loans, the subsidy is equivalent to a grant paid by the Government to the borrower. The subsidy is thus equivalent to direct budget outlays for grants made to individuals or businesses. In this manner, economic or programmatic effects of loan guarantees can be reasonably compared to the effects of budget outlays.

Table F-13 presents these subsidy calculations for nearly all of the gross commitments that loan guarantee programs are estimated to make in 1989. The present value of the total estimated subsidies is $8.7 billion.

Table F-13, like Table F-12, estimates the value of the subsidy by measuring the cost of a loan on the same basis as direct spending for grants, and not by using the cost of Treasury borrowing. It would be inappropriate to use a Treasury borrowing cost basis for calculating economic subsidies, since it would not measure the cost of the loan guarantee to the economy. This could lead to the

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Table F-13. **ESTIMATED SUBSIDY COSTS FOR 1989 GUARANTEED LOAN COMMITMENTS**

Agency and program	Present value of subsidy	
	Percent of guaranteed loan commitments	Millions of dollars
Funds Appropriated to the President:		
Foreign military sales credit	7.5	155.2
AID private sector loans	11.3	5.7
AID housing and other credit	15.7	15.7
Overseas Private Investment Corporation	13.1	22.9
Agriculture:		
ACIF	0.8	0.1
CCC export credits	13.7	554.0
RDIF	0.9	0.9
REA	17.3	80.7
Education:		
Guaranteed student loans	33.6	3,242.3
Health:		
Health education assistance loans	2.0	3.5
Housing and Urban Development:		
FHA fund	1.2	900.0
GNMA secondary mortgage guarantees	1.9	1,900.0
Interior:		
Bureau of Indian Affairs	2.5	11.2
Veterans Administration:		
Loan guarantees	6.6	1,184.1
Export-Import Bank	2.5	254.0
FSLIC	2.5	81.2
NCUA share insurance fund	100.0	4.0
Small Business Administration:		
Business assistance	9.1	327.3
Total, guaranteed loan subsidies		8,742.8

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 require more detailed financial information about the borrower than the Federal Government requires. The private sector would reflect these higher transaction costs in its charges for loans and loan guarantees. The subsidy estimates do not take explicit 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

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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 whose fees are used for comparison may charge less than they otherwise would, thereby lowering the subsidy estimate.

VIII. 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-14 shows the amount of direct loans written off and the amount of guaranteed loans terminated for defaults. Of all direct loans outstanding, only 0.8 percent are recorded as write-offs in 1987. Of total guaranteed loans outstanding, 2.0 percent are reported to be terminated in 1987.

The economic development, business, and agricultural loan programs have the highest estimated default or termination rates in 1987. The economic development loans are from terminated programs that aided the financing of various public works and business development projects. The objective of these terminated programs was to provide increased employment opportunities and family income in areas of the country that lagged behind the rest of the nation economically. The high rate of write-offs and terminations in this program is the result of loans to failed steel companies and reflects the limited success of these types of loans in stimulating growth in certain areas of the country.

The high business loan write-off and termination rates are attributable to the nature of these loans—to small businesses that are unable to obtain private financing. Accordingly, since the failure rate is quite high for small businesses that are deemed creditworthy by private financial institutions, it is dramatically higher still for firms that qualify for Federal or federally guaranteed loans as the only source of financial assistance.

Delinquencies and defaults in various agricultural programs can be traced to depressed market conditions. Starting in the early 1980s, the U.S. farm economy was characterized by declining income and asset values. As a result of the depressed conditions,

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Table F-14. **DIRECT LOAN WRITE-OFFS AND GUARANTEED LOAN TERMINATIONS FOR DEFAULTS**

	In millions of dollars			As percentages of outstanding loans [1]		
	Actual	Estimated		Actual	Estimated	
	1987	1988	1989	1987	1988	1989
Direct loans:						
Commodity Credit Corporation	1	63	78		0.38	0.56
FmHA agricultural credit insurance	865	1,220	663	3.07	4.61	2.77
Rural housing insurance fund	31	30	30	0.11	0.11	0.12
Economic development revolving fund	99	100	26	17.62	20.04	6.22
Guaranteed student loans	121	225	328	1.74	4.42	5.80
Other education loans	24	60	50	0.48	3.29	4.00
Federal Housing Administration	65	68	69	1.46	1.50	1.55
MARAD ship financing fund	196			12.69		
Small business assistance:						
Business loans	411	377	364	10.51	13.49	14.53
Disaster loan fund	181	144	128	4.56	4.09	4.48
Other	3	22	24	0.01	0.02	0.02
Total write-offs	1,997	2,309	1,760	0.82	1.02	0.83
Guaranteed loans:						
Commodity Credit Corporation	456	642	635	12.42	11.72	10.67
FmHA agricultural credit insurance	90	126	190	3.87	3.99	4.73
Rural development insurance fund	57	50	40	2.51	2.80	2.57
Economic development revolving fund	148	20	15	77.49	19.80	16.48
Guaranteed student loans	1,382	1,728	1,855	3.56	4.25	4.44
Federal Housing Administration fund	4,433	5,016	5,027	1.78	1.80	1.87
MARAD ship financing fund	342	250	100	7.38	6.18	2.72
BIOMASS energy development	196			24.62		
VA loan guarantee revolving fund	1,898	2,426	2,322	1.31	1.65	1.66
SBA business loans	548	540	505	6.31	5.85	5.57
Other	26	74	187	0.11	0.27	0.30
Total terminations	9,576	10,872	10,876	2.00	2.10	2.03

[1] Average of loans outstanding over year

delinquency, liquidation, and bankruptcy rates continue to rise. However, this situation is expected to turn around owing to the major improvement in export markets, record levels of farm income in 1987, and the decline in farm debt that is projected for the fifth straight year.

In addition, the VA loan guaranty revolving fund is experiencing a dramatic increase in the home loan guarantees terminated due to default in 1988. Some of these terminations were expected due to the unprecedented high level of guarantees granted in 1987. The majority of the terminations are occurring in the States worst hit by the decline in the petroleum industry such as Texas, Colorado and Louisiana. This trend is expected to level off in 1989.

Finally, there has been a growing awareness that losses in both direct and loan guarantee programs are higher than reported. In recognition of this problem, agencies have been instructed to periodically review their existing portfolios and to write-off accounts that are determined to be uncollectible within a reasonable period

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of time. In 1987, $11.6 billion in uncollectible accounts were written off by agencies, a 27 percent increase from the $9.1 billion in write-offs and terminations reported in 1986. However, further improvements in this area of credit management are needed. The agencies that have not already done so are expected to complete an initial review of their portfolios in 1988. Also, Treasury's Financial Management Service will issue a guidance paper to assist agency portfolio managers in determining whether, when, and how to write off uncollectible accounts.

IX. 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 and is, in reality, merely another "window" of the Treasury. 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.

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. None of the three forms of FFB lending are recorded immediately as outlays; instead, outlays are recorded when the proceeds of borrowing are spent by the agencies.

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 analysis and elsewhere in the budget have been incorporated into the account of the agency originating the transaction.

Table F-15 summarizes the activities of the FFB on behalf of the agencies it serves for 1987 through 1993. Table F-21 at the end of

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Table F–15. **SUMMARY OF FFB FINANCING OF AGENCY ACTIVITIES**

(In billions of dollars)

	Actual 1987	Estimated					
		1988	1989	1990	1991	1992	1993
Credit related:							
New acquisitions	3.4	2.4	1.4	1.2	0.5	0.6	0.7
Net lending	−2.4	−16.3	−12.7	−11.8	−5.9	−8.4	−7.0
Loans outstanding	134.7	118.4	105.7	93.5	87.6	79.2	72.2
Other:							
New acquisitions	3.6	2.8	3.0	3.1	2.6	0.8	1.3
Net lending	2.8	2.2	2.2	2.2	1.7	*	−*
Loans outstanding	22.6	24.8	27.0	29.3	31.0	31.0	30.9
Total, all FFB acquisitions:							
New acquisitions	7.0	5.2	4.4	4.3	3.1	1.3	2.0
Net lending	0.4	−14.0	−10.5	−9.6	−4.2	−8.4	−7.1
Loans outstanding	157.3	143.2	132.7	122.8	118.6	110.2	103.1

*$50 million or less.

this document shows the activities of the FFB over the same period by agency and account.

The Omnibus Budget Reconciliation Act of 1986 authorized certain rural electric cooperatives to prepay their Rural Electric Administration guaranteed-loans held by the FFB without premium or penalty, and provided that prepayments in excess of $2,017.5 million during 1987 were to be subject to the approval of the Secretary of the Treasury. Prepayments of approximately that amount were approved. Under this legislation, rural electric borrowers prepaid $589 million in principal with an associated taxpayer loss of $165 million.

The 1986 Act also authorized that refinancing be accomplished using full Government guarantees in the private credit markets. Refinancing in this manner (1) is contrary to the ongoing role and effectiveness of the FFB; (2) interferes with the administration of Federal credit policy; (3) competes with the Treasury financing of the national debt; and (4) provides a further subsidy to borrowers. This subsidy would be provided to borrowers that have already received the lowest available rate at the time that they originally borrowed funds, and this subsidy would be provided outside of the normal appropriations process, without the determination of the need of the borrower for the subsidy.

The Omnibus Budget Reconciliation Act of 1987 authorized an additional $2 billion in premium-free prepayments during 1988 using full Government guarantees and provided that prepayments in excess of $2 billion would be subject solely to the approval of the Secretary of the Treasury. The Secretary has determined that par prepayments in excess of $2 billion will not be approved because of taxpayer costs involved. While it is difficult to estimate the final

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taxpayer costs because of changes in market interest rates that affect those costs, if the full $2 billion were prepaid at par under market conditions prevailing in January 1988, the costs could be as high as $631 million.

In other congressional action, the Continuing Appropriations Resolution for FY 1988 included a provision that allows FFB borrowers under foreign military sales guarantees to prepay at par their debt with interest rates of 10 percent or higher. While the amounts that these borrowers will choose to prepay are subject to a variety of factors and thus cannot be estimated precisely, if the $13.6 billion of FMS loans held by the FFB that have interest rates of 10 percent or higher were prepaid, the associated taxpayer costs could be as high as $3.5 billion.

X. Loan Asset Sales to the Public

The administration proposes to continue its pilot program of selling existing and newly made loan assets to the public without recourse or the right to make a claim against the Federal Government in the event of borrower default. The pilot program was first proposed in the President's 1987 budget with the goal of selling loan assets with a face value of $4.4 billion. This amount of sales was increased by Congress in the Omnibus Budget Reconciliation Act to approximately $7.1 billion in loan assets. As seen in table F-16, at the end of 1987, loans with a face value of $7.9 billion had been sold or prepaid by borrowers and had yielded $5.5 billion in net receipts.

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Table F–16. **LOAN ASSET SALES AND PREPAYMENTS**

(in millions of dollars)

Agency or Program	1987			1988		1989		Total 1987–89	
	Face value	Gross proceeds [1]	Net proceeds [2]	Face value	Gross proceeds	Face value	Gross proceeds	Face value	Gross proceeds
PROCEEDS INCLUDED IN THE GRH BASELINE [3]									
Sales:									
Veterans Administration:									
Vendee loans—without recourse				680	436	1,341	781	2,021	1,217
Vendee loans—with recourse [4]	904			388				1,292	
Agriculture: rural development insurance fund	1,907	1,045	1,004	635	356	1,125	630	3,667	2,031
Education: college housing and academic facilities [5]	237	98	97	650	336			887	434
HUD: GNMA—with recourse	241			24		385		650	
Subtotal, sales	2,144	1,143	1,101	1,965	1,128	2,466	1,411	6,575	3,682
Prepayments:									
Agriculture: rural development insurance fund	80	51	51	870	505			950	556
Education: college housing and academic facilities	792	499	479					792	499
Export-Import Bank	1,901	1,901	1,901	500	500	525	525	2,926	2,926
Transportation: railroad rehabilitation				370	205	165	120	535	325
Subtotal, prepayments	2,773	2,451	2,431	1,740	1,210	690	645	5,203	4,306
Subtotal, in baseline	4,917	3,594	3,532	3,705	2,338	3,156	2,056	11,778	7,988
PROCEEDS NOT INCLUDED IN THE GRH BASELINE									
Sales:									
Interior: Bureau of Reclamation				529	130			529	130
Agriculture:									
Rural housing insurance fund [6]	2,989	1,960	1,943			1,752	870	4,741	2,830
Rural Electrification Administration						1,600	972	1,600	972
Education: college housing and academic facilities						483	230	483	230
HHS: Medical facilities						122	76	122	76
HUD:									
Public facilities				306	188			306	188

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Table F-16. **LOAN ASSET SALES AND PREPAYMENTS—Continued**

(in millions of dollars)

Agency or Program	1987			1988		1989		Total 1987-89	
	Face value	Gross proceeds [1]	Net proceeds [2]	Face value	Gross proceeds	Face value	Gross proceeds	Face value	Gross proceeds
FHA fund—without recourse				103	78	146	100	249	178
FHA fund—with recourse				441				441	
SBA: business & disaster loans						1,080	710	1,080	710
Subtotal, sales not in base	2,989	1,960	1,943	938	396	5,183	2,958	9,110	5,314
Prepayments:									
Funds Appropriated to the President: Foreign military sales				5,900	5,900	2,300	2,300	8,200	8,200
Agriculture:									
Rural Electrification Administration (FFB)				2,000	2,000	1,000	1,000	3,000	3,000
Rural Electrification Administration						250	152	250	152
Rural Telephone Bank				230	230	50	50	280	280
HHS: Health maintenance organizations				30	20	30	20	60	40
HUD: public facilities	11	8	8					11	8
SBA: disaster loans	4	3	3					4	3
Economic Development Administration	10	10	10					10	10
Subtotal, prepayments not in base	25	21	21	8,160	8,150	3,630	3,522	11,815	11,693
Subtotal, not in base	3,014	1,981	1,964	9,098	8,546	8,813	6,480	20,925	17,007
Total, all sales	5,133	3,103	3,044	2,903	1,524	7,649	4,369	15,685	8,996
Total, all prepayments	2,798	2,472	2,452	9,900	9,360	4,320	4,167	17,018	15,999
Grand total, all sales and prepayments	**7,931**	**5,575**	**5,496**	**12,803**	**10,884**	**11,969**	**8,536**	**32,703**	**24,995**

[1] Gross proceeds represent the receipts received by the Government. These figures do not equal the amounts paid by investors (the amounts prior to the deduction of various transaction costs at closing). In 1987, the amounts paid by investors include: higher education and college housing—$127.0 million; rural development insurance fund—$1,134.1 million; and rural housing insurance fund—$1,840.7 million. In addition, the gross proceeds figures do not include any additional equity interest retained by the Government.

[2] Net proceeds calculations include lost principal and interest payments previously assumed in budget totals and all transaction costs including financial advisor, underwriter, legal, and filing fees.

[3] "GRH baseline" categorization only applies to 1988 and 1989.

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[4] Loans sold with recourse have the full faith and credit of the United States as backing and as such are similar in form to a Treasury security. Accordingly, both OMB and the Congressional Budget Office consider this type of sale to be a means of financing other than borrowing instead of offsetting collections and thus the sale proceeds are scored as zero. Also, the face amounts of recourse sales are not included in the totals.

[5] Sale proceeds for Education in 1988 includes $22 million from a prior year sale. The Department's securitized sale, not included in the sales proceeds amount, provided the Government with a junior pool that had an estimated market value of $10.7 million.

[6] Sale proceeds for RHIF in 1987 include an estimated market value of $215 million for the junior security that was not sold.

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The program is continuing in 1988 with loans having a face value of $12.8 billion. These sales or prepayments are projected to yield approximately $10.9 billion in offsetting collections. The loans to be sold or prepaid under the program in 1989 will come from 13 different portfolios and have a face value of $12.0 billion. The estimated market value of these assets is $8.5 billion.

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. Collections from asset sales reduce Treasury borrowing and, therefore, have the potential to lower interest outlays in subsequent years. In addition, the savings from improved management of credit programs that occur as a consequence of asset sales are not explicitly reflected in the budget. Finally, to the extent that newly made loans are sold without recourse, the difference between the face and market values provides an objective measure of the subsidy implicit in loan programs.

The nonrecourse requirement of loan asset sales is an important part of the pilot program. Although selling with recourse would yield a higher initial price than selling loans without recourse, the primary reason behind loan asset sales is to improve the Government's credit management practices. Federal credit programs were designed with an emphasis on granting loans, rather than collecting and servicing loans; as a result, delinquency and default rates are frequently much higher than in the private sector. In addition, prior to the current loan sales program, agency procedures and standards varied and many field offices had inadequate documentation of their loans.

If loans are sold with recourse, there is no incentive for Federal programs to improve the origination and documentation of loans because borrowers will rely on the Federal guarantee rather than demand improved credit management of the underlying loans. Also, selling loan assets to the public with a Government guarantee is a form of Federal borrowing from the public in the sense that a contingent liability is created. Since this type of borrowing from the public is more costly than issuing Treasury securities—purchasers of the guaranteed loan assets typically offer prices well below the face value of the loans because the assets may be relatively illiquid or have unique characteristics that reduce their value to the purchaser—it is inefficient.

Management improvements have already occurred as a result of the three sales completed. Specifically, loan originations have been improved by including more rigorous legal review to ensure the enforceability of each loan, and deficiencies in the documentation of loans, as well as in the information systems used to track loan

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repayments, have been identified and will be corrected. Also, future sales will benefit from past sales in two ways. First, if default and recovery experience on the portfolios sold turn out to be better than expected, the Government will benefit to the extent that more optimistic assumptions will raise the proceeds from future sales. Second, the continuing sale of similar assets develops buyer familiarity with the Government assets and enhances the salability of future issues.

To the extent possible, the sale of new loans will be emphasized in the 1988 and 1989 sales. This goal is in keeping with the credit reform initiative objective of measuring the subsidy element of Federal credit programs as the difference between the face and market value of a loan. The sale of loans as they are originated, as opposed to the sale of existing loan assets, not only provides information on the subsidy inherent in Federal programs, but it more directly encourages improvements in loan origination and documentation practices. Loans sell at a higher price if screening and documentation are up to private sector standards. The sale of loans close to the time of origination would make this connection between improved credit management and higher asset prices more direct than if the assets were to be sold at some indefinite point in the future.

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 enterprises 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,

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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.

Like all contracts in the Government, leases are subject to the requirements of the Anti-Deficiency Act (31 U.S.C. 1341). The act requires the lessee agency to obligate funds sufficient to cover the commitments of the Government in the contract. Leases typically include termination clauses that limit the potential exposure of the Government and, therefore, also limit the amount of funds needed to be obligated.

Recently, however, several agencies and committees of the Congress have been proposing financing schemes involving lease-purchase arrangements. These are designed to allow agencies to enter into multiyear contracts that do not include effective termination rights and yet permit agencies to obligate only the annual costs, as opposed to the full legal obligation of the lessee agency under the contracts. Such proposals have included specific language exempting the transactions from the Anti-Deficiency Act. This, of course, violates the intent of the Act by under-reporting the liabilities of the Government. The administration is strongly opposed to any such efforts by agencies or the Congress intended to hide outlays and debts of the Government.

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. As originally issued, the circular did not apply to all lease-buy decisions. Recognizing 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 Circular A-104 on June 1, 1986. The revised circular prescribes a uniform method for the economic analysis to be conducted when considering whether to use

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leasing in place of direct Government purchase and ownership as a means of acquiring the use of assets.

XII. Tax-Exempt Credit

Interest on State and local government obligations generally has been exempted from the Federal income tax since adoption of the tax code in 1913. Federal tax exemption increases the demand for these obligations, since it results in higher after-tax interest rates for 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 have averaged about 75 percent of taxable interest rates on long-term obligations with similar credit risk. As a result of various provisions of the 1986 Tax Reform Act (Tax Act), the spread between tax-exempt and taxable bonds has decreased markedly with tax-exempt yields averaging 89 percent of long-term Treasury bond yields in 1987. The Tax Act has additionally affected the supply as well as the demand for municipal bonds. 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.

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 who lack 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 under Federal income taxes.

Although tax-exempt financing alters the allocation of credit and has costs similar to other Government financing programs, it is not included in the credit budget. 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.

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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, State and local governments purchase SLGS securities, which are used as collateral for an outstanding bond issue of the entity. 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 1987, approximately $140 billion of these bonds were outstanding, which represents nearly 20 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 default 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 for nongovernmental purposes. 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 or leased 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.

Private purpose bonds have been a common means of financing for a range of activities from sewage treatment plants and multifamily rental housing to owner-occupied housing and private edu-

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cational facilities. Starting with the 1968 and 1969 tax acts and most recently in the Tax Act of 1986, various prohibitions against this type of bond were enacted. Tax-exempt private purpose bonds are still permitted for the "public" activities undertaken by municipalities, but most of the business or private purpose bonds have become subject to strict volume caps on a State-by-State basis.

Table F–17 shows the growth in the volume of long-term, tax-exempt bonds. In anticipation of restrictions on tax-exempt bonds being incorporated into the 1986 Tax Act, the growth in volume in tax-exempt securities was unusually high in 1985. In 1986 and 1987, the volume of new issues dropped off markedly as a result of the large volume issued in 1985 and the effects of tax reform.

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Table F–17. **TAX-EXEMPT FINANCING**

(In billions of dollars)

	Actual									Preliminary 1987	Estimated	
	1978	1979	1980	1981	1982	1983	1984	1985	1986		1988	1989
Private purpose tax-exempts	19.7	28.1	32.5	30.9	49.6	57.1	74.0	121.6	29.9	31.0	28.8	27.4
Housing bonds	6.9	12.1	14.0	4.8	14.6	17.0	20.5	41.5	7.7	8.4	6.5	4.5
Single-family mortgage subsidy bonds	3.4	7.8	10.5	2.8	9.0	11.0	12.8	14.3	5.1	6.2	4.2	2.0
Multi-family rental housing bonds	2.5	2.7	2.2	1.1	5.1	5.3	5.5	25.0	2.2	1.9	1.8	1.9
Veterans general obligation bonds	1.2	1.6	1.3	0.9	0.5	0.7	2.2	2.2	0.3	0.3	0.5	0.6
Private exempt bonds [1]	2.9	3.2	3.3	4.7	8.5	11.7	11.7	38.2	6.2	12.3	13.1	14.0
Student loan bonds	0.3	0.6	0.5	1.1	1.8	3.3	1.2	4.0	2.0	1.8	1.8	1.8
Pollution control industrial bonds	2.8	2.5	2.5	4.3	5.9	4.5	8.1	7.7	2.4	2.5	1.6	1.2
Small-issue industrial development bonds	3.6	7.5	9.7	13.3	14.7	14.7	18.3	17.8	7.8	2.8	2.8	2.8
Other industrial development bonds [2]	3.2	2.2	2.5	2.7	4.1	6.0	14.1	12.3	3.9	3.2	3.0	3.0
Public purpose tax-exempts [3]	29.3	20.3	22.0	24.2	36.3	36.2	41.7	99.6	115.5	68.8	72.0	77.0
Total new issues, long-term tax exempts [4]	49.1	48.4	54.5	55.1	84.9	93.3	115.7	221.2	145.4	99.8	100.8	104.4

[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.

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The pattern of growth in new issues of private purpose tax-exempt bonds was similar to the pattern of issuance for all bonds. In 1985, the volume of private purpose bonds issued rose dramatically and then dropped off considerably in 1986 and 1987.

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 remained fairly constant until 1986 when the percentage dropped back to 20 percent of the total. Again, the change in the proportion of private purpose versus public purpose bonds reflects the 1986 Tax Act limits on this type of tax exemption.

Owing to the specific provisions of the 1986 Tax Act, the supply and the demand for municipal bonds are both expected to decrease. In addition, the type of bonds issued as well as the type of investors purchasing bonds are expected to change.

More specifically, the tax reform provisions influencing the issuance of municipal bonds include:

- Restricting the type of allowable uses for tax-exempt bonds to Government use and certain private activity bonds. Tax-exempt bonds can no longer be used to finance pollution control facilities, sports stadiums, convention facilities, or parking complexes.
- Imposing a single unified cap by State on most private activity tax-exempt bonds. The annual cap was the greater of $75 per capita or $25 million in 1987 and $50 per capita or $100 million beginning in 1988. This cap applies to all private activity bonds except bonds under 501(c)(3)—nonprofit hospitals and private universities and colleges, qualified veterans mortgages, and publicly owned airports, docks, wharfs, and solid waste facilities.
- Permitting advance refundings only for governmental use and 501(c)(3) bonds as well as imposing a limit of at most two advance refundings in an issue.
- Restricting the use of small issue industrial development bonds (a particular type of private purpose bond) to manufacturing facilities (however, even this limited use of small issue industrial development bonds will expire on December 31, 1989).

On the demand side of the municipal bond market, the outlook is less predictable. The across-the-board reduction in marginal tax rates for both individuals and corporations, the alternative minimum tax provision that could be triggered for certain taxpayers investing in industrial development bonds that are still exempt under the regular tax, and the elimination of the tax deduction on interest that commercial banks used to enjoy when they borrowed money to buy municipal bonds are three provisions that will tend

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to reduce the demand for tax-exempt bonds. Still, 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 means for sheltering income from Federal income tax are sharply curtailed. Similarly, the base-broadening measures aimed at business will tend to increase taxable income in certain sectors of the economy and may increase the demand for municipals.

XIII. Summary

To gain better control over Federal credit, since January 1980 the budget has included 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 management improvement 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. The subsidy costs of operating these programs could then be compared to the cost of grants and other Federal spending programs. Policy makers would thus have information to choose the form of Federal activity that is most cost effective in delivering economic and social benefits.

XIV. Appendix: Additional Discussion of Federal Credit Programs and Related Issues in the 1989 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 ("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).

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- Part 6b of the Budget ("Federal Credit") presents an outline of the credit reform initiative and a summary of much of the material in this special analysis.
- Part 6g of the Budget ("Summary Tables") contains summary tables of the credit budget totals (Table 1) and summaries by agency and function of direct loan obligations, guaranteed loan commitments, and program subsidies (Tables 4 and 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 contain data on total direct loan obligations by sector—agriculture, business, education, and housing—and by agency or program for the period 1951–1993.
- Management of the United States Government, contains discussions of credit program management issues, the debt collection report, and agency credit management goals.

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Table F–18. **DIRECT LOAN TRANSACTIONS OF THE FEDERAL GOVERNMENT (in millions of dollars)**

Agency or Program		Actual 1987	Estimate					
			1988	1989	1990	1991	1992	1993
Funds Appropriated to the President:								
Economic support fund	Obligations	109	25					
	Loan disbursements	69	65					
	Change in outstandings	*5*	*−43*	*−73*	*−78*	*−81*	*−87*	*−90*
	Outstandings	**6,310**	**6,267**	**6,194**	**6,116**	**6,035**	**5,948**	**5,858**
Foreign military sales	Obligations	4,053	4,049	4,460	4,540	4,615	4,680	4,734
	Loan disbursements	4,498	4,351	4,111	4,286	4,674	4,498	4,605
	Change in outstandings	*1,066*	*−5,070*	*−1,571*	*−1,966*	*1,573*	*1,225*	*1,296*
	Outstandings	**24,935**	**19,865**	**18,293**	**16,327**	**17,900**	**19,125**	**20,421**
Guarantee reserve fund (foreign military sales defaults)	Obligations							
	Loan disbursements	710	1,257	738	427	115	143	68
	Change in outstandings	*−95*	*559*	*643*	*40*	*−5*	*−42*	*−359*
	Outstandings	**1,325**	**1,884**	**2,528**	**2,568**	**2,563**	**2,521**	**2,162**
OPIC loan subsidies	Obligations			17	18	18	18	18
	Loan disbursements			1	7	11	12	12
	Change in outstandings			*1*	*7*	*11*	*11*	*9*
	Outstandings			**1**	**8**	**19**	**30**	**39**
OPIC	Obligations	23	23					
	Loan disbursements	13	13	13	8	4	5	5
	Change in outstandings	*8*	*4*	*2*	*−1*	*−6*	*−5*	*−5*
	Outstandings	**49**	**53**	**56**	**54**	**48**	**43**	**38**
AID functional development assistance	Obligations	124	65					
	Loan disbursements	263	260	260	220	200	182	
	Change in outstandings	*229*	*220*	*215*	*169*	*140*	*108*	*−73*
	Outstandings	**3,654**	**3,874**	**4,089**	**4,258**	**4,398**	**4,506**	**4,433**

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AID development loans revolving fund	Obligations							
	Loan disbursements							
	Change in outstandings	*−256*	*−279*	*−295*	*−295*	*−243*	*−244*	*−240*
	Outstandings	**8,052**	**7,773**	**7,478**	**7,183**	**6,940**	**6,696**	**6,456**
AID private sector loan subsidies	Obligations			5	5	5	3	3
	Loan disbursements				1	2	4	4
	Change in outstandings				*1*	*2*	*4*	*4*
	Outstandings				**1**	**4**	**7**	**11**
AID private sector revolving fund	Obligations	15	12					
	Loan disbursements	8	9	11	8	6	4	2
	Change in outstandings	*6*	*7*	*8*	*4*	*−1*	*−4*	*−6*
	Outstandings	**17**	**24**	**32**	**36**	**35**	**31**	**24**
AID housing & other credit guarantees	Obligations							
	Loan disbursements	45	51	51	50	49	52	51
	Change in outstandings	*23*	*19*	*20*	*26*	*21*	*19*	*15*
	Outstandings	**92**	**112**	**132**	**158**	**179**	**198**	**213**
AID miscellaneous appropriations	Obligations							
	Loan disbursements							
	Change in outstandings	*−7*	*−6*	*−7*	*−7*	*−7*	*−7*	*−7*
	Outstandings	**318**	**312**	**305**	**298**	**291**	**284**	**277**
Agriculture:								
Farmers Home Administration:								
Agricultural credit insurance fund	Obligations			600	500	400	100	100
	Loan disbursements			570	505	405	115	100
	Change in outstandings			*570*	*452*	*299*	*−18*	*−31*
	Outstandings			**570**	**1,022**	**1,321**	**1,303**	**1,272**
Agricultural credit insurance fund	Obligations	1,493	1,137					
	Loan disbursements	1,513	1,194	70	6	15	12	6
	Change in outstandings	*−1,471*	*−2,270*	*−2,742*	*−2,554*	*−2,241*	*−1,918*	*−1,576*
	Outstandings	**27,600**	**25,329**	**22,587**	**20,033**	**17,792**	**15,874**	**14,298**

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Table F–18. **DIRECT LOAN TRANSACTIONS OF THE FEDERAL GOVERNMENT (in millions of dollars)—Continued**

Agency or Program		Actual 1987	Estimate					
			1988	1989	1990	1991	1992	1993
Rural housing insurance fund	Obligations	1,716	1,714					
	Loan disbursements	1,766	1,918	841	206	95	6	1
	Change in outstandings	*−3,220*	*301*	*−2,434*	*−1,195*	*−1,228*	*−1,224*	*−1,198*
	Outstandings	**26,510**	**26,811**	**24,377**	**23,182**	**21,954**	**20,730**	**19,531**
Rural development loan subsidies	Obligations			300	200	100		
	Loan disbursements			12	74	150	150	89
	Change in outstandings			*12*	*74*	*147*	*142*	*77*
	Outstandings			**12**	**86**	**233**	**375**	**452**
Rural development insurance fund	Obligations	426	426					
	Loan disbursements	468	542	492	221	168	81	60
	Change in outstandings	*−1,796*	*−1,044*	*−810*	*70*	*14*	*−72*	*−92*
	Outstandings	**6,431**	**5,386**	**4,576**	**4,646**	**4,660**	**4,588**	**4,496**
Commodity Credit Corporation:								
Export loan subsidies	Obligations							
	Loan disbursements			19	234	438	630	643
	Change in outstandings			*19*	*234*	*438*	*630*	*643*
	Outstandings			**19**	**252**	**690**	**1,320**	**1,964**
Short and medium term export loans	Obligations							
	Loan disbursements							
	Change in outstandings	*−49*	*−84*	*−10*	*−26*	*−28*	*−42*	*−48*
	Outstandings	**778**	**694**	**684**	**657**	**629**	**587**	**539**
Commodity loans	Obligations	16,566	15,024	10,746	10,923	10,330	9,888	10,639
	Loan disbursements	16,566	14,316	10,746	10,923	10,330	9,888	10,631
	Change in outstandings	*−3,386*	*−4,735*	*−1,317*	*−1,511*	*−364*	*−471*	*−725*
	Outstandings	**15,108**	**10,374**	**9,056**	**7,546**	**7,182**	**6,710**	**5,985**

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Storage facility loans	Obligations	*						
	Loan disbursements	*						
	Change in outstandings	*−109*	*−55*	*−10*	*−73*	*−136*	*−196*	*−196*
	Outstandings	**65**	**10**	*	**−78**	**−214**	**−410**	**−606**
Rescheduled guaranteed loans	Obligations							
	Loan disbursements	478	708	682	430	247	13	11
	Change in outstandings	*513*	*690*	*620*	*380*	*240*	*−51*	*−75*
	Outstandings	**2,626**	**3,316**	**3,936**	**4,321**	**4,561**	**4,510**	**4,435**
Public Law 480 long-term export credits	Obligations	804	777	739	752	764	775	784
	Loan disbursements	740	780	742	751	763	774	783
	Change in outstandings	*597*	*543*	*499*	*607*	*556*	*578*	*598*
	Outstandings	**11,219**	**11,762**	**12,261**	**12,868**	**13,424**	**14,002**	**14,600**
Rural electrification and telephone revolving fund	Obligations	1,033	1,794					
	Loan disbursements	1,342	1,613	1,489	1,133	847	632	498
	Change in outstandings	*−666*	*−1,117*	*−1,120*	*−918*	*−1,006*	*−1,274*	*−1,459*
	Outstandings	**34,323**	**33,206**	**32,086**	**31,168**	**30,162**	**28,887**	**27,428**
Rural telephone bank subsidies	Obligations			177	177	177	177	177
	Loan disbursements			11	50	85	110	129
	Change in outstandings			*11*	*50*	*85*	*110*	*129*
	Outstandings			**11**	**60**	**145**	**255**	**383**
Rural telephone bank	Obligations	185	177					
	Loan disbursements	52	106	122	102	81	68	59
	Change in outstandings	*13*	*−145*	*53*	*32*	*9*	*−4*	*−15*
	Outstandings	**1,447**	**1,302**	**1,355**	**1,387**	**1,396**	**1,391**	**1,377**
Commerce:								
Economic development revolving fund	Obligations							
	Loan disbursements	145	20	15	15	15	15	15
	Change in outstandings	*−13*	*−114*	*−47*	*−13*	*−12*	*−5*	
	Outstandings	**556**	**441**	**394**	**381**	**370**	**364**	**364**
EDA miscellaneous appropriations	Obligations							
	Loan disbursements							
	Change in outstandings	*−5*	*−3*	*−3*				
	Outstandings	**85**	**83**	**80**	**80**	**80**	**80**	**80**

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Table F–18. **DIRECT LOAN TRANSACTIONS OF THE FEDERAL GOVERNMENT (in millions of dollars)—Continued**

Agency or Program		Actual 1987	Estimate					
			1988	1989	1990	1991	1992	1993
ITA operations and administration	Obligations							
	Loan disbursements	1	*					
	Change in outstandings	*–1*	*–7*					
	Outstandings	**7**						
NOAA coastal energy impact fund	Obligations							
	Loan disbursements	3						
	Change in outstandings	*–8*	*–3*	*–3*	*–3*	*–3*	*–3*	*–3*
	Outstandings	**89**	**85**	**82**	**79**	**75**	**72**	**69**
NOAA Federal ship financing (fishing)	Obligations	1						
	Loan disbursements	2	2	2	2	2	2	2
	Change in outstandings	*1*	*–2*	*–2*	*–2*	*–2*	*–2*	*–2*
	Outstandings	**19**	**17**	**16**	**14**	**13**	**11**	**10**
Defense:								
Navy industrial fund	Obligations							
	Loan disbursements	77						
	Change in outstandings	*40*	*–29*	*–38*	*–48*	*–48*	*–48*	*–48*
	Outstandings	**1,788**	**1,759**	**1,721**	**1,672**	**1,624**	**1,576**	**1,528**
Defense stock fund	Obligations							
	Loan disbursements							
	Change in outstandings	*–1*						
	Outstandings							
Production guarantees	Obligations							
	Loan disbursements							
	Change in outstandings	*–10*						
	Outstandings							

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Education:								
Guarantees of SLMA obligations	Obligations							
	Loan disbursements							
	Change in outstandings	*−30*	*−30*		*−30*	*−30*	*−30*	*−30*
	Outstandings	**4,940**	**4,910**	**4,910**	**4,880**	**4,850**	**4,820**	**4,790**
Guaranteed student loans	Obligations							
	Loan disbursements	1,259	1,576	1,690	1,690	1,634	1,527	1,427
	Change in outstandings	*615*	*603*	*531*	*319*	*43*	*−256*	*−543*
	Outstandings	**4,792**	**5,394**	**5,925**	**6,244**	**6,287**	**6,030**	**5,488**
National direct student loans	Obligations							
	Loan disbursements							
	Change in outstandings	*−4,615*	*−17*	*−19*	*−18*	*−12*	*−13*	*−15*
	Outstandings	**657**	**639**	**620**	**602**	**590**	**577**	**562**
College housing & academic facilities	Obligations	60	62					
	Loan disbursements		6	42	55	19		
	Change in outstandings		*6*	*42*	*55*	*18*	*−2*	*−2*
	Outstandings		**6**	**48**	**104**	**121**	**120**	**118**
College housing loans	Obligations							
	Loan disbursements	32	35	36	30	20	24	
	Change in outstandings	*−1,035*	*−567*	*−424*	*13*	*3*	*6*	*−18*
	Outstandings	**1,194**	**626**	**203**	**216**	**218**	**225**	**207**
Higher education	Obligations							
	Loan disbursements							
	Change in outstandings	*−10*	*−33*	*−8*	*−5*	*−4*		
	Outstandings	**51**	**17**	**9**	**4**			
Higher education facilities loans and insurance	Obligations							
	Loan disbursements							
	Change in outstandings	*−120*	*−111*	*−70*	*−4*	*−5*	*−5*	*−5*
	Outstandings	**219**	**108**	**38**	**34**	**29**	**24**	**20**

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Table F–18. **DIRECT LOAN TRANSACTIONS OF THE FEDERAL GOVERNMENT (in millions of dollars)—Continued**

Agency or Program		Actual 1987	Estimate					
			1988	1989	1990	1991	1992	1993
Energy:								
Geothermal resources	Obligations							
	Loan disbursements							
	Change in outstandings							
	Outstandings	**16**	**16**	**16**	**16**	**16**	**16**	**16**
Bonneville Power Administration	Obligations							
	Loan disbursements							
	Change in outstandings	*	*	*	*	*	*	*
	Outstandings	**5**	**4**	**4**	**4**	**4**	**4**	**3**
Health and Human Services:								
Medical facilities guarantees and loan fund	Obligations							
	Loan disbursements	2	16	2	2	2	2	2
	Change in outstandings	*—8*	*—7*	*—122*	*2*	*2*	*2*	*2*
	Outstandings	**129**	**122**		**2**	**5**	**7**	**9**
Health maintenance organization loan fund	Obligations							
	Loan disbursements	*						
	Change in outstandings	*—13*	*—51*	*—41*				
	Outstandings	**92**	**41**					
Health resources and services	Obligations	1	1	*	*	*	*	*
	Loan disbursements	1	1	*	*	*	*	*
	Change in outstandings	*—54*	*—1*	*—2*	*—2*	*—2*	*—2*	*—2*
	Outstandings	**440**	**439**	**438**	**436**	**435**	**433**	**432**
Health professions graduate student insurance fund	Obligations							
	Loan disbursements	12	19	25	22	21	20	16
	Change in outstandings	*18*	*28*	*35*	*33*	*30*	*28*	*22*
	Outstandings	**49**	**76**	**111**	**144**	**174**	**202**	**224**

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Housing and Urban Development:								
Low-rent public housing	Obligations							
	Loan disbursements							
	Change in outstandings	*−37*	*−39*	*−42*	*−44*	*−47*	*−50*	*−52*
	Outstandings	**2,074**	**2,035**	**1,993**	**1,949**	**1,901**	**1,851**	**1,799**
Housing for the elderly or handicapped subsidies	Obligations			333	350	368	378	386
	Loan disbursements					79	235	338
	Change in outstandings					*79*	*235*	*338*
	Outstandings					**79**	**314**	**652**
Housing for the elderly or handicapped	Obligations	574	566	17	9			
	Loan disbursements	412	543	529	532	434	151	4
	Change in outstandings	*377*	*505*	*490*	*491*	*391*	*106*	*−44*
	Outstandings	**6,566**	**7,071**	**7,560**	**8,051**	**8,442**	**8,548**	**8,504**
GNMA emergency mortgage purchases	Obligations							
	Loan disbursements	12	2					
	Change in outstandings	*−427*	*−55*	*−393*	*	*	*	*
	Outstandings	**457**	**402**	**9**	**9**	**8**	**8**	**8**
Mortgage-backed securities subsidies	Obligations							
	Loan disbursements				4	8	11	15
	Change in outstandings				*	*	*1*	*1*
	Outstandings				*	**1**	**1**	**2**
Payments on mortgage-backed securities	Obligations							
	Loan disbursements	169	276	281	29	24	22	21
	Change in outstandings	*92*	*2*	*−28*	*−22*	*−10*	*−9*	*−9*
	Outstandings	**102**	**104**	**75**	**53**	**44**	**34**	**25**
FHA subsidies	Obligations			103	168	168	168	168
	Loan disbursements			53	151	239	253	253
	Change in outstandings			*41*	*107*	*166*	*172*	*171*
	Outstandings			**41**	**148**	**314**	**486**	**657**
Federal Housing Administration fund	Obligations		41					
	Loan disbursements	802	811	675	654	793	1,406	1,168
	Change in outstandings	*399*	*−203*	*42*	*280*	*338*	*835*	*523*
	Outstandings	**4,645**	**4,442**	**4,484**	**4,764**	**5,102**	**5,937**	**6,460**

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Table F–18. **DIRECT LOAN TRANSACTIONS OF THE FEDERAL GOVERNMENT (in millions of dollars)—Continued**

Agency or Program		Actual 1987	Estimate					
			1988	1989	1990	1991	1992	1993
Rehabilitation loan fund	Obligations	64	85					
	Loan disbursements	38	75	47				
	Change in outstandings	*−52*	*−20*	*−39*	*−600*			
	Outstandings	**658**	**639**	**600**				
Revolving fund for liquidating programs	Obligations							
	Loan disbursements							
	Change in outstandings	*−62*	*−327*	*	*	*	*	*
	Outstandings	**329**	**2**	**2**	**2**	**2**	**2**	**2**
Nonprofit sponsor assistance subsidies	Obligations			1	1	1	1	1
	Loan disbursements				*	*	*	*
	Change in outstandings				*	*	*	*
	Outstandings				*	1	1	1
Nonprofit sponsor assistance	Obligations	1	1					
	Loan disbursements	*	1	1	*	*		
	Change in outstandings	*	*	*	*	*	*	*
	Outstandings	**2**	**2**	**2**	**1**	**1**	**1**	**1**
Interior:								
Bureau of Reclamation loans	Obligations	43	32	18	11	2	1	*
	Loan disbursements	51	29	23	11	*	*	1
	Change in outstandings	*40*	*−349*	*23*	*10*	*−1*	*−1*	*−1*
	Outstandings	**520**	**171**	**194**	**203**	**202**	**201**	**200**
BIA loan subsidies	Obligations			13	13	13	13	13
	Loan disbursements			13	13	13	13	13
	Change in outstandings			*13*	*12*	*10*	*10*	*9*
	Outstandings			**13**	**24**	**35**	**44**	**53**

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BIA revolving fund	Obligations	7	13					
	Loan disbursements	10	14					
	Change in outstandings	*2*	*6*	*−9*	*−8*	*−7*	*−7*	*−6*
	Outstandings	**108**	**115**	**106**	**98**	**90**	**83**	**77**
BIA loan guaranty & insurance fund	Obligations							
	Loan disbursements	4	9	17	1	1	1	1
	Change in outstandings	*4*	*7*	*−7*	*−2*	*−3*	*−2*	*−3*
	Outstandings	**16**	**23**	**16**	**14**	**11**	**8**	**6**
Transportation:								
Railroad rehabilitation and improvement financing	Obligations							
	Loan disbursements	4	18	15				
	Change in outstandings	*3*	*−352*	*−151*	*−29*	*−105*		
	Outstandings	**638**	**285**	**134**	**105**			
Federal-aid highways trust fund	Obligations							
	Loan disbursements	*	1					
	Change in outstandings	*−38*	*−18*	*−21*				
	Outstandings	**38**	**21**					
Right-of-way revolving fund	Obligations	48	45	48	48	48	48	48
	Loan disbursements	45	45	48	48	48	48	48
	Change in outstandings	*−27*						
	Outstandings	**104**	**104**	**104**	**104**	**104**	**104**	**104**
Miscellaneous expired accounts	Obligations							
	Loan disbursements							
	Change in outstandings		*−1*					
	Outstandings	**1**						
Aircraft purchase loan guarantees	Obligations							
	Loan disbursements		15					
	Change in outstandings	*−4*	*12*	*	*	*	*	*
	Outstandings	**41**	**53**	**53**	**53**	**53**	**53**	**52**
MarAd ship loan subsidies	Obligations			5	5	5	5	5
	Loan disbursements			5	5	5	5	5
	Change in outstandings			*5*	*5*	*5*	*5*	*5*
	Outstandings			**5**	**10**	**15**	**20**	**24**

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Table F–18. **DIRECT LOAN TRANSACTIONS OF THE FEDERAL GOVERNMENT (in millions of dollars)—Continued**

Agency or Program		Actual 1987	Estimate					
			1988	1989	1990	1991	1992	1993
MarAd Federal ship financing fund	Obligations	1	5					
	Loan disbursements	343	255	100	100	100	100	100
	Change in outstandings	*137*	*244*	*91*	*93*	*93*	*94*	*95*
	Outstandings	**1,612**	**1,856**	**1,946**	**2,039**	**2,133**	**2,227**	**2,321**
Environmental Protection Agency:								
Abatement, control, and compliance	Obligations	28	17					
	Loan disbursements	4	49	31				
	Change in outstandings	*4*	*46*	*26*	*−6*	*−6*	*−6*	*−6*
	Outstandings	**27**	**74**	**100**	**94**	**87**	**81**	**76**
NASA	Obligations							
	Loan disbursements							
	Change in outstandings	*−79*	*−91*	*−105*	*−121*	*−138*	*−157*	*−115*
	Outstandings	**809**	**717**	**612**	**491**	**354**	**197**	**82**
Veterans Administration:								
Vendee loan and repurchase subsidies	Obligations			959	712	606	571	523
	Loan disbursements			959	713	608	573	527
	Change in outstandings			*956*	*703*	*601*	*568*	*522*
	Outstandings			**956**	**1,659**	**2,260**	**2,828**	**3,351**
Vendee loans and loans repurchased	Obligations	1,008	1,061	16	7	5	3	2
	Loan disbursements	1,223	1,223	74	35	23	17	13
	Change in outstandings	*16*	*−318*	*−260*	*−192*	*−168*	*−161*	*−155*
	Outstandings	**1,204**	**886**	**626**	**434**	**266**	**105**	**−50**
Direct loan subsidies	Obligations			1	1	1	*	*
	Loan disbursements			1	1	*	*	*
	Change in outstandings			*1*	*1*	*	*	*
	Outstandings			**1**	**2**	**2**	**2**	**3**

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Direct loan revolving fund	Obligations	2	2	*	*	*	*	*
	Loan disbursements	2	2	1	1	1	*	*
	Change in outstandings	*−27*	*−23*	*−59*	*−2*	*−1*	*	*
	Outstandings	**98**	**75**	**16**	**14**	**13**	**13**	**13**
Other veterans programs	Obligations	1	1	1	1	1	1	1
	Loan disbursements	1	1	1	1	1	1	1
	Change in outstandings	*−6*	*−6*	*−4*	*−3*	*−3*	*−3*	*−3*
	Outstandings	**40**	**35**	**30**	**27**	**24**	**21**	**19**
District of Columbia:								
Loans to the District of Columbia	Obligations							
	Loan disbursements							
	Change in outstandings	*−293*	*−30*	*−31*	*−33*	*−35*	*−37*	*−39*
	Outstandings	**715**	**685**	**654**	**621**	**586**	**549**	**510**
Export-Import Bank loan subsidies	Obligations			705	718	730	740	751
	Loan disbursements			103	252	371	431	473
	Change in outstandings			*96*	*218*	*297*	*309*	*302*
	Outstandings			**96**	**315**	**612**	**921**	**1,223**
Export-Import Bank	Obligations	677	693					
	Loan disbursements	468	794	606	428	194	104	31
	Change in outstandings	*−3,149*	*−1,552*	*−1,471*	*−960*	*−1,148*	*−1,076*	*−1,097*
	Outstandings	**11,202**	**9,649**	**8,178**	**7,218**	**6,070**	**4,994**	**3,898**
Federal Deposit Insurance Corporation[1]	Obligations							
	Loan disbursements							
	Change in outstandings	*−334*	*−1*	*−216*	*−50*	*−50*	*−50*	*−50*
	Outstandings	**3,089**	**3,088**	**2,872**	**2,822**	**2,772**	**2,722**	**2,672**
Federal Savings and Loan Insurance Corporation[1]	Obligations	96	100	74	25	25	25	25
	Loan disbursements	96	100	74	25	25	25	25
	Change in outstandings	*83*	*−12*	*−35*	*15*	*15*	*15*	*15*
	Outstandings	**1,769**	**1,757**	**1,722**	**1,737**	**1,752**	**1,767**	**1,782**

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Table F–18. **DIRECT LOAN TRANSACTIONS OF THE FEDERAL GOVERNMENT (in millions of dollars)—Continued**

Agency or Program		Actual 1987	Estimate					
			1988	1989	1990	1991	1992	1993
National Credit Union Administration:								
Share insurance fund	Obligations	2	20	5				
	Loan disbursements	2	20	5				
	Change in outstandings	*−17*	*15*	*−1*	*−5*	*−5*	*−5*	*−4*
	Outstandings	**5**	**20**	**19**	**14**	**9**	**4**	
Central liquidity facility	Obligations	106	127	144	150	150	150	150
	Loan disbursements	106	127	144	150	150	150	150
	Change in outstandings	*6*	*25*	*25*	*25*	*25*	*25*	*25*
	Outstandings	**112**	**137**	**162**	**187**	**212**	**237**	**262**
Small business:								
Business and investment loans	Obligations	86	85					
	Loan disbursements	670	608	500	421	282	170	89
	Change in outstandings	*−159*	*−158*	*−420*	*−313*	*−87*	*−167*	*−201*
	Outstandings	**2,874**	**2,716**	**2,296**	**1,983**	**1,896**	**1,729**	**1,528**
Small business investment companies	Obligations							
	Loan disbursements							
	Change in outstandings	*−226*	*−130*	*−110*	*−100*	*−100*	*−80*	*−60*
	Outstandings	**741**	**611**	**501**	**401**	**301**	**221**	**161**
Small business development companies	Obligations							
	Loan disbursements	115	60					
	Change in outstandings	*84*	*10*	*−380*	*−530*			
	Outstandings	**900**	**910**	**530**				
Disaster loan subsidies	Obligations			265	265	265	265	265
	Loan disbursements			119	239	239	239	239
	Change in outstandings			*112*	*205*	*172*	*145*	*120*
	Outstandings			**112**	**317**	**489**	**634**	**754**

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Disaster loans	Obligations	208	350					
	Loan disbursements	209	224	158				
	Change in outstandings	*−503*	*−394*	*−942*	*−754*	*−607*	*−1,022*	
	Outstandings	**3,719**	**3,325**	**2,383**	**1,629**	**1,022**		
Tennessee Valley Authority:								
Power program	Obligations	97	72	70	68	65	62	59
	Loan disbursements	97	72	70	68	65	62	59
	Change in outstandings	*16*	*−6*	*−23*	*−12*	*−6*	*−8*	*−10*
	Outstandings	**267**	**261**	**238**	**226**	**220**	**212**	**203**
Seven States	Obligations	156	212	180	208	330	247	239
	Loan disbursements	156	212	180	208	330	247	239
	Change in outstandings	*−16*	*−80*	*169*	*−362*	*−190*	*−30*	*−599*
	Outstandings	**1,824**	**1,744**	**1,912**	**1,550**	**1,360**	**1,330**	**732**
Area and regional development	Obligations							
	Loan disbursements							
	Change in outstandings		*	*	*	*	*	*
	Outstandings	**3**	**3**	**3**	**3**	**2**	**2**	**2**
Payments for Conrail securities	Obligations							
	Loan disbursements							
	Change in outstandings	*−851*						
	Outstandings							
United States Railway Association	Obligations							
	Loan disbursements							
	Change in outstandings	*−89*						
	Outstandings							
Other agencies and programs	Obligations	3	3	2	3	3	3	3
	Loan disbursements	68	26	28	3	3	3	3
	Change in outstandings	*−5*	*−75*	*−79*	*−86*	*−77*	*−58*	*−43*
	Outstandings	**948**	**873**	**794**	**708**	**631**	**573**	**530**

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Table F–18. **DIRECT LOAN TRANSACTIONS OF THE FEDERAL GOVERNMENT (in millions of dollars)—Continued**

Agency or Program		Actual 1987	Estimate					
			1988	1989	1990	1991	1992	1993
Grand total, net direct loans	Obligations	29,817	28,817	20,005	19,877	19,195	18,321	19,094
	Loan disbursements	35,171	34,468	27,651	25,553	24,433	23,238	23,033
	Change in outstandings	*−18,984*	*−16,211*	*−10,626*	*−8,255*	*−2,432*	*−3,574*	*−4,440*
	Outstandings	**234,239**	**218,027**	**207,402**	**199,147**	**196,715**	**193,141**	**188,701**

* $500,000 or less.
[1] Direct loan obligations and disbursements for these programs represent increases in their holdings of loan assets rather than cash disbursements.

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Table F–19. **GUARANTEED LOAN TRANSACTIONS OF THE FEDERAL GOVERNMENT (in millions of dollars)**

Agency or Program		Actual 1987	Estimate					
			1988	1989	1990	1991	1992	1993
Funds Appropriated to the President:								
Foreign military sales	Commitments		5,153	2,300	3,266			
	New guaranteed loans		5,153	2,300	3,266			
	Change in outstandings	*—20*	*5,133*	*2,280*	*2,730*	*—562*	*—541*	*—543*
	Outstandings	**140**	**5,273**	**7,553**	**10,283**	**9,721**	**9,180**	**8,637**
OPIC loan subsidies	Commitments			175	178	181	184	186
	New guaranteed loans			11	68	114	114	114
	Change in outstandings			*11*	*68*	*92*	*70*	*49*
	Outstandings			**11**	**80**	**171**	**242**	**290**
Overseas Private Investment Corporation	Commitments	200	200					
	New guaranteed loans	85	80	69	52			
	Change in outstandings	*40*	*30*	*19*	*—23*	*—60*	*—51*	*—51*
	Outstandings	**308**	**338**	**357**	**333**	**273**	**222**	**172**
AID private sector loan subsidies	Commitments			100	100	100	100	100
	New guaranteed loans				25	50	75	100
	Change in outstandings				*25*	*50*	*71*	*88*
	Outstandings				**25**	**75**	**146**	**233**
AID housing & other guarantee subsidies	Commitments			100	100	100	100	100
	New guaranteed loans						50	100
	Change in outstandings						*50*	*100*
	Outstandings						**50**	**150**
AID housing and other credit guarantees	Commitments	145	125					
	New guaranteed loans	140	125	145	160	125	75	25
	Change in outstandings	*112*	*95*	*112*	*124*	*86*	*33*	*—20*
	Outstandings	**1,328**	**1,423**	**1,535**	**1,659**	**1,745**	**1,778**	**1,758**

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Table F–19. **GUARANTEED LOAN TRANSACTIONS OF THE FEDERAL GOVERNMENT (in millions of dollars)—Continued**

Agency or Program		Actual 1987	Estimate					
			1988	1989	1990	1991	1992	1993
Agriculture:								
Rural electric and telephone loan subsidies	Commitments			1,319	1,413	1,413	1,413	1,413
	New guaranteed loans			179	581	875	1,059	1,161
	Change in outstandings			*179*	*581*	*875*	*1,057*	*1,155*
	Outstandings			**179**	**760**	**1,634**	**2,692**	**3,847**
Rural electric and telephone revolving fund	Commitments	582	2,000					
	New guaranteed loans	602	2,000					
	Change in outstandings	*404*	*1,985*	*−15*	*−15*	*−15*	*−15*	*−15*
	Outstandings	**1,434**	**3,419**	**3,404**	**3,389**	**3,374**	**3,359**	**3,344**
Farmers Home Administration:								
Agricultural credit subsidies	Commitments			3,600	3,675	3,750	4,050	4,050
	New guaranteed loans			1,615	3,292	3,396	3,830	4,002
	Change in outstandings			*1,615*	*2,969*	*2,398*	*2,269*	*1,982*
	Outstandings			**1,615**	**4,584**	**6,982**	**9,251**	**11,233**
Agricultural credit insurance fund	Commitments	1,565	2,793					
	New guaranteed loans	1,216	2,074	1,321	212	375	90	59
	Change in outstandings	*700*	*1,345*	*357*	*−757*	*−354*	*−505*	*−487*
	Outstandings	**2,488**	**3,834**	**4,191**	**3,433**	**3,079**	**2,575**	**2,088**
Rural housing insurance fund	Commitments							
	New guaranteed loans	*						
	Change in outstandings	*−5*	*−140*	*−1*	*−2*	*−5*	*−6*	*−1*
	Outstandings	**177**	**37**	**35**	**33**	**28**	**22**	**21**
Rural development insurance subsidies	Commitments			96	196	296	396	396
	New guaranteed loans			19	57	111	176	257
	Change in outstandings			*19*	*54*	*101*	*154*	*222*
	Outstandings			**19**	**73**	**175**	**329**	**551**

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Rural development insurance fund	Commitments	115	96					
	New guaranteed loans	75	116	64	30	−20	−83	−161
	Change in outstandings	*−438*	*−265*	*−189*	*−213*	*−234*	*−264*	*−310*
	Outstandings	**1,918**	**1,653**	**1,464**	**1,251**	**1,017**	**753**	**443**
CCC export loan subsidies	Commitments			3,500	3,500	3,500	3,500	3,500
	New guaranteed loans			3,500	3,500	3,500	3,500	3,500
	Change in outstandings			*3,500*	*2,450*	*1,400*	*350*	*300*
	Outstandings			**3,500**	**5,950**	**7,350**	**7,700**	**8,000**
Commodity Credit Corporation export credits	Commitments	2,998	5,500					
	New guaranteed loans	2,447	5,500					
	Change in outstandings	*123*	*3,492*	*−2,879*	*−2,240*	*−1,729*	*−63*	*−57*
	Outstandings	**3,732**	**7,224**	**4,346**	**2,106**	**377**	**314**	**257**
Commerce:								
Economic development programs	Commitments		20					
	New guaranteed loans		20					
	Change in outstandings	*−191*	*8*	*−24*	*−23*	*−19*	*−10*	*−6*
	Outstandings	**95**	**103**	**79**	**56**	**37**	**27**	**22**
ITA operations and administration	Commitments							
	New guaranteed loans							
	Change in outstandings	*−2*	*−18*					
	Outstandings	**18**						
National Oceanic and Atmospheric Administration	Commitments	80	85					
	New guaranteed loans	80	85					
	Change in outstandings	*57*	*64*	*−20*	*−18*	*−18*	*−18*	*−18*
	Outstandings	**250**	**315**	**294**	**277**	**259**	**242**	**224**
Education:								
Guaranteed student loans	Commitments	9,730	9,576	10,039	10,521	11,027	11,564	12,250
	New guaranteed loans	9,266	9,124	9,567	10,029	10,515	11,030	11,688
	Change in outstandings	*2,585*	*1,190*	*1,049*	*860*	*813*	*1,037*	*1,242*
	Outstandings	**40,067**	**41,256**	**42,306**	**43,166**	**43,979**	**45,016**	**46,258**

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Table F–19. **GUARANTEED LOAN TRANSACTIONS OF THE FEDERAL GOVERNMENT (in millions of dollars)—Continued**

Agency or Program		Actual 1987	Estimate					
			1988	1989	1990	1991	1992	1993
Energy:								
Geothermal resources development fund	Commitments							
	New guaranteed loans							
	Change in outstandings							
	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	*−84*	*−106*	*−102*	*−114*	*−126*	*−134*	*−143*
	Outstandings	**792**	**686**	**584**	**470**	**343**	**209**	**66**
Health professions graduate student insurance fund	Commitments	221	350	77				
	New guaranteed loans	221	350	77				
	Change in outstandings	*199*	*319*	*35*	*−39*	*−40*	*−40*	*−39*
	Outstandings	**1,305**	**1,623**	**1,659**	**1,620**	**1,580**	**1,539**	**1,501**
Health education assistance loan subsidies	Commitments			100	100	100	75	50
	New guaranteed loans			100	100	100	75	50
	Change in outstandings			*100*	*100*	*100*	*75*	*50*
	Outstandings			**100**	**200**	**300**	**375**	**425**
Housing and Urban Development:								
Low-rent public housing	Commitments							
	New guaranteed loans							
	Change in outstandings	*−249*	*−275*	*−300*	*−325*	*−350*	*−375*	*−400*
	Outstandings	**6,252**	**5,977**	**5,677**	**5,352**	**5,002**	**4,627**	**4,227**
Revolving fund (liquidating)	Commitments							
	New guaranteed loans							
	Change in outstandings	*9*	*−4*	*−8*	*−11*	*−15*	*−13*	*
	Outstandings	**63**	**59**	**50**	**40**	**24**	**11**	**11**

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FHA loan subsidies	Commitments			61,790	63,918	66,309	68,339	70,060
	New guaranteed loans			34,972	52,088	54,018	55,822	57,355
	Change in outstandings			*34,801*	*51,141*	*51,519*	*50,469*	*49,939*
	Outstandings			**34,801**	**85,942**	**137,460**	**187,929**	**237,868**
Federal Housing Administration (FHA)	Commitments	79,995	59,850					
	New guaranteed loans	94,088	49,324	15,425				
	Change in outstandings	*51,897*	*7,685*	*−27,174*	*−42,048*	*−41,153*	*−39,264*	*−42,539*
	Outstandings	**275,417**	**283,102**	**255,928**	**213,880**	**172,727**	**133,463**	**90,925**
GNMA mortgage securities subsidies	Commitments			83,609	84,462	85,409	87,242	89,508
	New guaranteed loans			51,452	64,971	65,699	67,109	68,852
	Change in outstandings			*50,422*	*62,128*	*60,893*	*60,303*	*59,998*
	Outstandings			**50,422**	**112,550**	**173,443**	**233,746**	**293,744**
GNMA mortgage-backed securities	Commitments	139,976	83,355					
	New guaranteed loans	115,299	64,119	12,863				
	Change in outstandings	*67,767*	*32,522*	*−22,690*	*−36,771*	*−35,984*	*−34,132*	*−31,303*
	Outstandings	**308,997**	**341,519**	**318,829**	**282,058**	**246,074**	**211,943**	**180,640**
Interior:								
BIA guaranteed loan subsidies	Commitments			45	45	45	45	45
	New guaranteed loans			45	45	45	45	45
	Change in outstandings			*43*	*42*	*40*	*39*	*37*
	Outstandings			**43**	**85**	**125**	**164**	**201**
BIA loan guaranty & insurance fund	Commitments	39	34					
	New guaranteed loans	39	34					
	Change in outstandings	*26*	*18*	*−25*	*−7*	*−7*	*−7*	*−6*
	Outstandings	**169**	**187**	**162**	**155**	**148**	**142**	**136**
Transportation:								
MarAd Federal ship financing fund	Commitments							
	New guaranteed loans	26						
	Change in outstandings	*−716*	*−464*	*−291*	*−276*	*−262*	*−249*	*−237*
	Outstandings	**4,279**	**3,815**	**3,524**	**3,248**	**2,986**	**2,736**	**2,500**

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Table F–19. **GUARANTEED LOAN TRANSACTIONS OF THE FEDERAL GOVERNMENT (in millions of dollars)—Continued**

Agency or Program		Actual 1987	Estimate					
			1988	1989	1990	1991	1992	1993
Aircraft purchase loan guarantees	Commitments							
	New guaranteed loans							
	Change in outstandings	*—77*	*—68*	*—38*	*—21*	*—18*	*—11*	*—13*
	Outstandings	**199**	**131**	**93**	**72**	**54**	**43**	**30**
Miscellaneous expired accounts	Commitments							
	New guaranteed loans							
	Change in outstandings							
	Outstandings	**997**	**997**	**997**	**997**	**997**	**997**	**997**
Treasury:								
Biomass energy development	Commitments							
	New guaranteed loans							
	Change in outstandings	*—218*	*—12*	*—10*				
	Outstandings	**578**	**565**	**555**	**555**	**555**	**555**	**555**
Veterans Administration:								
Loan guarantee subsidies	Commitments			17,940	17,033	15,973	15,770	16,208
	New guaranteed loans			17,940	17,033	15,973	15,770	16,208
	Change in outstandings			*16,743*	*14,804*	*11,464*	*9,694*	*8,615*
	Outstandings			**16,743**	**31,547**	**43,012**	**52,706**	**61,321**
Loan guarantee revolving fund	Commitments	34,900	18,287					
	New guaranteed loans	34,900	18,287					
	Change in outstandings	*3,757*	*675*	*—13,780*	*—12,547*	*—10,244*	*—8,708*	*—7,170*
	Outstandings	**146,319**	**146,994**	**133,214**	**120,668**	**110,424**	**101,716**	**94,546**
Export-Import Bank subsidies	Commitments			10,200	10,384	10,555	10,703	10,826
	New guaranteed loans			3,185	5,291	6,362	6,962	7,330
	Change in outstandings			*1,184*	*1,498*	*1,461*	*1,381*	*1,290*
	Outstandings			**1,184**	**2,682**	**4,143**	**5,524**	**6,814**

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Export-Import Bank	Commitments	6,754	14,601					
	New guaranteed loans	3,852	3,890	1,041	1,633	828	447	256
	Change in outstandings	*294*	*−115*	*−1,125*	*−647*	*−554*	*−475*	*−423*
	Outstandings	**5,079**	**4,964**	**3,839**	**3,192**	**2,638**	**2,163**	**1,740**
Federal Savings and Loan Insurance Corporation	Commitments	1,260	623	325	100	100	100	100
	New guaranteed loans	1,260	623	325	100	100	100	100
	Change in outstandings	*1,110*	*−367*	*218*	*50*	*50*	*50*	*50*
	Outstandings	**4,063**	**3,696**	**3,913**	**3,963**	**4,013**	**4,063**	**4,113**
National Credit Union Administration	Commitments	62	5	4				
	New guaranteed loans	62	5	4				
	Change in outstandings	*1*	*−1*	*−2*	*−3*			
	Outstandings	**6**	**4**	**3**				
Small business:								
Business and investment loan subsidies	Commitments			3,596	3,596	3,596	3,596	3,596
	New guaranteed loans			1,600	3,200	3,200	3,200	3,200
	Change in outstandings			*1,345*	*2,485*	*1,625*	*815*	*405*
	Outstandings			**1,345**	**3,830**	**5,455**	**6,270**	**6,675**
Business and investment loans	Commitments	3,383	3,741	*				
	New guaranteed loans	3,255	3,200	1,600				
	Change in outstandings	*584*	*440*	*−1,035*	*−2,280*	*−1,530*	*−830*	*−430*
	Outstandings	**9,014**	**9,454**	**8,691**	**6,411**	**4,881**	**4,051**	**3,621**
Pollution control equipment guarantees	Commitments	4	50					
	New guaranteed loans	12	10					
	Change in outstandings	*1*	*−5*					
	Outstandings	**277**	**272**					
Disaster loans	Commitments							
	New guaranteed loans							
	Change in outstandings	*−1*	*	*	*	*	*	*
	Outstandings	**2**	**1**	**1**	**1**	*	*	

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Table F–19. **GUARANTEED LOAN TRANSACTIONS OF THE FEDERAL GOVERNMENT (in millions of dollars)—Continued**

Agency or Program		Actual 1987	Estimate					
			1988	1989	1990	1991	1992	1993
Tennessee Valley Authority:								
Power program	Commitments							
	New guaranteed loans	1	1	1	2			
	Change in outstandings		*–1*			*–1*		
	Outstandings	**1**	**1**	**1**	**1**			
Other agencies and programs	Commitments	30	144					
	New guaranteed loans	54	130	72	1			
	Change in outstandings	*32*	*111*	*19*	*–67*	*–72*	*–77*	*–83*
	Outstandings	**669**	**780**	**799**	**732**	**661**	**584**	**501**
Subtotal, guaranteed loans (gross)	Commitments	282,040	206,588	198,914	202,587	202,454	207,176	212,388
	New guaranteed loans	266,982	164,249	159,493	165,734	165,366	169,445	174,241
	Change in outstandings	*127,697*	*53,270*	*44,344*	*43,662*	*39,615*	*42,132*	*41,228*
	Outstandings	**816,483**	**869,753**	**914,097**	**957,759**	**997,374**	**1039,506**	**1080,734**
Less secondary guaranteed loans:[1]								
GNMA guarantees of FHA/VA/FmHA pools	Commitments	139,976	83,355					
	New guaranteed loans	115,299	64,119	12,863				
	Change in outstandings	*67,767*	*32,522*	*–22,690*	*–36,771*	*–35,984*	*–34,132*	*–31,303*
	Outstandings	**308,997**	**341,519**	**318,829**	**282,058**	**246,074**	**211,943**	**180,640**
GNMA guarantees subsidies	Commitments			83,609	84,462	85,409	87,242	89,508
	New guaranteed loans			51,452	64,971	65,699	67,109	68,852
	Change in outstandings			*50,422*	*62,128*	*60,893*	*60,303*	*59,998*
	Outstandings			**50,422**	**112,550**	**173,443**	**233,746**	**293,744**
Subtotal, guaranteed loans (net)	Commitments	142,064	123,233	115,306	118,125	117,045	119,935	122,880
	New guaranteed loans	151,683	100,130	95,178	100,763	99,667	102,336	105,389
	Change in outstandings	*59,930*	*20,748*	*16,611*	*18,305*	*14,706*	*15,960*	*12,533*
	Outstandings	**507,486**	**528,235**	**544,846**	**563,151**	**577,857**	**593,817**	**606,350**

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Less guaranteed loans held as direct loans:[2]								
By GNMA	Commitments							
	New guaranteed loans	12	2					
	Change in outstandings	*−427*	*−55*	*−393*	*	*	*	*
	Outstandings	**457**	**402**	**9**	**9**	**8**	**8**	**8**
Total, primary guaranteed loans	Commitments	142,064	123,233	115,306	118,125	117,045	119,935	122,880
	New guaranteed loans	151,671	100,128	95,178	100,763	99,667	102,336	105,389
	Change in outstandings	*60,357*	*20,803*	*17,004*	*18,305*	*14,706*	*15,960*	*12,533*
	Outstandings	**507,029**	**527,833**	**544,837**	**563,142**	**577,848**	**593,809**	**606,342**

* $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 the totals in this table.

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Table F–20. **LENDING AND BORROWING BY GOVERNMENT-SPONSORED ENTERPRISES**

(In millions of dollars)

Enterprise		Actual 1987	Estimate 1988	Estimate 1989
LENDING				
Student Loan Marketing Association	Obligations	5,260	5,786	6,365
	New transactions	5,260	5,786	6,365
	Net change	3,540	3,893	4,283
	Outstandings	17,729	21,622	25,905
Federal National Mortgage Association:				
Corporation Accounts	Obligations	22,171	20,308	20,769
	New transactions	22,690	21,293	17,996
	Net change	−1,788	7,715	5,996
	Outstandings	95,929	103,644	109,640
Mortgage-backed securities	Obligations	80,944	43,067	42,266
	New transactions	66,999	37,560	36,861
	Net change	44,181	21,764	21,528
	Outstandings	130,540	152,304	173,832
Farm Credit Banks:				
Banks for cooperatives	Obligations	15,767	46,026	45,593
	New transactions	15,767	46,026	45,593
	Net change	485	−272	343
	Outstandings	8,162	7,891	8,233
Federal intermediate credit banks	Obligations	2,570	7,180	7,628
	New transactions	2,570	7,180	7,628
	Net change	−3,731	−251	−245
	Outstandings	9,478	9,229	8,982
Federal land banks	Obligations	2,555	1,606	2,041
	New transactions	2,555	1,606	2,041
	Net change	−10,965	−1,354	−137
	Outstandings	32,504	31,151	31,014
Federal Home Loan Bank system:				
Federal home loan banks	Obligations	197,143	225,000	260,000
	New transactions	197,143	225,000	260,000
	Net change	20,802	12,907	13,997
	Outstandings	120,865	133,772	147,769
Federal Home Loan Mortgage Corporation:				
Corporation accounts	Obligations	1,983	1,785	2,700
	New transactions	1,983	1,785	2,700
	Net change	−1,998	243	1,504
	Outstandings	12,940	13,183	14,687
Participation certificate pools [1]	Obligations	99,125	74,335	74,799
	New transactions	99,125	74,335	74,799
	Net change	63,349	50,219	45,960
	Outstandings	208,350	258,569	304,529
Subtotal, lending (gross)	Obligations	427,518	425,093	462,161
	New transactions	414,092	420,571	453,983
	Net change	113,875	94,864	93,229
	Outstandings	636,497	731,363	824,591
Less loans between sponsored enterprises	Obligations			
	New transactions			
	Net change	−406	−5	−1
	Outstandings	825	820	819

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Table F–20. **LENDING AND BORROWING BY GOVERNMENT-SPONSORED ENTERPRISES—Continued**

(In millions of dollars)

Enterprise		Actual 1987	Estimate 1988	Estimate 1989
Less secondary funds advanced from Federal sources:				
SLMA from FFB [2]	Obligations			
	New transactions			
	Net change	—30	—30	
	Outstandings	4,940	4,910	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	4,198	—927	375
	Outstandings	31,877	30,950	31,325
Federal home loan banks	Obligations			
	New transactions			
	Net change	1,058	—367	217
	Outstandings	4,063	3,696	3,913
Federal Home Loan Mortgage Corporation [3]	Obligations			
	New transactions			
	Net change	—2,290		
	Outstandings	839	839	839
Farm Credit Banks	Obligations			
	New transactions			
	Net change	—10	—7	
	Outstandings	11	4	4
Student Loan Marketing Association [2]	Obligations			
	New transactions			
	Net change	3,570	3,923	4,283
	Outstandings	12,789	16,712	20,995
Total lending	Obligations	427,518	425,093	462,161
	New transactions	414,092	420,571	453,983
	Net change	107,785	92,277	88,355
	Outstandings	581,073	673,352	761,706
BORROWING				
Student Loan Marketing Association	Net change	5,803	6,101	6,593
	Outstandings	21,329	27,430	34,023
Federal National Mortgage Association [4]	Net change	45,170	27,614	27,000
	Outstandings	223,158	250,772	277,772
Farm Credit System:				
Farm Credit System Financial Assistance Corporation	Net change			
	Outstandings			
Banks for cooperatives	Net change	401	—185	262
	Outstandings	8,890	8,705	8,967

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Table F-20. **LENDING AND BORROWING BY GOVERNMENT-SPONSORED ENTERPRISES—Continued**

(In millions of dollars)

Enterprise		Actual 1987	Estimate 1988	Estimate 1989
Federal intermediate credit banks	Net change	−2,721	−90	262
	Outstandings	10,240	10,150	10,412
Federal land banks	Net change	−7,325	−515	−520
	Outstandings	35,300	34,785	34,265
Federal Home Loan Bank system:				
Federal home loan banks	Net change	16,997	9,920	13,000
	Outstandings	105,080	115,000	128,000
The Financing Corporation	Net change	496	3,874	3,750
	Outstandings	496	4,370	8,120
Federal Home Loan Mortgage Corporation	Net change	65,592	51,003	47,019
	Outstandings	225,409	276,412	323,431
Subtotal, borrowing (gross)	Net change	124,413	97,722	97,366
	Outstandings	629,902	727,624	824,990
Less borrowing from other sponsored enterprises	Net change	−406	−5	−1
	Outstandings	825	820	819
Less borrowing from Federal sources:				
SLMA from FFB [2]	Net change	−30	−30	.....
	Outstandings	4,940	4,910	4,910
TVA to FNMA	Net change	.....	.....	.....
	Outstandings	80	80	80
Total borrowing from the public	Net change	124,849	97,757	97,367
	Outstandings	624,057	721,814	819,181
Less investments in Federal securities	Net change	3,281	−1,546	498
	Outstandings	5,266	3,720	4,218
Less borrowing for guaranteed loans held as direct loans by:				
Federal National Mortgage Association	Net change	4,198	−927	375
	Outstandings	31,877	30,950	31,325
Federal home loan banks	Net change	1,054	−367	217
	Outstandings	4,063	3,696	3,913
Federal Home Loan Mortgage Corporation	Net change	−2,290	.....	.....
	Outstandings	839	839	839
Farm Credit Banks	Net change	−10	−7	.....
	Outstandings	11	4	4
Student Loan Marketing Association [2]	Net change	3,570	3,923	4,283
	Outstandings	12,789	16,712	20,995
Total borrowed	Net change	115,046	96,681	91,994
	Outstandings	569,212	665,893	757,887

[1] All new transactions are loans purchased from FHLMC corporation accounts.
[2] All SLMA lending financed through the FFB has been counted in Table F-18 as direct loans. All SLMA loans are student loans guaranteed by the Federal Government and, therefore, counted in Table F-19 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 1988 and 1989 are made by OMB.
[4] Loans purchased at discount are recorded at their acquisition cost.

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Table F–21. **FFB FINANCING OF AGENCY ACTIVITIES**

(in millions of dollars)

Agency or Program	Actual	Estimates					
	1987	1988	1989	1990	1991	1992	1993
CREDIT RELATED ACTIVITIES							
Overseas Private Investment Corp.:							
New acquisitions							
Net lending	−1	−1					
Loans outstanding	1						
Farmers Home Administration:							
Agricultural credit insurance fund:							
New acquisitions							
Net lending	−385	−385	−3,960	−3,322	−1,975	−5,510	−3,950
Loans outstanding	28,010	27,625	23,665	20,343	18,368	12,858	8,908
Rural housing insurance fund:							
New acquisitions							
Net lending	−150	−2,980	−1,725	−1,990	−1,415	−275	−410
Loans outstanding	28,951	25,971	24,246	22,256	20,841	20,566	20,156
Rural development insurance fund:							
New acquisitions	170						
Net lending	170	−3,387	−200				
Loans outstanding	8,048	4,661	4,461	4,461	4,461	4,461	4,461
Rural Electrification Administration:							
Loan asset purchases:							
New acquisitions	635	394	258				
Net lending		224	−1,172	−297	−334	−372	−413
Loans outstanding	4,241	4,465	3,293	19,508	19,677	19,707	19,621
Originations:							
New acquisitions	590	803	472	608	502	402	328
Net lending	−248	−1,457	−641	−439	−464	−613	−695
Loans outstanding	21,196	19,739	19,099	2,147	1,181	166	−857
Medical facilities guarantees:							
New acquisitions							
Net lending	−6	−7	−96				
Loans outstanding	102	96					
Health maintenance organizations:							
New acquisitions							
Net lending	−11	−49	−42				
Loans outstanding	92	42					
Small Business Administration:							
Loan asset purchases:							
New acquisitions							
Net lending	−7	−7	−6	−6	−3		
Loans outstanding	22	15	9	3			
Originations:							
New acquisitions	115	60					
Net lending	−143	−120	−490	−630	−100	−80	−60
Loans outstanding	1,640	1,520	1,030	401	301	221	161
Foreign military sales credit:							
New acquisitions	1,099	623	280	74			
Net lending	367	−5,991	−2,740	−3,487	−303	−347	−349
Loans outstanding	19,164	13,173	10,433	6,946	6,643	6,296	5,947
Navy industrial fund:							
New acquisitions	77						
Net lending	40	−29	−38	−48	−48	−48	−48
Loans outstanding	1,788	1,759	1,721	1,672	1,624	1,576	1,528

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Table F–21. **FFB FINANCING OF AGENCY ACTIVITIES—Continued**

(in millions of dollars)

Agency or Program	Actual	Estimates					
	1987	1988	1989	1990	1991	1992	1993
Low-rent public housing:							
New acquisitions							
Net lending	−37	−39	−42	−44	−47	−50	−52
Loans outstanding	2,074	2,035	1,993	1,949	1,901	1,851	1,799
Revolving fund for liquidating programs (HUD):							
New acquisitions							
Net lending	−2	−31					
Loans outstanding	31						
Community development grants:							
New acquisitions	63	22	20				
Net lending	24	−57	−56	−66	−55	−36	−20
Loans outstanding	324	267	211	145	90	54	34
Loans to territories:							
New acquisitions							
Net lending	−2	−2	−2	−2	−2	−2	−2
Loans outstanding	60	59	57	55	53	51	49
Railroad programs:							
New acquisitions	2	1					
Net lending	−5	−7	−9	−7	−5	−6	−7
Loans outstanding	55	48	39	32	27	21	19
Guarantees of SLMA obligations:							
New acquisitions							
Net lending	−30	−30		−30	−30	−30	−30
Loans outstanding	4,940	4,910	4,910	4,880	4,850	4,820	4,790
Federal building fund:							
New acquisitions							
Net lending	−7	−8	−9				
Loans outstanding	395	387	378	378	378	378	378
NASA:							
New acquisitions							
Net lending	−79	−91	−105	−121	−138	−157	−115
Loans outstanding	809	717	612	491	354	197	82
WMATA:							
New acquisitions							
Net lending							
Loans outstanding	177	177	177	177	177	177	177
Export-Import Bank:							
New acquisitions	511	400	257	426	−9	114	281
Net lending	−1,805	−1,843	−1,407	−1,368	−973	−902	−918
Loans outstanding	12,463	10,621	9,214	7,845	6,872	5,970	5,052
Central liquidity facility (NCUA):							
New acquisitions	106	127	144	50	50	50	50
Net lending	6	25	25	25	25	25	25
Loans outstanding	112	137	162	187	212	237	262
U.S. Railway Association:							
New acquisitions							
Net lending	−89						
Loans outstanding							
Subtotal, credit related:							
New acquisitions	3,368	2,430	1,431	1,158	543	566	659
Net lending	−2,400	−16,272	−12,715	−11,832	−5,867	−8,403	−7,044
Loans outstanding	134,697	118,424	105,710	93,499	87,632	79,228	72,188

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Table F–21. **FFB FINANCING OF AGENCY ACTIVITIES—Continued**

(in millions of dollars)

Agency or Program	Actual	Estimates					
	1987	1988	1989	1990	1991	1992	1993
OTHER ACTIVITIES							
Tennessee Valley Authority:							
Originations:							
New acquisitions	156	212	180	1,306	695	254	816
Net lending	−16	−80	169	736	175	−22	−22
Loans outstanding	1,824	1,744	1,912	20,803	20,978	20,956	20,934
Acquisition of securities:							
New acquisitions	1,809	1,075	1,194				
Net lending	1,309	1,075	694				
Loans outstanding	16,386	17,461	18,155				
Postal Service:							
New acquisitions	1,635	1,500	1,641	1,827	1,900	504	496
Net lending	1,499	1,239	1,380	1,500	1,500	28	
Loans outstanding	4,353	5,592	6,972	8,472	9,972	10,000	10,000
Subtotal, other:							
New acquisitions	3,600	2,787	3,015	3,133	2,595	758	1,312
Net lending	2,792	2,234	2,243	2,236	1,675	6	−22
Loans outstanding	22,563	24,797	27,039	29,275	30,950	30,956	30,934
Total, all FFB financing:							
New acquisitions	6,968	5,217	4,446	4,291	3,138	1,324	1,971
Net lending	392	−14,038	−10,472	−9,596	−4,192	−8,397	−7,066
Loans outstanding	157,260	143,221	132,749	122,773	118,581	110,184	103,123

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Table F–22. **FEDERAL PARTICIPATION IN DOMESTIC CREDIT MARKETS**

(In billions of dollars)

	Actual									
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
Total funds loaned in U.S. credit markets [1]	379.0	413.0	359.0	410.5	391.1	547.6	649.5	687.5	830.0	642.7
Direct loans	19.8	19.6	24.2	26.1	23.4	15.3	6.3	28.0	11.2	−19.0
Guaranteed loans	13.4	25.2	31.6	28.0	20.9	34.1	20.1	21.6	34.6	60.4
Government-sponsored enterprise loans [2]	25.2	28.1	24.1	32.4	43.3	37.1	53.1	60.7	83.3	107.8
Federal and federally assisted lending	58.4	72.9	79.9	86.5	87.6	86.5	79.5	110.3	129.1	149.2
Federal lending participation ratio (percent)	15.4	17.7	22.3	22.1	22.4	15.8	12.2	16.0	15.6	23.2
Total funds borrowed in U.S. credit markets [1]	379.0	418.5	351.1	409.5	393.3	511.4	700.7	758.2	906.1	723.8
Federal borrowing from public	59.1	33.6	70.5	79.3	135.0	212.3	170.8	197.3	236.3	151.7
Borrowing for guaranteed loans	13.4	25.2	31.6	28.0	20.9	34.1	20.1	21.6	34.6	60.4
Government-sponsored enterprise borrowing [2]	21.4	21.9	21.4	34.8	43.6	34.0	55.5	57.9	103.2	115.0
Federal and federally assisted borrowing	93.9	80.7	123.5	142.1	199.5	280.4	246.4	276.8	374.1	327.1
Federal borrowing participation ratio (percent)	24.8	19.3	35.2	34.7	50.7	54.8	35.2	36.5	41.3	45.2

[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.

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SPECIAL ANALYSIS G

TAX EXPENDITURES

The Congressional Budget Act of 1974 (Public Law 93-344) requires that a list of tax expenditures be included 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 a tax expenditure draws a distinction between the baseline provisions of the tax structure and special or preferential provisions that are exceptions to the baseline structure. Public Law 93-344 does not, however, specify the baseline provisions of the tax law, so deciding which provisions are special or preferential is necessarily a matter of judgment.

Prior to 1983, the list of tax expenditures in Special Analysis G was almost identical to those published by the Congressional Budget Office and the Joint Committee on Taxation. Both the executive branch and congressional staffs used the same concept—a "normal tax"—as the baseline. The normal tax standard they used is a variant of a comprehensive income tax.

After 1982, tax expenditures in Special Analysis G were identified using an alternative baseline, the "reference tax law." This year's Special Analysis G again displays tax expenditures identified by both the reference tax baseline and the normal tax baseline. 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.

Before proceeding with this discussion it will be helpful to understand how the Tax Reform Act of 1986 (Public Law 99-514) has affected the fiscal year 1988 tax expenditure budget. First, certain tax expenditures were repealed outright, or restricted in scope, while some new tax expenditures were enacted. Second, the act altered the reference tax law and thereby changed the list of tax expenditures identified by this standard. These two changes are discussed below. Finally, the reductions in individual and corporate tax rates called for by the act have reduced the value of almost all tax expenditures. The top individual marginal tax rate was reduced from 50 percent to 38.5 percent in 1987 and to 28 percent in 1988.

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The maximum corporate tax rate was reduced from 46 percent 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 was reduced by 23 percent in 1987 and by another 21 percent in 1988, a total of 44 percent as compared with 1986. For corporations, the value of preferential deductions was reduced by 13 percent for each of the two years, a total of 26 percent.

In preparing the President's 1985 tax reform proposals and in the course of the subsequent legislative debate on the Tax Reform Act, a number of questions were raised concerning the normal tax and reference tax law standards used for identifying tax expenditures. A number of provisions in the tax law were discovered that could have been included in previous tax expenditure budgets. The knowledge gained from tax reform is now being used to conduct a comprehensive review of the tax expenditure budget concepts.

Pre-1983 Budget Concepts

The "normal tax" structure used for identifying expenditures is quite similar to a comprehensive income tax. Such a tax defines taxable income as the sum of consumption, all other taxes, and the change in net wealth in a given period of time. The normal tax is not limited to a particular structure of tax rates, or by a specific definition of the taxpaying unit (as between families and individuals). It also permits personal exemptions and a standard deduction. In addition, the normal tax, like a pure comprehensive income tax, allows deductions from gross income when these are expenses incurred to earn income and are subtracted in order to arrive at a measure of taxable income. Examples are the deductions for interest incurred in financing income-producing assets and for employee business expenses. The normal tax structure, however, does make several major departures from a truly comprehensive income tax. For example:

- Under the normal tax structure, income is taxed when realized, not as it is accrued. Thus, for example, the tax deferred on unrealized capital gains is not regarded as a tax expenditure.
- The current tax system taxes only cash income, and this is reflected in the normal tax structure. The benefits that households receive from using their own capital to produce goods and services for their own consumption are not included in taxable income. Thus, the exclusion from tax of imputed income from owner-occupied homes or the tax-free consumption by farmers of products grown on their farms, is not a tax expenditure.
- The normal tax structure includes a separate tax on corporation income. The additional revenue resulting from the unin-

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tegrated 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 during the time assets are held. Thus it overstates real capital gains, interest income or interest costs, and understates depreciation when there is inflation. If the normal tax were a comprehensive income tax, failure to take account of inflation in measuring depreciation, capital gains, and interest income would be regarded as a negative tax expenditure. A failure to take account of inflation in measuring interest costs would be regarded as a positive tax expenditure, or subsidy for borrowing.

Notwithstanding these exceptions, the normal tax concept can be thought of as a practical compromise with the ideal of a comprehensive income tax, one that avoids certain complexities while preserving the general idea. Nevertheless, one could use a truly comprehensive income tax as a standard where the failure to include accrued but unrealized income in the tax base would be a tax expenditure. Alternately, the standard could be a comprehensive personal tax on consumption. Here the failure to tax income that is accrued but not realized would not be a tax expenditure, because under a consumption based tax income earned but not consumed is not taxable.

Post-1982 Budget Concepts

Both definition and measurement of tax expenditures have undergone major changes in recent years. Two types of items had been identified as tax expenditures in previous budgets: deviations from general rules that could be compared to the subsidy and transfer programs on the outlay side of the budget, and more general deviations from some normative, comprehensive tax standard. The second group is no longer considered as tax expenditures.

To identify the "special" provisions that substitute for outlay expenditures, tax expenditure budgets since fiscal year 1983 were constructed using 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) the tax law would enable a taxpayer to determine his tax liability in the absence of the provision, i.e., the particular provision is an exception to a general rule that is part of the "reference tax law"; and (b) the provision is sufficiently narrow in scope that it could be replaced by an expenditure program administrable by a Federal agency other than the Internal Revenue Service.

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Beginning with the fiscal year 1983 budget, tax expenditures have also been estimated in terms of taxable "outlay equivalents." This allows a comparison of the resource cost of tax expenditure programs with other Federal Government expenditures, which are pre-tax magnitudes. There are two reasons why taxable "outlay equivalents" can be larger than revenue loss estimates.

The first reason is that some tax provisions are equivalent to tax-free grants. When tax benefits are not taxed themselves, it increases the subsidy by an amount equal to the additional "tax saving" resulting from the tax exemption. For example, the Federal Government provides a 20-percent tax credit to the companies that increase their research and experimentation (R&E) expenditures above a certain threshold. If companies making R&E expenditures were provided a direct grant, the grant would be included in their taxable income and would be subject to tax. The R&E tax credit however, is not included in the taxable income of the company, and thus it is equivalent to a tax-free grant. The outlay equivalent of the R&E credit is therefore larger than the revenue loss associated with tax credits claimed.

The difference between "outlay equivalents" and revenue losses does not arise for all provisions which are equivalent to tax-exempt grants. If the grant is contingent on individuals' consumption decisions, then the grant is a price reduction, not an increase in the individuals' taxable income. For instance, the mortgage interest deduction reduces the after-tax interest rate on mortgage financing and lowers individuals' taxes payable, but does not increase their pre-tax incomes.

The second reason for a difference between taxable "outlay equivalents" and revenue losses occurs when revenue losses are partially offset by the loss of a tax benefit. For instance, the Targeted Jobs Tax Credit (TJTC) is equivalent to a taxable grant, because companies must include the amount of the tax credit earned in taxable income by reducing the amount of deductions for wages by the amount of the credit. The TJTC revenue estimate assumes that companies' taxes will be increased due to these lower wage deductions, which partially offsets the amount of credits received. Federal budget expenditures which are taxable are not estimated taking into account changes in taxable income resulting from the taxable grant. Thus, if an equivalent targeted jobs program paid out $1 million, then the budget outlay would show $1 million, even though the equivalent tax credit program would show a revenue loss of less than $1 million. The outlay equivalent estimates make the budget cost of tax subsidies equivalent to comparable budget cost estimates of outlay programs.

Neither the Congressional Budget Office nor the Joint Committee on Taxation has adopted the reference tax law standard. Both

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continue to use the modified income tax norm, described above, as their basis for identifying tax expenditures. As a consequence, the list of tax expenditures in the 1983 and 1984 Special Analysis G did not fully correspond to these other lists of tax expenditures. Some have found these discrepancies confusing. Beginning with the 1985 budget, therefore, both groups of tax expenditures have been listed in Special Analysis G. The discussion below sets out in greater detail the reference tax law used to identify the narrower set of tax expenditures and identifies some of the differences between this reference tax law and 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.* The taxpaying units are the same in the normal and reference tax structures with one major exception.[1] 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 received by 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. The Tax Reform Act of 1986 generally did not change these provisions, so the reference tax law is unchanged.

2. *Tax rate schedules.* Separate schedules apply to the various taxpaying units. These schedules are all included in the reference tax system. The Tax Reform Act of 1986 reduced the number of personal income tax brackets and reduced marginal tax rates. 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 are thus regarded as a tax expenditure.

[1] The Internal Revenue Service code identifies as taxpaying units 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.

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3. *General accounting rules for determining income subject to the tax.* Income subject to tax is defined as gross income less the costs of earning that income. The Federal income tax has always defined gross income to include: (1) consideration received in the exchange of goods and services, including one's labor services, or property; and (2) the taxpayer's share of gross, or net income earned and/or reported by another entity.[2] Under the reference tax 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, which can be thought of as gifts from the Government. Gross income does, however, include transfer payments associated with past employment, such as social security benefits. The normal tax baseline also excludes gifts between individuals from gross income. Under the normal tax baseline used prior to 1983 however, all cash transfer payments from government to private individuals are counted in gross income, and exemptions of such transfers from tax are identified as tax expenditures.

The costs of earning gross income are deductible in determining taxable income under the reference tax rules. These costs include: (1) expenses incurred in earning income from personal service (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 [3] and an allowance for physical capital used up in producing the output that generates the gross income of the business; [4] and (3) interest paid creditors who have advanced funds to help finance the ownership and use of assets by the trade or business.

In the particular cases of individuals who hold "passive" equity interests in businesses for which they report pro rata shares of sales and expenses, the Tax Reform Act of 1986 imposed restrictions limiting the amounts of the above deductions reportable in a year. For these purposes, a "passive" business activity is defined to be one in which the holder of the interest, usually a partnership interest, does not actively perform managerial or other participatory functions. For all his interests in "passive activities" the taxpayer may generally report no larger deductions for a year than will reduce his taxable income from such activities to zero. Deductions in excess of the limitation may be taken in subsequent years, or when the interest is liquidated.

With one exception, both the reference and normal tax law standards have incorporated the general statutory provisions governing these allowable deductions. The exception is the rule for

[2] Such as interest, dividends, rents, royalties, and profits of partnerships, subchapter S corporations, and cooperatives.

[3] Such as compensation of employees, goods and services purchased from other firms, royalties paid.

[4] Depreciation in the case of machinery, equipment, and structures and depletion in the case of mineral deposits.

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determining tax depreciation allowances. Under the reference tax law standard, the accelerated cost recovery system (ACRS) allowances 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) is the reference tax law baseline for investments placed in service beginning with January 1, 1987. Thus, under the reference tax law standard, there are no tax expenditures from "accelerated depreciation."

Under the normal tax standard baseline, however, the depreciation for personal property is determined by using statutory accelerated methods [5] over tax lives equal to mid-values of the asset depreciation range (ADR).[6] The depreciation baseline for real property is computed using 40-year straight line depreciation. Consequently, from 1981 through 1986, the ACRS depreciation provisions generated tax expenditures under the normal tax baseline. Since the Tax Reform Act of 1986 provides depreciation allowances approximately equal to those in the normal tax baseline for machinery and equipment, post-1986 investment will no longer generate tax expenditures under either standard for investments of this type.

In addition to determining what must be included in gross income and what can be deducted, an operational income tax system also stipulates rules for valuing the exchange of goods and services and specifies when gross income is reportable and when deductions may be taken. On these matters, both the reference and normal tax law standards embody the provisions of enacted law including: (1) valuation is determined at the time transactions occur (realization as opposed to accrual accounting); (2) the market value of services from owner occupied housing and other durable goods or self-produced income, such as do-it-yourself repairs and maintenance, are excluded; (3) historical costs determine allowable deductions for capital cost recovery and the gain on the sale of an asset (no inflation adjustments); (4) current expenses are deductible from gross income in the period when the transaction is completed, while capital expenditures are recovered by depreciation or depletion deductions over the asset's productive life; and (5) the accounting period to determine income subject to tax, computing tax due and payable, and the dates when tax must be paid, as specified.

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.

[5] Declining balance at double the straight-line rate or sum-of-years digits.
[6] A statutory system in effect from 1971 through 1980.

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Major Departures From the Reference Rules

Beginning with the 1983 budget, the reference tax law standard has been used to identify as tax expenditures provisions that can be thought of as substitutes for budget outlays. For example:

- Current law excludes some forms of employee compensation, such as certain military housing and food allowances or employer-paid fringe benefits, from employees' gross income although they are clearly part of an employee's total compensation and are properly deductible from the gross income of the trade or business of employers who are taxable entities.
- The interest payments on State and local tax-exempt government bonds are no less income than interest, dividends, rents, and royalties received from other sources, but they are not included in the bondholder's gross income.
- The dividend and interest receipts of pension funds are not included as they accrue in the gross income of the taxable beneficiaries who will ultimately receive them; they are reported only when they are paid out as retirement benefits after compounding, perhaps for many years, at pre-tax interest rates.

Defense Department outlays for military personnel are lower because part of military compensation takes the form of tax-free housing and food allowances. Excluding this compensation from tax substitutes for the higher direct outlays which would otherwise be required to maintain an equivalent level of compensation. Compensation in this form, if received from another employer, would be subject to tax. Similarly, the tax exclusion for interest paid by State and local governments enables them to obtain funds at lower rates. This exclusion is, therefore, equivalent to an interest subsidy or capital grant to State and local governments on the outlay side of the budget. The tax exclusion of employer-paid pension, health, and other insurance premiums and the preferred treatment of pension trust income are equivalent to direct Federal Government subsidies that would partly pay for private retirement, health, and insurance plans.

The tax laws also permit 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 would require. For example:

- Individuals may deduct contributions to charitable, educational, scientific, or religious organizations.
- Some oil, gas, and mineral producers may deduct a percentage depletion allowance that is not limited to recovery of the cost of acquiring the deposit. In addition, some investments in this type of property may be deducted in the year incurred, rather than capitalized and recovered as production ensues.

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These special rules permit investment costs to be recovered more rapidly than the reference tax rules generally allow. They, in fact, often permit more than the full investment to be recovered tax free.

- Individuals are allowed to deduct mortgage interest from their pre-tax incomes, although they have not reported the (imputed) gross income they receive from the housing that the mortgages finance.

These particular exceptions to the general rules for computing taxable income have direct incentive effects that could just as well be obtained with outlay programs. Matching grants to qualified organizations based on contributors' support could replace the charitable deductions. Direct subsidies paid to mineral producers could replace the preferential treatment of oil and mineral investments. Expanded Federal mortgage interest subsidy programs could substitute for the deductibility of mortgage interest.

Finally, there are special exceptions to the general rules for determining net income tax due and payable. After a taxpayer has determined his pre-tax income, taking into account all preferential exclusions from gross income and all the special deductions, and has applied the appropriate tax rate schedule, there are still other exceptions to consider before arriving at 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 imagine equivalent outlay programs that would subsidize these activities directly.

All of these examples are tax expenditures using either the reference tax rules or the normal tax rules. The major tax expenditures defined according to the normal tax baseline that are not tax expenditures according to the reference tax rules are: deferral of income of controlled foreign corporations, expensing of research and development expenditures, progressive corporation income tax rates, the tax exemption for certain government transfer payments, and the difference between statutory depreciation rules (ACRS) for investments made between 1981 and 1986 and rules providing a more accurate measure of economic income.

Measuring Tax Expenditures

Presenting budget outlays along functional lines, as in Part 5 of the Budget, is a way of showing how the Federal Government

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influences the allocation of resources. The functions may be broadly categorized as: (1) the provision of public goods and services; (2) the provision of subsidies; and (3) the payment of transfers. The budget outlays for public goods, such as national defense, are used to acquire the labor and capital services needed to produce such goods. Subsidies, such as those for school lunches, are used to reduce the effective price of the subsidized item. Transfers, such as aid to families with dependent children, are intended to provide a level of income to recipients they would not otherwise achieve.

These Government activities alter the composition of national output. This occurs as a result of taxation or through the effects of borrowing. There also will be direct effects because of the changes in income and relative prices that these activities cause. Functional budget outlay figures measure the resource cost to the Federal Government of accomplishing the program objectives. Because GNP measures the total 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 the costs of specific programs, it is essential that the outlay figures be both consistent and comprehensive. In particular, these costs should reflect the pre-tax price of the resources. The market value of the goods and services included in GNP covers indirect taxes (sales and property taxes) as well as before tax incomes of wage earners and property owners.[7] Consistency requires that all budget outlay measures also be stated in pre-tax magnitudes. Outlays for the purchase of goods and services are generally gross of taxes.[8] Similarly, subsidy outlays in the budget generally enter the gross incomes of sellers of subsidized goods. In some instances government purchases (outlays) or subsidies are exempted from tax by a special tax provision. When this occurs, the outlay figure understates the resource cost of the program and is, therefore, not comparable with other outlay amounts. For example, as noted above, the outlays for certain military personnel allowances are not taxed. If this form of compensation were treated 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. The tax subsidy must be added to the tax-exempt budget outlay to make this element of national defense expenditures comparable with other outlays.

The estimates of tax expenditures in table G-1 conform to the functional budget classification for outlays. Table G-1 figures are

[7] The income of property owners is usually received in the form of rent, interest and profit.

[8] 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.

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estimated as outlay equivalents, the magnitudes of which are consistent with direct budget outlays. The entries represent amounts that could be added to the other functional budget outlays while at the same time being added 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, 1987. In table G-1 the estimates show the expenditure equivalent of each special tax provision by fiscal year. In estimating tax expenditures it is assumed—as is true for estimates of out-year budget outlays—that the existing tax structure is unchanged. Aggregate output and income estimates are the same as those used for the 1989 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 the taxable outlay figures in the budget.

The tax expenditure estimates presented in this Special Analysis should not be interpreted as estimates of the increase in Federal receipts or the reductions in budget deficits 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 levels of income and rates of economic growth. Consequently, large changes in tax expenditures could be expected to alter projected growth rates for aggregate national income and product and thus, the tax base over the forecast period. All receipts and expenditures in the budget are based, however, on projections of income and growth that assume all existing laws will continue.[9]

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 the demand for, and cost of, other Federal subsidy programs will be increased. For example, if the exclusion of employer-paid medical insurance from the gross income of employees were repealed, other tax-exempt forms of compensation, such as employer-paid pensions, would probably expand. Thus, the net effect on the budget of repealing the exclusion of employer-paid medical insurance would not equal the estimated cost of that tax expenditure, but a smaller amount after subtracting 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.

[9] Except as amended by proposals made in the budget.

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Third, tax expenditures are all cleared through individual and corporation tax accounts and, for this reason, their values become interdependent. For example, excluding interest received from State and local governments lowers a taxpayer's taxable income, and in a tax system with progressive tax rates, this can reduce the value of other tax deductions, such as charitable contributions. If the interest exclusion alone were repealed, some taxpayers could be thrust into higher tax brackets, automatically increasing the value of charitable contributions and their budget cost, even if taxpayers 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 assuming that the other remains in force.

Finally, the annual value of tax expenditures for tax deferrals, like the outlay figures for government lending programs, is highly time-dependent while the unified budget is largely prepared on a strict cash receipts and disbursement basis. For example, the annual budget cost of tax deferrals due to the exclusion from employees' gross income of employers' contributions to employee 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 to tax the employees on the employers' current year contributions and the current year pension fund asset earnings. As the existing population of covered employees retired and received their annuities, thereby depleting the stock of asset-reserves previously accumulated with untaxed dollars, the deficit-reducing impact of repealing this tax expenditure would be fully registered in the budget.

Tax Expenditures by Function

The 1987–89 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 under the normal tax rules, but not the reference tax rules, it is indicated by the designation, "Pre-1983 budget method" in the table. In these cases a line also appears, designated as "Post-1982 budget method" showing that tax expenditures for this item would be zero using the reference tax rules. The headings are the functional categories used in Part 5 of the Budget.

Because the sources of data for estimating tax expenditures are largely corporation and individual income tax returns, the esti-

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mates 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 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 taxes of corporations resulting from minerals tax preferences makes possible higher wages and more employment for mineral workers, higher royalties payable to mineral land owners, and lowers the price of minerals. Little, if any, of the subsidy remains in the pockets of the corporations' creditors and equity holders in the form of higher interest rates or excessive rates of return. 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, that are departures from both the reference and normal tax law unless otherwise specifically identified.

National defense.—The housing and meals provided military personnel, either in cash or in kind, are excluded from income subject to tax.

International affairs.—A U.S. citizen or resident alien who resides in a foreign country or who stays in one or more foreign countries for a prescribed period is allowed tax relief on foreign earnings. Beginning in 1982, the prescribed period is a minimum of 11 out of the past 12 months.

Eligible taxpayers 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 some persons paid from public funds. The tax expenditure estimate also reflects another provision that excludes from their taxable income certain allowances received by Federal employees working abroad. The effect of these two provisions 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 to reflect the

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FSC's sales functions as foreign corporations. These provisions conform to the General Agreement on Tariffs and Trade (GATT).

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. The income of those foreign corporations becomes taxable only when the controlling U.S. shareholders receive dividends or other distributions from their foreign stockholding.

The normal income tax standard defines a controlling interest in a foreign corporation 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 the normal tax accounting rules, the currently attributable foreign source pre-tax 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. Foreign income eligible for such deferral was further restricted by The Tax Reform Act of 1986.

The worldwide income of U.S. persons is taxable by the United States and a credit for foreign taxes paid is allowed. 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, therefore, to determine the size of the credit and the U.S. tax owed.[10]

General science, space, and technology.—The benefits of research and development expenditures are normally expected to continue for several years into the future. Such expenditures are treated like outlays for fixed capital under the normal income tax rules which means they would generate amortization deductions over the period they are productive. Calculating such deductions would be highly arbitrary, however, due to lack of a clearly defined norm for the expected amortization period. Current law allows the expensing of R&D expenditures, but this is a departure from the normal tax rules and is, therefore, considered a tax expenditure under this standard. It is not regarded as a tax expenditure under the reference tax rule, because Code section 174 makes such expensing the general tax rule.

[10] The Tax Reform Act of 1986 revised the sourcing rules extensively and provided two exceptions. The first is an exception for sales of inventory property that reduces the U.S. tax of exporters. The second exception is for financial institutions and certain financing operations of nonfinancial enterprises from the rules that require allocation of interest expenses between domestic and foreign activities of a U.S. taxpayer.

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The Economic Recovery Tax Act of 1981 (ERTA) added a credit for additional investments in 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. In addition, the taxpayer was not required to reduce his otherwise allowable deduction for R&E expenses by the amount of credit he had taken. 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 above, both the reference and normal tax rules for taxing foreign income require an accurate "sourcing" of deductions. Regulations issued in 1977 were designed to achieve a reasonable allocation of R&E expenses as between domestic and foreign activities, but successive legislative enactments suspended the requirement to allocate R&E expenses to foreign income until August 1, 1986. The Tax Reform Act of 1986 then substituted for one year a statutory allocation rule which reduced by half the benefit enjoyed by taxpayers during the suspension period. Currently, corporations are again required to follow the 1977 rules which contain no tax expenditure element.

Energy.—Certain expenditures for discovering fuel mineral properties may be deducted current expenses rather than being capitalized and amortized over the productive life of the property. The tax treatment of a number of expenditures in this category departs from both the reference and normal tax rules.

In the case of oil and gas investments, the intangible drilling costs (IDCs) of successful wells, such as wages, the costs of using machinery for grading and drilling, and the cost of nonsalvageable materials used in constructing wells, could be expensed prior to the enactment of the Tax Reform Act of 1986. The Tax Reform Act restricts this provision to successful domestic wells.

Integrated oil companies may currently deduct only 70 percent of such costs and amortize the remaining 30 percent over five years. Other oil producers may deduct 100 percent of their IDCs, but if their IDCs less the amount which could be deducted had the IDCs been capitalized and amortized over ten years exceed 65 percent of the taxpayer's oil and gas income, the difference is subject to the minimum tax. The exploration and development costs of surface stripping and the construction of shafts and tunnels for other fuel minerals are also partially expensed; 70 percent of these costs may be currently deducted. The remaining 30 percent are deductible over five years.

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In addition, fuel mineral producers are generally allowed to take percentage depletion deductions rather than cost depletion as provided by the reference and normal tax rules. Under cost depletion, outlays, not recovered immediately through expensing are deducted over the productive life of the property, much as other businesses take deductions for the depreciation of the capital goods they use. Unlike depreciation, however, percentage depletion deductions are not limited to the cost of the investment. Taxpayers instead deduct a percentage of gross income from mineral production at rates of 22 percent for uranium, 15 percent for oil, gas and oil shale, and 10 percent for coal. The deduction, however, is limited to 50 percent of net income from the property and also to 65 percent of total 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 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 have been 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 extended the energy tax credits for solar energy property and geothermal energy property at declining rates through 1988. The solar energy credit was 15 percent in 1986 and 12 percent in 1987, and is 10 percent in 1988. The geothermal energy credit was extended at 15 percent in 1986 and 10 percent in 1987-88. The credit for ocean thermal property was extended through 1988 at a 15 percent rate. The credit for biomass property was extended for two years, at 15 percent in 1986, and 10 percent in 1987. Other energy tax credits provided under prior law had been 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 proper-

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ty,[11] 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 is exempt from 6 of the 9 cents per gallon Federal excise tax on gasoline.[12] 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. If an application for the licensing of such a facility had been filed, however, with FERC before January 1, 1986, tax-exempt financing would be 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.

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 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 private pollution control and waste disposal facilities 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 of 1986.

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

[11] Property used in an existing industrial, agricultural or commercial facilities to reduce the amount of energy consumed or heat wasted.

[12] A motor fuel composed of at least 10 percent alcohol.

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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 was reduced to 20 percent, the depreciable basis 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.

Income derived from cutting timber or iron ore royalties was taxed at the capital gains rate which was lower than the tax rates on 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 was restricted to 28 percent.

The Tax Reform Act of 1986, codified and made uniform the definition of the costs that must be capitalized when goods are produced for inventory in one's own trade or business, or under contract for another party. When the production takes 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. 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 also encouraged by a special provision permitting a faster rate of amortization on reforestation projects. 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 can be amortized over a 7-year period rather than capitalized and recovered when the timber is cut, 20 or more years later. The costs are also eligible for a special 10 percent investment tax credit up to a $10,000 limit, notwithstanding that investments in timber stands are not depreciable nor that the regular investment tax credit has been repealed by the Tax Reform Act of 1986.

Agriculture.—Farmers, except for certain agricultural corporations and partnerships, currently are allowed to deduct 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. Expensing is allowed, even though these expenditures are for inventories held at the end of the year or for capital improvements that would otherwise be capitalized. The profit from the sale of livestock and certain other agricultural products has been treated as capital gains

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in the past but, as previously noted, ordinary tax rates apply after 1986.

The Tax Reform Act of 1986 provided a special one-time grant to those farmers with accumulated unused ("carryover") investment tax credits as of the end of 1986.[13] Taxpayers whose reported gross farm income made up more than 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: (1) 50 percent of their unused credits; (2) their total net tax liability over the 15 years; or (3) $750. This provision was an exception both 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 provided 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. Farmers, however, 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.[14] Normally, the amount of loan forgiveness is accounted for as a gain (income) of the debtor and he must either report the gain, or reduce his recoverable basis in the property to which the loan relates. If the debtor 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.[15] 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

[13] These are claimable credits for qualified investment made in prior years but which were not claimed because they exceeded the annual tax liability limitations.

[14] Settlement of a debt for an amount less than the principal of a loan.

[15] 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.

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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 on December 31, 1989.

Interest on all mortgage revenue bonds issued before January 1, 1989, by State and local governments is exempt from taxation. Proceeds are used to finance first time buyers of homes with prices under 90 percent 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.

Mortgage revenue bonds have been found to be relatively inefficient in providing subsidies to first time home buyers. States, therefore, 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. In this way the entire amount of the subsidy flows directly to the home buyer without being partly diverted to financial middlemen or bondholders.

The aggregate annual amount of MCCs a State may substitute for mortgage bonds may not exceed 25 percent of the amount of qualified mortgage bonds that it could have issued under its annual ceiling. 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 one line item.

Prior to 1987, State and local government issues of IDBs were restricted to multifamily rental housing projects in which 20 percent (15 percent in targeted areas) of the units were reserved for families whose income did not exceed 80 percent of the area's median income. The Tax Reform Act increased these percentages while lowering the defined income limits. The setaside is now either 40 percent or 20 percent for families with incomes of no

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more than 60 percent or 50 percent of the area median income, respectively. Other tax-exempt bonds for multifamily rental projects are generally issued with the requirement that all tenants must be low or moderate income families.

There are also limits imposed on the amount of tax-exempt State and local government bonds that can be issued to fund private activity. The annual limit on the aggregate volume of student loans and most industrial development bonds was initially set at the greater of $150 for each resident of a State or $200 million if that was larger. The Tax Reform Act of 1986 combined the prior law volume cap for single-family mortgage revenue bonds and multifamily rental housing bonds with the cap for student loans and IDBs. The cap was set at $50 per capita or the larger of $150 million for each State.

Prior to 1987, sellers of real and personal property could defer taxable income from "installment sales." Sellers who extended credit to a purchaser could defer the tax gains from the sale until the receipt of the loan repayment. The Tax Reform Act of 1986 denied use of the installment method to all sellers of property sold in the national markets, such as securities, and to sellers using "revolving credit" arrangements. The act also installed a "proportionate disallowance rule" which restricted the tax benefit to the amount of credit extended that was financed by the seller's own equity. Because the installment method was generally available to all sellers before tax reform, the installment method was not considered a tax expenditure.

The Omnibus Budget Reconciliation Act of 1987 repealed the use of the installment method by all dealers in personal and real property, i.e., sellers who regularly hold property for sale or resale. It also repealed the proportionate disallowance rule for non-dealers, defined as sellers of real property used in their business. The 1987 Act, however, requires payment of interest to the Federal Government on deferred taxes attributable to the sellers' total installment obligations in excess of $5 million but including only property with sales prices exceeding $150,000. The payment of a market rate of interest eliminates the benefit of the tax deferral. Thus, the 1987 Act restores pre- tax reform law for nondealers with total installment obligations of less than $5,000,000. The tax benefit for these "small" nondealers is, therefore, a tax expenditure.

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

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for such treatment. 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 not taxed 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 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 was 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. The Tax Reform Act limited the mortgage interest deduction to interest on debt no greater than the owner's basis in the residence, plus qualified medical and educational expenses financed by the mortgage. The Omnibus Budget Reconciliation Act of 1987 changed the rules for deducting the mortgage interest on debt incurred after October 13, 1987. Interest on mortgage debt to acquire or improve a principal or second residence is still fully deductible for debt of no more than $1 million. Interest on up to $100,000 of other debt secured by a lien on a principal or second residence is also deductible, irrespective of the purpose of borrowing, provided the debt does not exceed the fair market value of the residence. Mortgage interest deductions on personal residences are tax expenditures because the taxpayers are not required to report the value of owner occupied housing services as gross income.

The Tax Reform Act of 1986 eliminated 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 are subject to tax at the same rate as other income. However, for 1987 only, when the maximum ordinary income tax rate for individuals was 38.5 percent, the maximum tax rate on long-term capital gains was limited to 28 percent.

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Under prior law, the sixty percent of net long-term capital gains excluded from taxable income 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 are now taxed as ordinary income at a rate of 34 percent. Only in 1987, when the maximum corporate tax rate dropped to 40 percent, was the maximum on such gains held at 28 percent, as under prior law, when the maximum corporate rate was at 46 percent.

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 a 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 the 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 original acquisition. The estimate of this tax expenditure 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). Property acquired after December 31, 1985, receives no investment credit unless certain transition rules are satisfied.[16] Prior to 1983, taxpayers were permitted to recover through depreciation allowances the full price of the asset notwithstanding that the tax credit represented an implicit grant from the government covering part of the purchase price. After 1983, an investor was required to either reduce his recoverable basis in the asset by half the credit or to accept a 2 percentage point reduction in the credit rate. The Tax Reform Act

[16] These rules regard prior commitments to the property's purchase and its placement in service before specified dates extending through 1991.

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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 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 set at 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 was not reduced thereby to less than 75 percent of the alternative minimum tax otherwise due and payable for the year. To benefit steel companies and farmers, the act provided two exceptions, however, to these modifications of investment credit carryforwards. As noted previously for farming, this exception provides that the qualified steel companies may elect to receive as tax refunds the amount determined by carrying back to the preceding 15 years 50 percent of either their unused investment tax credits as of the end of 1986 or their net tax liability for those years, whichever is less. The only steel companies that qualified for this grant-like subsidy were those described in the Steel Import Stabilization Act or those incorporated before 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 compared to the 3 to 15 year range under prior law. The recovery period now is 27.5 years for residential real property and 31.5 years for nonresidential. Under prior law, the recovery period was 19 years for both residential and nonresidential property.

For the 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

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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 and nonresidential real property can only be depreciated by the straight-line method; 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 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 no tax expenditures from depreciation 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 then available for tangible property leased by tax-exempt entities, including federal, state, and local governments. The Act provided that property leased to tax-exempt entities could not be written off as rapidly as other leased property. These more restrictive depreciation rules for lessors were retained in 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 to other payments he makes for nondepreciable intangible assets that are not recoverable until the business is sold.

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 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

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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 of 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 provided that this benefit is to be "recaptured" from 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.

The Tax Reform Act of 1986 disallowed the offset of passive losses against income from other sources. Losses up to $25,000 attributable to certain rental real estate activity, however, were exempted from this rule.

Transportation.—Certain companies that operate U.S. flag vessels receive a deferral of income taxes on that portion of their income used for shipping purposes, primarily construction, modernization and major repairs to ships, and repayment of loans to finance these qualified investments. Prior to January 1, 1987, the deferral was indefinite. Under the terms of the Tax Reform Act, the deferral is limited to 25 years. Within this period, the deferred taxable income will have to be spent for qualified investments or be taxed. 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.

Community and regional development.—Until it expired on December 31, 1986, taxpayers could elect under certain conditions to amortize rehabilitation expenditures for low and moderate income rental housing over a 5-year period in lieu of ACRS depreciation. To qualify, rehabilitation expenditures had to range between $3,000 and $20,000 per dwelling unit. The limit per dwelling unit was raised to $40,000 on units which could be purchased by the tenants at a price that limited the profit to the seller.

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In place of the five-year amortization the Tax Reform Act of 1986 introduced a tax credit for investment in low income housing.[17] 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 recoverable basis of the investment in rehabilitation was 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 was retained.

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 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 are 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 performed 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. 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

[17] New, substantially rehabilitated, and certain unrehabilitated, existing low income housing can qualify for the credit.

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under the normal tax standard gift-like transfers of Government funds—and many scholarships are derived directly or indirectly from Government funding—are included in gross income.

Interest on State and local government debt issued to finance student loans or the construction of facilities used by private nonprofit educational institutions 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 who is already claimed as a dependent on another tax return may not claim a personal exemption.

Many employers provide employee benefits that are not counted in 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 a tax subsidized educational assistance program for 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 to December 31, 1987.

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 expired. Employees generally are prohibited from withdrawing their share

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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 take the form of capital assets (usually securities that have appreciated in value) can claim its current value as a deduction without the taxation of any appreciation in value. Beginning in 1982, corporations could also deduct charitable contributions 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 tax credit may be claimed by married couples for child and dependent care expenses incurred when one spouse works full time and the other works at least part time or goes to school. 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. The credit is reduced by one percentage point for each $2,000 of income between $10,000 and $28,000. This aid is supplemented by excluding the value of employer-furnished child care from employees' income.

Another provision advantageous to two-earner married couples was repealed by the Tax Reform Act effective January 1, 1987. This provision allowed a deduction for such couples filing jointly equal to $3,000 or 10 percent of the income of the lower earning spouse, whichever was less. The tax code specified that the income of second earners is to be 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. With the introduction of only two marginal tax rates of 15 and 28 percent in 1988, this so-called "marriage penalty" largely disappears.

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

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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, taxpayers could deduct up to $1,500 of adoption expenses incurred during a year provided those adoption expenses were incurred with respect to a child with "special needs" as defined in section 473 of the Social Security Act. The Tax Reform 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 they are not included in employee gross income. The exclusion from employee income of such in-kind compensation constitutes 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 additional one percent 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 all medical 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 demand for them discourages private firms from undertaking the costly investment in clinical testing that must be completed before manufacture and distribution are 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 expenses (an R&D expenditure), this credit reduces the private cost of clinically testing "orphan

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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 included in gross income. In contrast, gifts not conditioned on the performance of services, including transfers from government, are not taxable under the reference tax baseline. Therefore, under the "Post-1982 Budget Method" the tax exclusion for public assistance benefits is not shown as a tax expenditure.

The Tax Reform Act of 1986 eliminated the last portion of unemployment benefits that had been excludable from taxable income prior to 1987. disability-related military pension income received by current retirees is mostly excluded from income subject to tax. These exclusions are tax expenditures because of the subsidy they provide.

Certain employer contributions to pension plans along with amounts set aside by the self-employed and individual contributions to individual retirement accounts (IRAs) are excluded from 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 and $50,000 for a joint return and $25,000 and $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. In 1988, the Act also limits to $7,313 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 the greater of $9,500 or the 401(k) limitation the annual 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 this exemption is, therefore, also a tax expenditure.

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The exclusion from employee income of certain other employer payments, including group life insurance premiums and accident and disability insurance premiums, are listed here because they contribute to income security. Other tax exempt benefits are 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 provided that taxpayers in either of these categories may take an additional $750 standard deduction, if single, or $600, if married. Moreover, such taxpayers could avail themselves in 1987 of the new larger standard deductions that other taxpayers could not use until 1988.[18]

Effective December 31, 1983, the tax credit for the elderly was expanded to cover the permanently disabled as well. Before then, a limited portion of disability payments by employers was excluded from the taxable income of the disabled employees. Individuals who are 65 years of age or older can take a tax credit equal to 15 percent of the sum of their earned and retirement income up to $2,500 for single individuals or 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 to protect one's personal or real property are considered personal expenditures with purchases of the property itself. Neither the purchase of property nor insurance premiums to protect its value are deductible as costs of earning income; therefore, reimbursement for insured loss of such property is not reportable as a part of gross income. 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 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 12 and 2/9ths cents per

[18] Depending on the filing status, the new standard deduction is greater by $460 to $1,860.

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dollar of the larger of earned income or adjusted gross income (AGI) over $6,500. For 1987, the credit was 14 percent of the first $6,080 of earnings up to a maximum credit of $851.20, and the credit was reduced by 10 percent of income over $6,920. After 1987, the maximum amount of income on which the credit may be taken is adjusted for inflation, as is the income level at which the phaseout begins. In addition, for tax years beginning on or after January 1, 1988, the income level at which the phaseout of the credit begins is permanently adjusted upward by 38.5 percent. For 1988, the credit is 14 percent of the first $6,240 of earnings up to a maximum credit of $873.60. The credit is reduced by 10 percent of income over $9,840, so that no credit is available at incomes over $18,576. In any tax year the amount of the credit must be reduced by the 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 that exceed the beneficiary's contributions out of taxed income are deferred employee compensation and the deferral of tax on that compensation is a tax expenditure. These additional retirement benefits are paid for partly by employers' contributions that were not included in employees' taxable compensation. Up to one-half of any recipient's social security benefits and tier 1 railroad retirement benefits are included in the income tax base 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, either one-half of the excess or one-half of the social security or railroad retirement benefits is included in income subject to tax, whichever is less. This limits the tax expenditure to the portion of the benefit which is still excluded.

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.

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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, as well as other veterans' readjustment and education benefits, are also excluded from taxable income.

The interest on general obligation bonds issued by State and local governments to finance housing for veterans is excluded from taxable income. There are, however, some restrictions on veterans mortgage revenue bonds. They are limited to five preexisting State programs and to amounts based upon previous volume levels for the period beginning on January 1, 1979 and ending on June 22, 1984. Furthermore, future issues are limited to veterans who served on 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 as well as 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 use of tax-exempt State and local government securities to finance student loans, private businesses, private non-profit 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 disallowed 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.

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Proposed Changes in Tax Expenditures

The Administration proposes a number of tax revisions that would introduce one new tax expenditure, make permanent two others, reintroduce an expired one, and change the cost of an existing one.

College Savings Bonds.—The Administration proposes to exclude from taxation the interest on certain savings bonds that are redeemed to pay post-secondary educational expenses. The exclusion would be phased out above certain income levels that would be adjusted for inflation. This proposal is estimated to reduce 1989 net revenues by $10 million.

Treatment of Regulated Investment Company Shareholder Expenses.—Individuals may deduct miscellaneous expenses only to the extent that they exceed 2 percent of adjusted gross income. Regulated investment company (RIC)—i.e. mutual fund—shareholder expenses were exempt from this floor for the tax year 1987. The Administration proposes that the exemption of these RIC expenses be made permanent, otherwise taxpayers will be required to include in their taxable income amounts greater than now actually received from mutual funds. If implemented, the proposal would cost $0.4 billion in revenue losses in 1989.

Permanent Research and Experimentation Credit.—The current 20 percent R&E tax credit is scheduled to expire at the end of 1988. The Administration is proposing a permanent credit that would reduce the taxpayers' uncertainty and encourage more research and experimentation. A permanent credit would reduce receipts by $0.4 billion in 1989.

Research and Experimentation Expense Allocation Rules.—The allocation of multinational companies' R&E expenses between their domestic and international operations was by formula for one year before reverting back to 1977 Treasury rules in August 1987. During the 1981 to 1986 Congressional moratorium on these rules, all R&E expenses effectively could be allocated to domestic income. The Administration proposes that at least 67 percent of R&E expenses be allocatable to domestic income. The revenue cost of the proposal would be $0.6 billion in 1989.

Oil and Gas Depletion Rule Modifications.—Currently, "proven" oil and gas properties that are transferred from integrated oil companies to independent oil and gas producers are ineligible for percentage depletion. This discourages the transfer of marginal wells. The Administration proposes to remove the restriction. The independent producers currently may not deduct more than 50 percent of the net income from a property as percentage depletion. The Administration also proposes to raise the deduction back to 100 percent. The revenue cost of these modifications would be less than $0.1 billion in 1989.

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Table G-1. **OUTLAY EQUIVALENT ESTIMATES FOR TAX EXPENDITURES BY FUNCTION**

(In millions of dollars)

Description	Fiscal years					
	Corporations			Individuals		
	1987	1988	1989	1987	1988	1989
National defense:						
Exclusion of benefits and allowances to Armed Forces personnel				2,385	2,210	2,230
International affairs:						
Exclusion of income earned abroad by United States citizens				1,710	1,665	1,785
Exclusion of income of foreign sales corporations (FSC)	1,370	730	645			
Inventory property sales source rules exception	3,150	4,130	4,415			
Certain nonfinancial institutions operations interest allocation rules exception	30	60	95			
Deferral of income from controlled foreign corporations:						
Pre-1983 budget method	420	170	155			
Post-1982 budget method						
Total (after interactions) [1]	4,970	5,090	5,310	1,710	1,665	1,785
General science, space, and technology:						
Expensing of research and development expenditures:						
Pre-1983 budget method	565	830	1,145	20	35	45
Post-1982 budget method						
Credit for increasing research activities	2,685	1,220	790	30	20	15
Suspension of the allocation of research and experimentation expenditures	465					
Total (after interactions)	3,985	2,170	2,015	55	55	60
Energy:						
Expensing of exploration and development costs:						
Oil and gas	−1,100	−870	−680	425	455	495
Other fuels	35	35	35			
Excess of percentage over cost depletion:						
Oil and gas	185	145	130	845	625	535
Other fuels	310	210	200	20	15	15
Capital gains treatment of royalties on coal				65		
Exclusion of interest on State and local industrial development bonds for certain energy facilities	380	385	400			
Residential energy credits:						
Supply incentives				60	5	
Conservation incentives				*	*	
Alternative, conservation and new technology credits:						
Supply incentives	170	95	35	10		
Conservation incentives	−*	−*	−*			
Alternative fuel production credit	25	15	15	*	*	*
Alcohol fuel credit [2]	10	10	10	*	*	*
Energy credit for intercity buses	*	−*	−*			
Special rules for minning reclamation reserves	40	40	40	5	5	5
Total (after interactions)	45	45	130	1,015	785	745
Natural resources and environment:						
Expensing of exploration and development costs, nonfuel minerals	30	30	35	5	5	5
Excess of percentage over cost depletion, nonfuel minerals	385	305	295	25	25	20

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Table G–1. **OUTLAY EQUIVALENT ESTIMATES FOR TAX EXPENDITURES BY FUNCTION—Continued**

(In millions of dollars)

Description	Fiscal years					
	Corporations			Individuals		
	1987	1988	1989	1987	1988	1989
Exclusion of interest on State and local IDBs for pollution control and sewage and waste disposal facilities	2,085	2,150	2,215			
Tax incentives for preservation of historic structures	70	60	60	150	115	110
Capital gains treatment of iron ore	*			10		
Capital gains treatment of certain timber income	210			80	10	
Expensing of multiperiod timber growing costs	95	160	175	35	105	125
Investment credit and seven-year amortization for reforestation expenditures	40	40	40	170	170	170
Total (after interactions)	2,855	2,690	2,765	465	420	420
Agriculture:						
Expensing of certain capital outlays	65	65	75	425	460	470
Expensing of certain multiperiod production costs	*	*	*	*	5	5
Treatment of loans forgiven solvent farmers as if insolvent				10	10	10
Capital gains treatment of certain income	15			160		
Special investment credit carryback rules for farming					315	
Total (after interactions)	75	60	70	555	735	450
Commerce and housing credit:						
Dividend exclusion				470		
Exclusion of interest on small issue industrial development onds	3,420	3,435	3,475			
Exemption of credit union income	265	240	220			
Excess bad debt reserves of financial institutions	575	120	65			
Exclusion of interest on life insurance savings	460	425	430	7,015	6,775	6,805
Deductions for special percentage of taxable income for life insurance companies	480					
Exemption of RIC expenses from miscellaneous deduction floor					240	*
Deductibility of interest on consumer credit				11,845	6,530	3,280
Deductibility of mortgage interest on owner-occupied homes				34,745	33,675	32,185
Deductibility of property tax on owner-occupied homes				10,285	10,100	10,410
Exclusion of interest on State and local housing bonds for owner-occupied housing				2,420	2,375	2,360
Exclusion of interest on State and local debt for rental housing				1,730	1,650	1,630
Deferral of Income from Post-1987 Installment Sales		100	170		160	500
Capital gains (other than agriculture, timber, iron ore and coal)	1,230			96,950	265	
Deferral of capital gains on home sales				2,970	4,435	4,690
Exclusion of capital gains on home sales for persons age 55 and over				2,935	3,730	3,910
Carryover basis of capital gains at death				9,210	16,030	17,310
Investment credit, other than ESOP's, rehabilitation of structures, energy property, and reforestation expenditures	16,435	10,805	3,660	1,310	490	370
Special investment credit carryback rules for steel companies		565	−25			

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Table G–1. **OUTLAY EQUIVALENT ESTIMATES FOR TAX EXPENDITURES BY FUNCTION—Continued**

(In millions of dollars)

Description	Fiscal years					
	Corporations			Individuals		
	1987	1988	1989	1987	1988	1989
Accelerated depreciation on rental housing:						
Pre-1983 budget method	140	180	220	70	110	130
Post-1982 budget method	.....	.....	.....	.....	.....	.....
Accelerated depreciation of buildings other than rental housing:						
Pre-1983 budget method	190	240	280	70	100	110
Post-1982 budget method	.....	.....	.....	.....	.....	.....
Accelerated depreciation of machinery and equipment:						
Pre-1983 budget method	10,270	16,550	21,300	3,010	5,370	6,220
Post-1982 budget method	.....	.....	.....	.....	.....	.....
Safe harbor leasing rules	975	660	535	.....	.....	.....
Amortization of start-up costs	30	30	30	270	215	200
Reduced rates on the first $100,000 of corporate income:						
Pre-1983 budget method	6,340	4,720	4,550	.....	.....	.....
Post-1982 budget method	.....	.....	.....	.....	.....	.....
Exception from passive loss rules for $25,000 of rental losses	.....	.....	.....	580	1,580	1,255
Total (after interactions) [1]	41,140	38,285	34,985	180,310	91,015	88,625
Transportation:						
Deferral of tax on shipping companies	115	115	120	.....	.....	.....
Exclusion of interest on State and local government bonds for mass commuting vehicles	20	50	40	.....	.....	.....
Total (after interactions)	135	165	160	.....	.....	.....
Community and regional development:						
Five-year amortization for housing rehabilitation	15	15	15	30	30	25
Credit for low-income housing investments	5	35	105	50	230	515
Investment credit for rehabilitation of structures (other than historic)	145	105	90	130	80	60
Exclusion of interest on IDBs for airports, docks and sports and convention facilities	950	960	1,000	.....	.....	.....
Total (after interactions)	1,170	1,170	1,270	220	355	630
Education, training, employment, and social services:						
Exclusion of scholarship and fellowship income:						
Pre-1983 budget method	.....	.....	.....	665	625	685
Post-1982 budget method	.....	.....	.....	.....	.....	.....
Exclusion of interest on State and local student loan bonds	.....	.....	.....	385	385	390
Exclusion of interest on State and local debt for private nonprofit educational facilities	335	320	315	.....	.....	.....
Parental personal exemption for students age 19 or over	.....	.....	.....	725	460	450
Deductibility of charitable contributions (education)	645	575	585	1,270	1,095	1,060
Employer educational assistance	.....	.....	.....	280	85	.....
Total education (after interactions) [1]	980	895	900	2,695	2,050	1,925
Exclusion of employer provided child care	.....	.....	.....	30	70	155
Exclusion of employee meals and lodging (other than military)	.....	.....	.....	835	760	790
Exclusion of contributions to prepaid legal services plans	.....	.....	.....	75	20	.....
Investment credit for ESOPs	950	310	195	.....	.....	.....

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Table G–1. **OUTLAY EQUIVALENT ESTIMATES FOR TAX EXPENDITURES BY FUNCTION—Continued**

(In millions of dollars)

Description	Fiscal years					
	Corporations			Individuals		
	1987	1988	1989	1987	1988	1989
Credit for child and dependent care expenses				4,380	4,725	5,340
Targeted jobs credit	115	165	235	30	45	40
Deduction for two earner married couples				5,390		
Total training and employment (after interactions)	1,065	475	430	10,835	5,630	6,335
Deductibility of charitable contributions, other than education and health	800	715	725	11,535	9,935	9,620
Deduction for certain adoption expenses				*		
Exclusion of parsonage allowances				145	165	200
Total social services, (after interactions)	800	715	725	11,680	10,100	9,820
Grand total (after interactions) [1]	2,845	2,085	2,055	25,210	17,780	18,080
Health:						
Exclusion of employer contributions for medical insurance premiums and medical care				31,830	31,055	34,820
Deductibility of medical expenses				3,150	1,960	2,155
Exclusion of interest on State and local debt for private nonprofit health facilities	3,000	2,870	2,850			
Deductibility of charitable contributions (health)	395	350	360	1,295	1,115	1,080
Tax credit for orphan drug research	*	*	*			
Total (after interactions)	3,395	3,220	3,210	36,275	34,130	38,055
Income security:						
Exclusion of railroad retirement system benefits				400	380	365
Exclusion of workmen's compensation benefits				2,740	2,660	2,600
Exclusion of public assistance benefits:						
Pre-1983 budget method				530	390	350
Post-1982 budget method						
Exclusion of special benefits for disabled coal miners				135	115	110
Exclusion of untaxed unemployment insurance benefits				690		
Exclusion of military disability pensions				115	105	105
Net exclusion of pension contributions and earnings:						
Employer plans				64,120	56,150	58,670
Individual Retirement Accounts				19,345	11,995	12,015
Keogh plans				3,780	2,125	1,535
Exclusion of other employee benefits:						
Premiums on group term life insurance				2,425	2,395	2,550
Premiums on accident and disability insurance				160	160	165
Income of trusts to finance supplementary unemployment benefits				30	30	30
Additional exemption for the blind				15		
Additional deduction for the blind				10	15	15
Additional exemption for elderly				1,205		
Additional deduction for the elderly				1,630	1,535	1,155
Tax credit for the elderly and disabled				205	225	240
Deductibility of casualty losses				285	265	265
Earned income credit [3]				590	1,090	1,850
Total (after interactions) [1]				96,440	78,040	80,380
Social Security:						
Exclusion of social security benefits:						
Disability insurance benefits				1,170	1,095	1,080
OASI benefits for retired workers				14,285	13,470	13,530

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Table G–1. **OUTLAY EQUIVALENT ESTIMATES FOR TAX EXPENDITURES BY FUNCTION—Continued**

(In millions of dollars)

Description	Fiscal years					
	Corporations			Individuals		
	1987	1988	1989	1987	1988	1989
Benefits for dependents and survivors	.....	.....	.....	3,025	2,850	2,880
Total (after interactions)	.....	.....	.....	18,480	17,415	17,490
Veterans benefits and services:						
Exclusion of veterans disability compensation	.....	.....	.....	1,615	1,470	1,445
Exclusion of veterans pensions	.....	.....	.....	130	85	75
Exclusion of GI bill benefits	.....	.....	.....	90	70	60
Exclusing of interest on state and local debt for veterans housing	.....	.....	.....	375	355	350
Total (after interactions)	.....	.....	.....	2,210	1,980	1,930
General government:						
Credits and deductions for political contributions	.....	.....	.....	250	.....	.....
General purpose fiscal assistance:						
Exclusion of interest on public purpose State and local debt	2,195	2,375	2,530	11,595	12,035	12,910
Deductibility of nonbusiness State and local taxes other than on owner-occupied homes	.....	.....	.....	22,480	17,250	17,305
Tax credit for corporations receiving income from doing business in United States possessions	3,310	2,675	2,605	.....	.....	.....
Total (after interactions)	5,505	5,050	5,135	34,075	29,285	30,215
Interest:						
Deferral of interest on savings bonds	.....	.....	.....	870	885	905

* $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 $475million in 1987, $480 million in 1988, and $480 million in 1989.

[3] The figures in the table indicate the tax subsidies provided by the earned income tax credit. The effect on outlays is: 1987, $1,410 million; 1988, $2,895 million; 1989, $3,895million.

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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		
	1987	1988	1989	1987	1988	1989
National defense:						
Exclusion of benefits and allowances to Armed Forces personnel				2,000	1,885	1,915
International affairs:						
Exclusion of income earned abroad by United States citizens				1,330	1,220	1,305
Exclusion of income of foreign sales corporations (FSC)	770	460	425			
Inventory property sales source rules exception	1,845	2,625	2,915			
Certain nonfinancial institutions operations interest allocation rules exception	15	40	60			
Deferral of income from controlled foreign corporations:						
Pre-1983 budget method	235	110	100			
Post-1982 budget method						
General science, space, and technology:						
Expensing of research and development expenditures:						
Pre-1983 budget method	565	830	1,145	20	35	45
Post-1982 budget method						
Credit for increasing research activities	1,845	885	570	20	15	10
Suspension of the allocation of research and experimentation expenditures	270					
Energy:						
Expensing of exploration and development costs:						
Oil and gas	−1,100	−870	−680	425	455	495
Other fuels	35	35	35			
Excess of percentage over cost depletion:						
Oil and gas	145	105	95	580	435	385
Other fuels	200	130	130	15	10	10
Capital gains treatment of royalties on coal	5			45		
Exclusion of interest on State and local industrial development bonds for certain energy facilities	305	290	280			
Residential energy credits:						
Supply incentives				45	5	
Conservation incentives				*	*	

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Table G–2. **REVENUE LOSS ESTIMATES FOR TAX EXPENDITURES BY FUNCTION—Continued**

(In millions of dollars)

Description	Fiscal years					
	Corporations			Individuals		
	1987	1988	1989	1987	1988	1989
Alternative, conservation and new technology credits:						
Supply incentives	140	80	30	10	.....	.....
Conservation incentives	—*	—*	—*	.....	.....	.....
Alternative fuel production credit	10	10	10	*	*	*
Alcohol fuel credit [1]	5	5	5	*	*	*
Energy credit for intercity buses	*	—*	—*	.....	.....	.....
Special rules for mining reclamation reserves	40	40	40	5	5	5
Natural resources and environment:						
Expensing of exploration and development costs, nonfuel minerals	30	30	35	5	5	5
Excess of percentage over cost depletion, nonfuel minerals	305	215	220	15	15	15
Exclusion of interest on State and local IDBs for pollution control and sewage and waste disposal facilities	1,715	1,635	1,555	.....	.....	.....
Tax incentives for preservation of historic structures	70	60	60	150	110	110
Capital gains treatment of iron ore	*	.....	.....	10	.....	.....
Capital gains treatment of certain timber income	145	*	*	60	5	.....
Expensing of multiperiod timber growing costs	95	160	175	35	105	125
Investment credit and seven-year amortization for reforestation expenditures	40	40	40	165	165	165
Agriculture:						
Expensing of certain capital outlays	65	65	75	425	460	470
Expensing of certain multiperiod production costs	*	*	*	*	5	5
Treatment of loans forgiven solvent farmers as if insolvent	.....	.....	.....	10	10	10
Capital gains treatment of certain income	10	.....	.....	125	.....	.....
Special investment credit carryback rules for farming	.....	.....	.....	.....	235	.....
Commerce and housing credit:	.....	.....	.....	.....	.....	.....
Dividend exclusion	.....	.....	.....	350	.....	.....
Exclusion of interest on small issue industrial development bonds	2,925	2,705	2,510	.....	.....	.....
Exemption of credit union income	195	170	160	.....	.....	.....
Excess bad debt reserves of financial institutions	385	80	50	.....	.....	.....
Exclusion of interest on life insurance savings	315	310	320	5,110	5,100	5,240
Deductions for special percentage of taxable income for life insurance companies	290	.....	.....	.....	.....	.....
Exemption of RIC expenses from miscellaneous deductions floor	.....	.....	.....	.....	240	*
Deductibility of interest on consumer credit	.....	.....	.....	11,845	6,530	3,280
Deductibility of mortgage interest on owner-occupied homes	.....	.....	.....	34,745	33,675	32,185
Deductibility of property tax on owner-occupied homes	.....	.....	.....	10,285	10,100	10,410
Exclusion of interest on State and local housing bonds for owner-occupied housing	.....	.....	.....	2,010	1,765	1,640
Exclusion of interest on State and local debt for rental housing	1,385	1,235	1,135	.....	.....	.....
Deferral of income from post 1987 installment sales	.....	100	170	.....	160	500
Capital gains (other than agriculture, timber, iron ore and coal)	910	.....	.....	61,285	210	.....

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Table G-2. **REVENUE LOSS ESTIMATES FOR TAX EXPENDITURES BY FUNCTION—Continued**

(In millions of dollars)

Description	Fiscal years					
	Corporations			Individuals		
	1987	1988	1989	1987	1988	1989
Deferral of capital gains on home sales				2,575	3,700	3,905
Exclusion of capital gains on home sales for persons age 55and over				2,160	2,860	2,970
Carryover basis of capital gains at death				5,710	11,540	12,465
Investment credit, other than ESOP's, rehabilitation of structures, energy property, and reforestation expenditures	11,505	7,995	2,715	1,800	1,200	565
Special investment credit carryback rules for steel companies		565	−25			
Accelerated depreciation on rental housing:						
Pre-1983 budget method	140	180	220	70	110	130
Post-1982 budget method						
Accelerated depreciation of buildings other than rental housing:						
Pre-1983 budget method	190	240	280	70	100	110
Post-1982 budget method						
Accelerated depreciation of machinery and equipment:						
Pre-1983 budget method	10,270	16,550	21,300	3,010	5,370	6,220
Post-1982 budget method						
Safe harbor leasing rules	1,065	690	550			
Amortization of start-up costs	20	20	20	200	165	150
Reduced rates on the first $100,000 of corporate income:						
Pre-1983 budget method	3,710	3,155	2,695			
Post-1982 budget method						
Exception from passive loss rules for $25,000 of rental losses				350	1,100	1,000
Transportation:						
Deferral of tax on shipping companies	115	115	120			
Exclusion of interest on State and local government bonds for mass commuting vehicles	35	10				
Community and regional development:						
Five-year amortization for housing rehabilitation	15	15	15	30	30	35
Credit for low-income housing investments	*	20	60	30	140	315
Investment credit for rehabilitation of structures (other than historic)	145	105	90	130	80	60
Exclusion of interest on IDBs for airports, docks and sports and convention facilities	755	725	695			
Education, training, employment, and social services:						
Exclusion of scholarship and fellowship income:						
Pre-1983 budget method				610	570	625
Post-1982 budget method						
Exclusion of interest on State and local student loan bonds				400	355	330
Exclusion of interest on State and local debt for private nonprofit educational facilities				285	250	225
Parental personal exemption for students age 19 or over				560	415	410
Deductibility of charitable contributions (education)	450	425	430	1,270	1,095	1,060
Exclusion of employer educational assistance				220	65	
Exclusion of employer provided child care				30	65	150

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Table G–2. **REVENUE LOSS ESTIMATES FOR TAX EXPENDITURES BY FUNCTION—Continued**

(In millions of dollars)

Description	Fiscal years					
	Corporations			Individuals		
	1987	1988	1989	1987	1988	1989
Exclusion of employee meals and lodging (other than military)				745	685	715
Exclusion of employer contributions to prepaid legal services plans				75	20	
Investment credit for ESOPs	665	230	145			
Credit for child and dependent care expenses				3,475	3,920	4,565
Targeted jobs credit	115	165	235	30	45	40
Deduction for two earner married couples				5,390		
Deductibility of charitable contributions, other than education and health	560	525	530	11,535	9,935	9,620
Deduction for certain adoption expenses				*		
Exclusion of parsonage allowances				125	145	175
Health:						
Exclusion of employer contributions for medical insurance premiums and medical care				24,550	24,690	27,650
Deductibility of medical expenses				3,150	1,960	2,155
Exclusion of interest on State and local debt for private nonprofit health facilities				2,570	2,230	2,025
Deductibility of charitable contributions (health)	275	260	265	1,295	1,115	1,080
Tax credit for orphan drug research	*	*	*			
Income security:						
Exclusion of railroad retirement system benefits				400	380	365
Exclusion of workmen's compensation benefits				2,740	2,660	2,600
Exclusion of public assistance benefits:						
Pre-1983 budget method				530	390	350
Post-1982 budget method						
Exclusion of special benefits for disabled coal miners				135	115	110
Exclusion of untaxed unemployment insurance benefits				690		
Exclusion of military disability pensions				115	105	105
Net exclusion of pension contributions and earnings:						
Employer plans				45,335	41,765	44,120
Individual Retirement Accounts				13,890	9,080	9,435
Keoghs				2,355	1,520	1,190
Exclusion of other employee benefits:						
Premiums on group term life insurance				1,940	1,940	2,065
Premiums on accident and disability insurance				120	120	125
Income of trusts to finance supplementary unemployment benefits				30	30	30
Additional exemption for the blind				15		
Additional deduction for the blind				10	15	15
Additional exemption for elderly				1,205		
Additional deduction for the elderly				1,630	1,535	1,155
Tax credit for the elderly and disabled				180	200	220
Deductibility of casualty losses				285	265	265
Earned income credit [2]				525	970	1,575
Social Security:						
Exclusion of social security benefits:						
Disability insurance benefits				1,170	1,095	1,080
OASI benefits for retired workers				14,285	13,470	13,530

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Table G–2. **REVENUE LOSS ESTIMATES FOR TAX EXPENDITURES BY FUNCTION—Continued**

(In millions of dollars)

Description	Fiscal years					
	Corporations			Individuals		
	1987	1988	1989	1987	1988	1989
Benefits for dependents and survivors	.....	.....	.....	3,025	2,850	2,880
Veterans benefits and services:						
Exclusion of veterans disability compensation	.....	.....	.....	1,615	1,470	1,445
Exclusion of veterans pensions	.....	.....	.....	130	85	75
Exclusion of GI bill benefits	.....	.....	.....	90	70	60
Exclusing of interest on state and local debt for veterans housing	.....	.....	.....	300	250	230
General government:						
Credits and deductions for political contributions	.....	.....	.....	250	.....	.....
General purpose fiscal assistance:						
Exclusion of interest on public purpose State and local debt	2,070	1,890	1,930	8,810	8,460	8,360
Deductibility of nonbusiness State and local taxes other than on owner-occupied homes	.....	.....	.....	22,480	17,250	17,305
Tax credit for corporations receiving income from doing business in United States possessions	1,895	1,690	1,720	.....	.....	.....
Interest:						
Deferral of interest on savings bonds	.....	.....	.....	870	885	905

* $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 $475 million in 1987, $480 million in 1988, and $480 million in 1989.

[2] The figures in the table indicate the effect of the earned income tax credit on receipts. The effect on outlays is: 1987, $1,410 million; 1988, $2,895 million; 1989, $3,895 million.

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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 $116.7 billion in 1988, are projected to increase to $119.0 billion in 1989. This increase reflects the administration's efforts to continue to support Federal grant programs for the needy, and to reduce Federal involvement in activities that are primarily State and local responsibilities.

The grant-in-aid proposals in the 1989 budget are affected by the Bipartisan Budget Agreement of November 1987. This agreement was designed to meet the Gramm-Rudman-Hollings deficit targets for 1988 and 1989. The 1989 budget meets these targets as well as the other targets in the agreement, such as those for total domestic mandatory and domestic discretionary programs.

Consistent with the agreement, the administration is proposing no major legislative changes for 1988 or 1989 for mandatory programs that are grants, such as medicaid or aid to families with dependent children, except for welfare reform. For 1989, the budget meets the overall target for total domestic discretionary programs, but proposes increases for high-priority discretionary grants, such as education and training, and reductions for grant programs that are not Federal priorities, such as grants for economic subsidies, community development, and mass transit.

The major proposals affecting grants-in-aid in the 1989 budget include increases for welfare reform, education, and training, and reductions and terminations of some discretionary grant programs:

- For welfare reform, the administration continues to support the proposed "AFDC Employment and Training Reorganiza-

[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.

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tion Act of 1987" (H.R. 3200 and S.1655). This legislation authorizes a comprehensive employment and training program in which teenage recipients would be encouraged to remain in or return to school, and older recipients would participate in a variety of employment and training activities designed to improve their employment status. The child support enforcement system would be strengthened to ensure that children receive adequate and timely support from parents who are absent from the home. States would have broad flexibility to carefully test innovative alternatives to current programs that support low income families and individuals.

- The administration proposes increases for major elementary and secondary education programs and for major employment and training programs above the 1988 levels. In addition to the increases for welfare reform, these increases will assist States and localities in meeting the educational and training needs of youth and adults.

The administration is also proposing reductions or terminations of discretionary 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:

- Large reductions for mass transit programs. The penny gas tax for mass transit activities would continue to be used to fund mass transit capital spending, rural transit, and operating subsidies to small cities, but general tax dollars would not be used (except for the Washington, D.C. Metro, which is authorized separately). Operating subsidies for medium and large communities are proposed for elimination.
- Termination of urban development action grants, economic development assistance, and Appalachian regional development grants in order to reduce direct Federal intervention in the economic decisions of firms and individuals.
- 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 1979 to 1989. Grant outlays for payments for individuals are estimated to be 54 percent of total grants by 1989; for physical capital investment, 21 percent; and for all other grants, largely for education, training, and social services, 26 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

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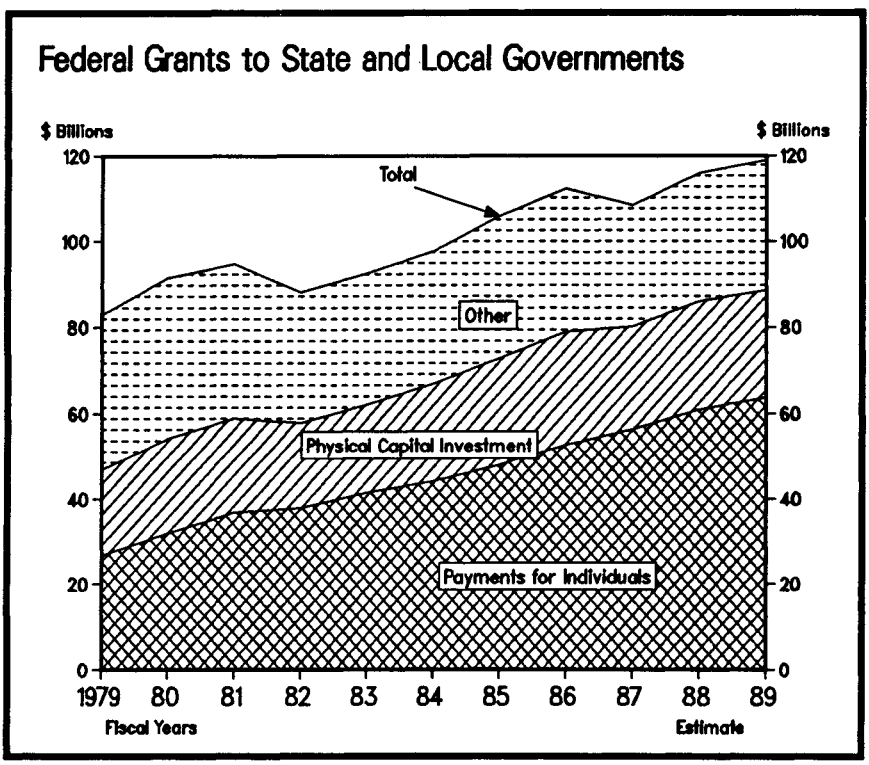
purposes, including land and water resource development and education. In 1989, the Federal Government is expected to disburse $664 million in new loans to State and local governments, compared to $641 million in 1988. New guaranteed loans are estimated to be $72 million in 1989, compared to $154 million in 1988.

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. As described later, 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 $43.5 billion in 1989.



Highlights of the Federal Aid Program

This section provides an overview of the Federal aid program proposed for 1989. Shown first are major differences between actual grant outlays in 1987 and estimated amounts for 1988 and 1989. 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.

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Detailed data supporting the description of grant programs are in Table H-11.

Table H-1 shows changes in grant outlays between 1987 and 1988 and between 1988 and 1989. These changes are divided into three categories: payments for individuals, grants for physical capital investment, and all other grants. From 1987 to 1989, grants for payments for individuals increase $7.5 billion, capital grants increase $1.0 billion, and other grants increase $2.1 billion.

Table H-1. **FEDERAL GRANT-IN-AID CHANGES, 1987–89**

(In billions of dollars)

	Outlays
Total grants, 1987 actual	108.4
Changes:	
Payments for individuals:	
Medicaid	3.0
Housing assistance	0.9
Food and nutrition assistance	0.6
Family support payments	0.2
Other	−0.2
Subtotal, payments for individuals, 1987–88 change	4.6
Physical capital investment:	
Highway programs	0.6
Sewage treatment plants	−0.4
Mass transit	0.3
Community and regional development	0.3
Other	0.4
Subtotal, capital, 1987–88 change	1.2
Other programs:	
Social services	1.7
Elementary and secondary education	0.8
Other	−0.1
Subtotal, other programs, 1987–88 change	2.4
Total grants, 1988 estimate	116.7
Changes:	
Payments for individuals:	
Medicaid	2.0
Housing assistance	0.7
Food and nutrition assistance	0.3
Other	−0.2
Subtotal, payments for individuals, 1988–89 change	2.9
Physical capital investment:	
Sewage treatment plants	−0.2
Other	−*
Subtotal, capital, 1988–89 change	−0.2
Other programs, 1988–89 change	−0.3
Total grants, 1989 estimate	119.0

* Less than $50 million.

Energy, Natural Resources, Environment, and Agriculture.—State and local *energy conservation grants* administered by the Depart-

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ment 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. States have received more than $3.0 billion from the settlement of cases involving violations of rules and regulations under the price control program which expired in 1981. Because these amounts are available to fund the State grant programs, the budget includes no new budget authority for these activities for 1989.

Grants to States for *land acquisition* and development of outdoor recreation lands, and for State *historic preservation* efforts are also proposed for elimination in 1989. 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 1989 is $130 million, $30 million less than the 1988 level. The lower level reflects spending that can be absorbed by States each year until program completion in 1992. Approximately 225 projects in 22 States will be financed by the 1989 request.

Outlays for *sport fish restoration* grants are estimated to increase from $148 million in 1988 to $163 million in 1989, using increased funds from motorboat fuel taxes, excise taxes, and customs duties added by the Deficit Reduction Act of 1984.

The Environmental Protection Agency *sewage treatment 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. For 1989, the administration is requesting $1.5 billion in budget authority divided evenly between the existing grant program and the new state revolving fund (SRF) program. Capitalization grants to SRFs are intended to set up self-sustaining financial mechanisms that would make loans, support refinancing, and provide loan guarantees. The 1989 funding level is consistent with the President's long-term program level of $12 billion from 1986 to 1993 proposed in the 1988 budget. Outlays are estimated to be $2.4 billion in 1989, largely from prior-year commitments.

The *hazardous substance superfund* pays for the cleanup of abandoned hazardous waste sites and chemical spills. Budget authority of $219 million is requested for 1989 for site specific cooperative agreements with States. This funding level, which is $25 million above the 1988 level, should finance the cleanup of 26 sites in 1989, nine more than in 1988.

The *Extension Service* makes formula and project grants to States to provide out-of-school education in agriculture and other

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subjects at State and local levels. The administration proposes to terminate the project grants to States that are used to support such programs as urban gardening, pest management, and support for rural development centers, and to reduce funding for food and nutrition education. These activities can be funded from the formula grant, which would continue. Proposed budget authority for Extension Service grants for 1989 is $300 million, a $58 million reduction from the 1988 amount. Proposed funding for formula grants is slightly more than 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 $17.0 billion in budget authority for these grant programs in 1989, a $1.9 billion reduction from the 1988 total.

The Federal-aid highway program helps fund the interstate highway system, other primary highways, bridges, and rural and urban highways. Obligations for Federal-aid highways are proposed to be $12.3 billion in 1989, $0.7 billion less than in 1988. The administration is proposing to carry out the highway programs within the level of anticipated user fee receipts. To ensure prudent use of the user fee revenue, the administration plans to require States to provide at least 20 percent of the project costs for all demonstration and special interest projects, now 100 percent federally funded.

The administration proposes budget authority of $196 million in 1989 for three *highway and motor carrier safety grant* programs. The program level for these grants, which supplement other State highway safety programs, is proposed to be $10 million more than the 1988 level.

The administration is proposing $1.4 billion in budget authority in 1989 for *mass transit* (except for Washington Metro). This amount is limited to receipts provided by the one cent per gallon of the gasoline tax dedicated to mass transit activities. Most of these subsidies would be distributed by existing formulas to States and localities, which could use the formula grant funds for public transportation capital projects provided they make matching contributions of at least 50 percent. The administration is also proposing to terminate operating subsidies to large and medium-sized cities. Only small urban and rural areas could use funds for transit operating subsidies, which would also require a 50 percent match.

The administration is also proposing no funding in 1989 or later years for discretionary grants that are used 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.

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In addition to the $1.4 billion from trust funds, the administration proposes a $128 million construction grant from general funds for the Washington, D.C. Metrorail system.

Grants-in-aid for *airports* are proposed to be funded at a program level of $1.2 billion in 1989, slightly below the 1988 level of $1.3 billion. This grant is designed to assist airports with construction needs in order to enhance capacity and safety in the national airport and airway system.

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 establish the CDBG program level at $2.6 billion for 1989, slightly below the 1988 program level of $2.9 billion. The 1989 program level includes $2.5 billion of new budget authority and a transfer of $145 million from the rehabilitation loan fund upon its termination at the end of 1988. Although this will reduce the total resources available for the CDBG program, recently enacted legislation targets assistance toward the most needy within communities.

The administration proposes to terminate the *urban development action grants* program at the end of 1988. No funding is proposed for 1989. This proposal is consistent with the Government-wide effort to reduce local economic development subsidies and reduce excessive Federal subsidization of 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 $150 million in budget authority for this program in 1989, 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. 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. For these reasons the *rental development grant program* is proposed to be terminated in 1989.

The administration is not requesting funds in 1989 for the *economic development assistance programs* administered by the Economic Development Administration (EDA). There is no evidence

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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 1989 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 1989. 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 on the whole are not substantially worse off than rural communities nationwide, and therefore do not warrant special assistance.

Education.—The administration's policies for assisting education activities of State and local governments provide significantly increased assistance for programs that provide supplementary aid for persons with disabilities and for the educationally and economically disadvantaged. For these programs the administration is requesting $8.6 billion in budget authority, an increase of $0.4 billion above the 1988 level of $8.2 billion.

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.* For the largest program, compensatory education for the disadvantaged, the administration is requesting $4.6 billion in budget authority for 1989, an increase of $0.2 billion above the 1988 enacted level. Budget authority for education for the handicapped is proposed to be $1.8 billion in 1989, 3 percent more than the 1988 level. The administration proposes to maintain budget authority for vocational education at $0.9 billion, and increase funding for adult education from $122 million in 1988 to $148 million in 1989. This increase is to enhance efforts to combat adult illiteracy.

The administration is requesting budget authority of $1.0 billion for 1989 to assist State and local governments carry out *school improvement programs,* $95 million more than for 1988. Most of this increase is for the State education block grant, which has proposed budget authority of $540 million in 1989. 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

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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 $582 million is requested in 1989 for all impact aid programs, a reduction of $118 million from the 1988 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 1989, the same as the 1988 enacted level. States have considerable discretion in using these funds to prepare low-income youth, welfare recipients, and economically disadvantaged unskilled adults for employment.

The *summer youth employment* program finances minimum-wage public sector summer 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 change the current summer program to give local areas flexibility in designing a program of jobs, basic skill remediation, and vocational training for low-income youth. Under the proposal, the resources would be available for year-round programs of assistance, for subsidized summer jobs, or for both activities, depending on local choice. The administration is proposing $718 million for this program for 1989, the same as enacted in 1988.

The administration proposes to replace the two existing programs financed under the Trade Adjustment Assistance Act (TAA) and the JTPA for assisting dislocated workers with an entirely new *worker readjustment assistance program (WRAP).* 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 1989 for serving dislocated workers. This includes a grant of $948 million and direct benefits of $32 million.

No budget authority is requested in 1989 for the *work incentive (WIN) program.* The services provided by this program would be provided more effectively by the work and training component of the welfare reform proposal, described earlier and in the "other income security" section below.

Grant outlays for the *State employment service* are estimated to be $928 million in 1989, $49 million less than the 1988 amount. Fewer funds will be required in 1989 when the new worker read-

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justment assistance program begins providing States with substantial new resources for job services now financed with these grants.

Social Services.—Budget authority requested for the *social services block grant* is $2.7 billion for 1989, the same as was enacted for 1988. 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 percent of their social services allotment to other block grants that support health services, health promotion and disease prevention, or low-income home energy assistance.

The administration proposes to begin to phase out the *community services* block grant program beginning in 1989, with termination proposed for 1993. 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 $1.5 billion of budget authority for 1989 for this program, slightly more than the amount enacted for 1988.

In 1989, budget authority of $1.1 billion is requested for *foster care and adoption assistance.* These funds support State efforts to reunite children with their families or to place them promptly in adoptive homes.

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 1989 the administration proposes $2.2 billion in budget authority for these grant programs. This amount is the same as the 1988 amount, which is $319 million more than the 1987 level.

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 25.0 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 1989, medicaid outlays are estimated to be $32.7 billion. The administration is not proposing medicaid legislation for 1989. Medicaid outlays will be affected by changes in regulatory and administrative policies beginning in 1989.

Budget authority of $1.3 billion is requested in 1989 for the *health block grants*, $196 million more than for 1988. The block grants include those for maternal and child health; preventive health and health services; alcohol, drug abuse, and mental health

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and a proposed new family planning block grant to give States greater flexibility in delivering voluntary family planning services.

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 1989, slightly higher than the 1988 level. This will allow for increases in costs and improvement of State quality control efforts.

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 $6.3 billion in 1989, $1.1 billion more than in 1988. Grant outlays under this program include new construction and modernization activities 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 100,000 additional households and grants for construction of 1,000 Indian housing units and 7,000 elderly or handicapped units to add to an estimated 4.3 million households served by the Department of Housing and Urban Development (HUD). About 1,000 of the 7,000 units will be built for the mentally handicapped homeless. Furthermore, under HUD's new regulations, homeless families will receive priority in the voucher program.

Approximately 20–25 percent of the 108,000 additional subsidized units 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 plus 1,200 vouchers to assist rural families displaced due to prepayment of rural rental housing loans. This is in addition to the 7,500 vouchers provided in 1987 legislation for rural housing demonstration programs. Both the HUD non-metropolitan 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 1989 budget.

Budget authority of $1.5 billion is requested for 1989 for *payments for the operation of low-income housing.* These payments are used to subsidize operating costs for almost 1.4 million low-rent public and Indian housing units. This request assumes implementa-

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tion of improved verification procedures to reduce fraud and abuse. It also assumes public housing authorities will have more flexibility in setting rents so that both public housing authorities and tenants will have greater incentive to reduce dependency on the Federal Government.

The Consolidated Omnibus Budget Reconciliation Act of 1985 changed the treatment 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 are estimated to be $1.5 billion in 1988 and $1.1 billion in 1989.

Food and Nutrition Assistance.—Food stamps help low-income families maintain a nutritious diet. Food stamp benefits are classified as direct payments to individuals by the Federal Government and not as grants to State or local governments; a grant from the Federal Government reimburses the States for about half of their food stamp administrative expenses. Outlays for the Federal share of State *administrative expenses for the food stamp program* are estimated to be $1.2 billion in 1989, about the same as 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 $0.9 billion in 1989.

Child nutrition programs subsidize institutions for meals served to students in schools, child care facilities, and other institutional settings. Budget authority proposed for the grant program in 1989, including food donations from the Section 32 program, is 4.8 billion, an increase of $0.1 billion from the 1988 amount.

The *supplemental feeding programs*, which include the special supplemental food program for women, infants, and children (WIC) and the commodity supplemental food program, provide 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 $1.9 billion for 1989 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 $0.7 billion are expected to be distributed through State and local governments in 1989. (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

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and the child support enforcement (CSE) program. AFDC helps State and local governments finance their cash assistance payments to needy families. The child support enforcement grants finance an average of 90 percent of State and local administrative expenses for establishing paternity and for collecting support from legally liable absent parents. Collections on behalf of AFDC recipients offset about 11 percent of State and Federal AFDC costs. Proposed budget authority for 1989 for the AFDC and CSE programs is $10.7 billion, including welform reform, which is described next.

For welfare reform, the budget reflects the administration's continued support of the "AFDC Employment and Training Reorganization Act of 1987" (H.R. 3200 and S.1655). This legislation proposes reforms for AFDC work and training programs, strengthens the Federal-State child support enforcement system and provides broad authority to States to demonstrate new ways of helping families and individuals achieve financial independence.

Under the comprehensive employment and training program, teenage recipients would be encouraged to remain in or return to school, and older recipients would participate in a variety of employment and training activities designed to improve their employment status. The unsuccessful work incentive (WIN) program classified in the education, training, employment and social services function would no longer be funded.

Changes in child support enforcement would require States to establish mandatory child support guidelines to help ensure that single-parent families receive adequate support from parents who are absent from the home. Employers would be required to automatically withhold from wages court ordered amounts to be paid as child support.

Under the proposed demonstration activity, States could receive waivers in a range of current programs for the low-income population if the demonstrations cost no more each year than the programs being modified, are designed to permit sound evaluation, and do not adversely affect those in need. In total, welfare reform would cost an estimated $168 million in Federal outlays in 1989.

The Federal Government subsidizes States for all of the initial resettlement costs of welfare, health, employment, English language training, and other services for *refugee and entrant assistance*. Budget authority of $268 million is requested in 1989 for refugee assistance, $65 million less than the 1988 level.

For *low-income home energy assistance*, $1.2 billion in budget authority is requested for 1989, $0.3 billion below the 1988 enacted 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 hun-

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dreds of millions of dollars in oil overcharge settlements available to States for these purposes.

Administration of Justice.—For the two major *justice assistance* programs, juvenile justice and State and local assistance, the administration is proposing no new budget authority for 1989. These programs have met their objectives and are now primarily the responsibility of 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 $82 million in 1989.

General Government.—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 $525 million in budget authority for the *Federal payment to the District of Columbia* in 1989, a reduction of $25 million from the 1988 level. The reduction is primarily because Federal agencies will now be billed directly by the District for water and sewer charges. These amounts are therefore not included in the Federal payment to the District.

Additional information on these and other grant programs is in Part 5 of the 1989 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, housing, and a variety of other activities.

Direct loan disbursements (excluding repayments) are estimated to be $664 million in 1989, compared to $641 million in 1988.

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 $72 million in 1989, compared to $154 million in 1988.

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

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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 as 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 presented in Special Analysis G.

Tax expenditures that provide aid to State and local governments are estimated to be $43.5 billion in 1989. The two major categories of tax expenditures 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 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 calendar year 1987, the Tax Reform Act of 1986 disallowed 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.

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

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Table H–2. **TAX EXPENDITURES AIDING STATE AND LOCAL GOVERNMENTS**

(Outlay equivalents; in millions of dollars)

Description	Fiscal year		
	1987	1988	1989
Deductibility of:			
Property taxes on owner-occupied homes	10,285	10,100	10,410
Nonbusiness State and local taxes other than on owner-occupied homes	22,480	17,250	17,305
Exclusion of interest on:			
Public purpose State and Local debt	13,790	14,410	15,440
IDBs for certain energy facilities	380	385	400
IDBs for pollution control and sewage and waste disposal facilities	2,085	2,150	2,215
Small-issue IDBs	3,420	3,435	3,475
Owner-occupied mortgage revenue bonds	2,420	2,375	2,360
State and local debt for rental housing	1,730	1,650	1,630
Mass commuting vehicle IDBs	20	50	40
IDBs for airports, docks and sports and convention facilities	950	960	1,000
State and local student loan bonds	385	385	390
State and local debt for private nonprofit educational facilities	335	320	315
State and local debt for private nonprofit health facilities	3,000	2,870	2,850
State and local debt for veterans housing	375	355	350
Total (after interactions) [1]	46,940	42,975	43,480

[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.

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 was set at the greater of $75 per capita or $250 million for each State, through 1987. In 1988 and later years, 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

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Table H–3. **FEDERAL GRANT-IN-AID OUTLAYS BY FUNCTION**

(In billions of dollars)

Function	Actual 1987	Estimate					
		1988	1989	1990	1991	1992	1993
National defense	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Energy	0.5	0.4	0.4	0.3	0.3	0.3	0.3
Natural resources and environment	4.1	3.9	3.5	3.5	3.2	2.9	2.6
Agriculture	2.1	1.8	1.3	1.1	1.0	1.0	1.0
Commerce and housing credit	*	*					
Transportation	16.9	17.9	17.8	17.7	17.1	16.6	16.1
Community and regional development	4.2	4.5	4.4	4.1	3.6	3.4	3.1
Education, training, employment, and social services	18.7	21.3	21.7	22.6	22.7	22.0	22.1
Health	29.5	32.8	35.1	38.2	41.4	45.2	49.1
Income security	30.0	31.5	32.3	32.3	32.8	34.0	34.9
Veterans benefits and services	0.1	0.1	0.1	0.2	0.2	0.2	0.2
Administration of justice	0.2	0.3	0.3	0.2	0.2	0.2	0.2
General government	2.0	2.0	1.9	1.6	1.7	1.7	1.8
Total outlays	108.4	116.7	119.0	121.9	124.3	127.7	131.5

*$50 million or less.

the budget has become important not only for analysis but also for congressional control.

One major function change has been made for this budget. The general purpose and fiscal assistance function has been abolished as a major function; all activities formerly included in this function have been transferred to the general government function, where they appear as a separate subfunction. This change was made because the general revenue sharing program, which constituted the bulk of the former major function, was ended by Congress, and the remaining general purpose fiscal assistance activities are not significantly large to warrant being a separate major function.

Table H–3 shows a functional distribution of Federal grant-in-aid outlays.[2] 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 29 percent in 1989. Transportation has declined from 43 percent in 1960 to an estimated 15 percent in 1989. Other changes occurred between 1960 and 1989 in education, training, employment, and social services programs, which increase from 7 percent in 1960 to an estimated 18 percent in 1989. General government also increased with the addition of general revenue sharing, from 2 percent in 1960 to 9 percent in 1980. In 1989, 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 in 1986.

[2] Table H–11 contains functional data and programmatic detail within each function for both budget authority and outlays.

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Table H–4. **PERCENTAGE DISTRIBUTION OF FEDERAL GRANT-IN-AID OUTLAYS BY FUNCTION**

	Actual				Estimate					
	1960	1970	1980	1987	1988	1989	1990	1991	1992	1993
Natural resources and environment	2	2	6	4	3	3	3	3	2	2
Agriculture	3	3	1	2	2	1	1	1	1	1
Transportation	43	19	14	16	15	15	14	14	13	12
Community and regional development	2	7	7	4	4	4	3	3	3	2
Education, training, employment, and social services	7	27	24	17	18	18	19	18	17	17
Health	3	16	17	24	28	29	31	33	35	37
Income security	38	24	20	28	27	27	26	26	27	27
General government	2	2	9	2	2	2	1	1	1	1
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 46 percent of total estimated grant-in-aid outlays in 1989, far more than any other agency.

Table H–5. **FEDERAL GRANT-IN-AID OUTLAYS BY AGENCY**

(In billions of dollars)

Agency	Actual 1987	Estimate	
		1988	1989
Department of Agriculture	10.9	11.3	11.0
Department of Commerce	0.4	0.4	0.2
Department of Education	8.7	9.7	10.4
Department of Energy	0.2	0.2	0.2
Department of Health and Human Services	47.9	52.6	54.4
Department of Housing and Urban Development	10.9	12.1	12.7
Department of the Interior	1.3	1.4	1.3
Department of Justice	0.2	0.3	0.2
Department of Labor	5.6	5.8	5.8
Department of Transportation	16.9	17.8	17.8
Department of the Treasury	0.4	0.3	0.3
Environmental Protection Agency	3.3	2.9	2.8
Federal Emergency Management Agency	0.4	0.4	0.4
Other	1.5	1.5	1.5
Total outlays	108.4	116.7	119.0

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

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determine the program level and the Federal Government reimburses 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	1987[1] total grants	Dollars per capita		Average annual percent increase, 1977-87
			1977	1987[2]	
I.	Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island	6.5	348	507	3.8
II.	New York, New Jersey, Puerto Rico, Virgin Islands	18.0	388	623	4.9
III.	Virginia, Pennsylvania, Delaware, Maryland, West Virginia, District of Columbia	12.2	330	478	3.8
IV.	Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Alabama,Mississippi, Florida	15.9	282	367	2.7
V.	Illinois, Indiana, Michigan, Ohio, Wisconsin, Minnesota	19.5	278	423	4.3
VI.	Arkansas, Louisiana, Oklahoma, New Mexico, Texas	10.0	259	353	3.2
VII.	Iowa, Kansas, Missouri, Nebraska	4.5	241	378	4.6
VIII.	Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming	3.8	326	502	4.4
IX.	Arizona, California, Nevada, Hawaii, other territories	13.5	314	403	2.3
X.	Idaho, Oregon, Washington, Alaska	4.3	355	490	2.2
	United States	**108.4**	**307**	**439**	**3.6**

[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 1987 went to Region II, which includes New York, New Jersey, Puerto Rico, and the Virgin Islands. The lowest per capita aid in 1987 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.

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. From 1981 to 1989, they are estimated to

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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	20.9	2.6
1985	105.9	11.2	19.3	20.9	2.7
1986	112.4	11.3	19.8	20.5	2.7
1987	108.4	10.8	18.9	18.2	2.5
1988 estimate	116.7	11.0	19.0	NA	2.5
1989 estimate	119.0	10.9	18.7	NA	2.4
1990 estimate	121.9	10.6	18.1	NA	2.3
1991 estimate	124.3	10.3	17.6	NA	2.2
1992 estimate	127.7	10.3	17.3	NA	2.1
1993 estimate	131.5	10.3	17.0	NA	2.0

[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 1989.*

grow at an average annual rate of 2.9 percent. In 1989 Federal grants are estimated to be $119.0 billion, 10.9 percent of total Federal outlays and 18.7 percent of outlays for domestic Federal programs.

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, and declined to 18.2 percent in 1987. 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 2.4 percent by 1989.

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. In 1989, 54 percent of grants are to States and localities as payments for individuals.[3] Among the larger of these programs are medicaid,

[3] Payments for individuals are defined as Federal outlays providing benefits in cash or in-kind that constitute income transfers to individuals or families.

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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	34.7	65.3
1985	105.9	48.1	24.8	33.0	33.4	66.6
1986	112.4	52.8	26.2	33.3	30.9	69.1
1987	108.4	56.4	23.8	28.2	26.3	73.7
1988 estimate	116.7	61.0	25.0	30.7	NA	NA
1989 estimate	119.0	63.8	24.8	30.4	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.

family support payments (AFDC), housing assistance, and nutrition programs.

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 percentage declined to 26.3 percent in 1987, largely because State and local capital spending financed by their own revenues and by borrowing 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 $24.8 billion in 1989, 21 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 recipi-

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ent 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 1991.

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. The general revenue sharing program was terminated in 1986. The remaining programs in this category are expected to comprise 1.8 percent of total grants-in-aid in 1989.

Under the current administration, broad-based aid has increased. 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. The administration is proposing a new block grant beginning in 1989 for family planning.

Broad-based aid is estimated to be 10.6 percent of total grants-in-aid in 1989.

In 1987 there were approximately 372 different grant programs. Most of the spending is concentrated in relatively few—more than 85 percent of estimated obligations in 1987 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 slightly. 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 $.41 for each Federal dollar. The

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Table H-9. **OUTLAYS FOR GENERAL-PURPOSE, BROAD-BASED, AND OTHER GRANTS**

(Dollar amounts in billions)

	Actual				Estimate			
	1972	1975	1980	1987	1988	1989	1990	1991
General-purpose grants:								
General revenue sharing	.....	6.1	6.8	0.1	.....	.....	.....	.....
Other general purpose fiscal assistance and TVA [1]	0.5	0.9	1.8	2.0	2.0	2.1	1.8	1.9
Subtotal, general-purpose grants	**0.5**	**7.0**	**8.6**	**2.1**	**2.0**	**2.1**	**1.8**	**1.9**
Broad-based:								
Community development	.....	*	3.9	3.0	3.0	3.0	3.0	2.9
Health block grants	0.1	0.1	0.1	1.2	1.1	1.2	1.3	1.3
State education block grants	.....	.....	.....	0.5	0.5	0.5	0.6	0.6
Employment and training	.....	1.3	2.1	1.9	1.9	1.9	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	.....	.....	.....	1.8	1.6	1.2	1.2	1.2
Other	0.8	1.1	1.4	2.0	2.3	2.0	1.9	1.8
Subtotal, broad-based grants	**2.9**	**4.6**	**10.3**	**13.1**	**13.0**	**12.6**	**12.4**	**12.2**
Other grants	**31.0**	**38.2**	**72.5**	**93.2**	**101.6**	**104.4**	**107.7**	**110.3**
Total	**34.4**	**49.8**	**91.5**	**108.4**	**116.7**	**119.0**	**121.9**	**124.3**
ADDENDUM: PERCENT OF TOTAL								
General-purpose grants	1.6%	14.1%	9.4%	1.9%	1.8%	1.8%	1.5%	1.5%
Broad-based grants	8.3%	9.2%	11.3%	12.1%	11.2%	10.6%	10.2%	9.8%
Other grants	90.1%	76.7%	79.3%	86.0%	87.1%	87.7%	88.3%	88.7%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

*$50 million, on or less.
[1] Includes most grants in the general government function, and shared revenues from the Tennessee Valley Authority, shown in the energy function in Table H-11.

increase is because of the significant growth in programs such as medicaid that require a larger than average matching share.

Federalism and Regulatory Relief.—Federalism and regulatory relief are areas where the administration is providing more flexibility and authority to State and local governments. Some examples of administration action in this area are listed below.

In October 1987 the President signed Executive Order 12612, "Federalism." This Executive Order is designed to restore the originally-intended division of responsibilities between the Federal Government and the States and to ensure that the principles of federalism guide agencies in the formulation and implementation of policies. In addition to listing these principles, the Executive Order establishes federalism policymaking criteria for the development of regulatory and legislative proposals, establishes limits on Federal preemption of State laws, and requires that each Executive department and agency designate an official to be responsible for imple-

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mentation of the order. Finally, the Office of Management and Budget is given the authority for Government-wide coordination and review to further ensure that the goals of the order are achieved.

During 1987 the administration began a review of regulatory impediments to efficient State management of federally-funded programs. These impediments were identified by a number of States as being particularly onerous and were submitted to the President by the National Governors' Association. By February 1988 the administration will have taken action on nearly 50 of these items and will have presented its final report to the States. The administration will continue to work closely with the National Governors' Association and other groups to further identify and address a variety of regulatory impediments.

In March 1987, the President directed all Federal grant-making agencies to simultaneously propose and subsequently adopt verbatim a single, Government-wide grants management "common rule" to replace agency implementation of OMB Circular A–102, "Uniform Administrative Requirements for Grants and Cooperative Agreements with State and Local Governments." The final rule is scheduled to be published in March 1988 in the *Federal Register*. The common rule will eliminate redundant and inconsistent administrative requirements among and within the 24 Federal grant-making agencies by rescinding all inconsistent grants administration provisions in program regulations, and by superceding all similar provisions of noncodified program manuals, handbooks, and other materials, unless required by legislation or approved by OMB.

The single, Government-wide grants management common rule will also contain numerous policy changes to further federalism, regulatory relief and business-like management of grants. Two particularly significant federalism changes affect States. First, States will no longer have to follow uniform Federal standards or requirements for financial management systems, equipment or procurement. Instead, States will expend and account for grant funds according to their own State laws and procedures. Second, in State-administered programs (other than the open-ended entitlement programs), States will no longer have to apply uniform Federal administrative standards to subgrantees. Instead, States will be free to condition and manage funds which "flow-down" to subgrantees according to their own State laws and procedures.

Finally, in March 1988 Federal agencies will be meeting for the third consecutive year with State Single Points of Contact, who are responsible for implementation of Executive Order 12372, the Intergovernmental Review Process. The Executive Order, now in its fourth year of implementation, allows States to choose which Fed-

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eral programs they wish to review and requires that the Federal agencies accommodate State comments and concerns or explain why they cannot. Since implementation of the Order, significant achievements in intergovernmental cooperation and consultation have been realized. The annual meeting affords both the Federal agencies and State and local governments the opportunity to review achievements in cooperation realized through the order, and identify areas for further progress.

Management Improvements.—The administration has also carried out a number of efforts to improve management of the grants-in-aid system.

In December 1987, 18 agencies issued interim final rules to replace the February 1986 Government-wide common rule for Uniform Relocation Assistance with a Government-wide single rule, promulgated by the Department of Transportation. The single rule will continue to recognize State and local competence, delete regulatory planning requirements, and change the reporting frequency, which had been annual in most cases, to no more than every three years. Uniform Relocation Assistance is one of 68 crosscutting requirements that affect Federal assistance and direct Federal development.

In May 1987, OMB proposed for public comment new, standard reporting formats for financial reporting on open-ended entitlement programs (e.g., medicaid and aid to families with dependent children). This new reporting would replace the many inconsistent and incomplete reports now called for with complete, consistent and logical reporting across all of the affected programs.

As part of this administration's initiatives to curb fraud, waste, and abuse, OMB is directing a series of actions so that suspension and debarment decisions in nonprocurement (grants, loans, etc.) programs by one Federal agency will have Government-wide effect, as established by Executive Order 12549 of February 1986. Government-wide effect means that a suspended or debarred participant for one Federal agency will no longer be able to receive a subgrant, subcontract, or loan from another Federal agency. In May 1988, agencies will issue final rules and start taking nonprocurement suspension and debarment actions with Government-wide effect.

A State and Federal task force is working on ways to improve the intergovernmental transfers of about $120 billion in Federal assistance funds. Proposed legislation would require that States be charged interest on Federal funds from the time they receive funds to the time recipients' checks clear the States' banks. Similarly, the Federal Government will pay interest when State funds are used for Federal assistance payments. Full implementation of this proposal would save the Federal Government about $50 million in interest costs annually.

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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.

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.

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Table H-10. **THREE MEASURES OF FEDERAL GRANTS-IN-AID TO STATE AND LOCAL GOVERNMENTS, 1983–86**

(In billions of dollars)

	1983	1984	1985	1986
Budget (Special Analysis H)	92.5	97.6	105.9	112.4
Less principal exclusions:				
Agricultural commodities	−2.0	−1.8	−2.5	−1.7
Geographical exclusions	−2.5	−2.6	−2.7	−2.7
Plus payments for research	4.2	4.6	5.1	5.4
Federal unemployment benefits and related	0.2	0.4	0.4	0.4
All other (net)	−3.9	0.7	1.0	1.8
Federal payments (Census)	88.5	99.0	107.2	115.6
Less:				
Low-rent public housing	−5.5	−5.6	−6.2	−6.2
Federal unemployment benefits and related	−0.2	−0.4	−0.4	−0.4
All other (net)	2.9	−2.3	−2.8	−1.6
Grants-in-aid (national income and product accounts)	85.7	90.7	97.8	107.4

—*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.

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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. 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.

[4] Special Analysis B provides general information on the Federal sector of the national income and product accounts.

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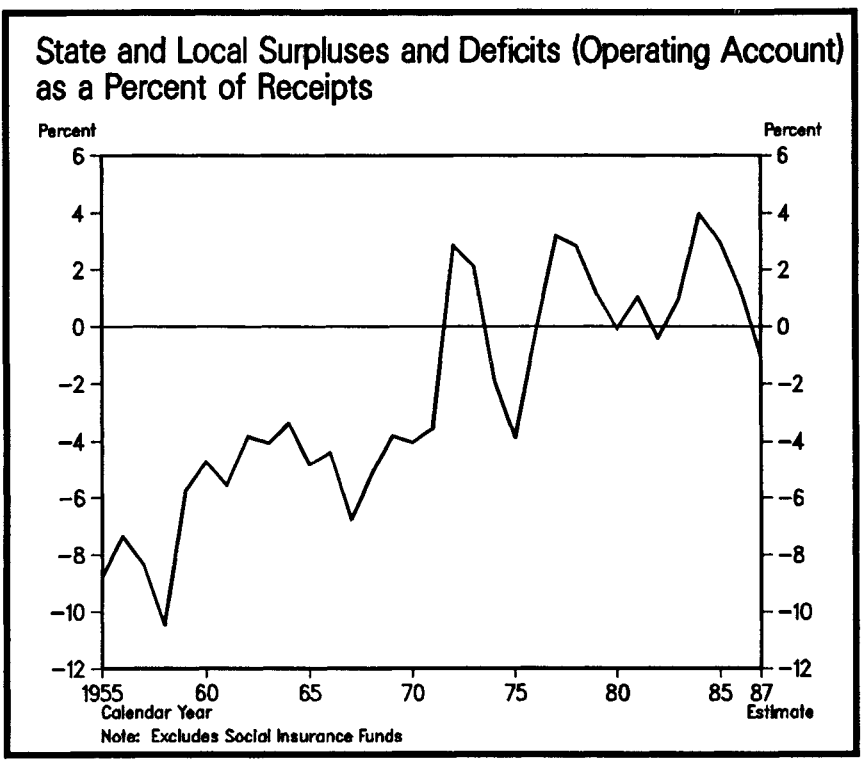
—The surpluses in the latter 1970's were largely the result of the economic recovery, increases in anti-recession Federal grants, reductions in debt-financed capital spending, and general restraints in government spending exemplified by the passage of Proposition 13 in California in 1978.

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. The gradual decline into deficit in 1987 is in part due to increases by States and localities in capital spending financed by borrowing.



Detailed Federal Aid Tables

The following two tables present detailed Federal aid data for 1987, 1988, and 1989. 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.

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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		
	1987 actual	1988 estimate	1989 estimate	1987 actual	1988 estimate	1989 estimate
NATIONAL DEFENSE:						
Department of Defense—Military:						
National Guard centers construction	107	110	110	107	110	110
Other	7	21	.....	7	21	.....
Federal Emergency Management Agency:						
Emergency management planning and assistance	78	80	89	80	79	84
Total, national defense	**191**	**211**	**199**	**193**	**210**	**194**
ENERGY:						
Department of Energy:						
Energy conservation	200	200	.....	242	193	172
Department of Housing and Urban Development:						
Assistance for solar and conservation improvements	2	2	.....	10	4	2
Tennessee Valley Authority:						
Tennessee Valley Authority fund	.....	.....	.....	203	218	237
Total, energy	**202**	**202**	.....	**455**	**414**	**411**
NATURAL RESOURCES AND ENVIRONMENT:						
Department of Agriculture:						
Water resource management and improvement	102	97	39	124	138	63
Resource conservation and development	7	7	5	7	8	7
State and private forestry	27	39	5	27	39	5
Forest research	.....	.....	.....	13	14	10
Department of Commerce:						
Operations research and facilities	158	141	50	158	141	50
Department of the Interior:						
Abandoned mine reclamation fund	161	160	130	135	143	121
Regulation and technology	45	40	42	44	40	41
Land acquisition	33	17	.....	80	63	47
Urban park and recreation fund	.....	—1	.....	4	3	3
Historic preservation fund	24	28	.....	25	30	14
Resource management	5	5	.....	5	5	1
Construction	2	2	.....	2	2	*
Sport fish restoration	141	161	195	85	148	163
Miscellaneous permanent appropriations	110	118	119	112	173	119
Environmental Protection Agency:						
Sewage treatment system construction grants	2,361	2,304	1,500	2,919	2,566	2,378
Abatement, control, and compliance	295	285	290	290	234	269
Hazardous substance superfund	176	194	219	42	102	145
Leaking underground storage tank trust fund	36	14	40	.....	14	22
Total, natural resources and environment	**3,682**	**3,611**	**2,634**	**4,073**	**3,864**	**3,457**
AGRICULTURE:						
Department of Agriculture:						
Food donations (Commodity Credit Corporation)	1,445	1,043	652	1,445	1,043	652
Temporary emergency food assistance program	50	50	.....	46	50	16
Extension Service	339	358	300	319	353	312
Cooperative State Research Service	379	306	257	281	304	276

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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		
	1987 actual	1988 estimate	1989 estimate	1987 actual	1988 estimate	1989 estimate
Payments to States and possessions (AMS)	1	1	.....	1	1	1
Total, agriculture	**2,214**	**1,758**	**1,209**	**2,092**	**1,751**	**1,257**
COMMERCE AND HOUSING CREDIT:						
Department of Commerce:						
Minority business development	1	1	.....	1	1	.....
Total, commerce and housing credit	**1**	**1**	.....	**1**	**1**	.....
TRANSPORTATION:						
Department of Transportation:						
Federal-aid highways (trust fund)	13,262	13,486	13,482	12,414	12,968	12,989
Highway traffic safety grants	121	220	126	115	121	128
Highway-related safety grants	10	10	10	9	9	11
Motor carrier safety grants	50	50	60	26	41	48
Other highway programs	96	101	.....	85	130	135
Formula mass transit grants	2,000	1,736	1,394	1,822	2,131	1,992
Discretionary grants - transit	1,097	1,200	.....	668	753	763
Interstate transfer grants - transit	200	124	.....	264	239	186
Research, training, and human resources	6	2	.....	5	2	1
Washington metro	201	180	128	150	159	164
Miscellaneous expired accounts - mass transit	.....	.....	.....	345	200	200
Federal Railroad Administration	11	11	.....	22	26	17
Grants-in-aid for airports	869	1,700	1,700	917	979	1,110
Boat safety	29	22	15	22	37	12
Research and special programs	4	.....	.....	4	1	.....
Pipeline safety	.....	4	5	.....	4	5
Washington Metropolitan Area Transit Authority:						
Interest payments	52	49	52	52	54	57
Total, transportation	**18,009**	**18,896**	**16,971**	**16,919**	**17,854**	**17,818**
COMMUNITY AND REGIONAL DEVELOPMENT:						
Department of Agriculture:						
Rural water and waste disposal grants	109	109	75	157	163	140
Rural community fire protection grants	3	3	.....	3	3	2
Rural development loan fund	.....	.....	.....	.....	14	.....
Rural development grant program	.....	.....	.....	*	9	*
Department of Commerce:						
Economic development assistance programs	192	182	.....	205	218	179
Other programs	.....	.....	.....	1	1	.....
Department of the Interior:						
Bureau of Indian Affairs	14	16	13	14	15	13
Department of Housing and Urban Development:						
Community development block grants	3,000	2,880	2,480	2,967	3,037	3,015
Urban development action grants	225	216	−50	354	400	366
Supplemental aid for facilities for the homeless	15	.....	.....	.....	5	5
Rental housing development and rehabilitation	314	206	150	166	324	348
Other community development	.....	.....	.....	7	10	10
Federal Emergency Management Agency:						
Disaster relief	112	108	173	201	157	230

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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		
	1987 actual	1988 estimate	1989 estimate	1987 actual	1988 estimate	1989 estimate
Appalachian Regional Commission:						
Appalachian regional development programs	101	102	.....	141	123	107
Neighborhood Reinvestment Corporation:						
Neighborhood Reinvestment Corporation	19	19	19	19	19	19
Total, community and regional development	**4,104**	**3,840**	**2,861**	**4,235**	**4,498**	**4,434**
EDUCATION, TRAINING, EMPLOYMENT, AND SOCIAL SERVICES:						
Department of Commerce:						
Public telecommunications facilities	20	21	.....	22	22	19
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	2,700	2,700	2,700	2,688	2,685	2,700
Community services block grant	405	382	310	361	406	349
Interim assistance to States for immigration	.....	928	644	.....	928	644
Human development services	1,899	2,218	2,218	1,771	2,150	2,206
Foster care and adoption assistance	1,041	811	1,075	783	979	1,013
Work incentives	126	93	.....	137	95	6
Department of the Interior:						
Operation of Indian programs	23	20	20	23	20	20
Department of Labor:						
Training and employment services	2,986	3,020	2,659	2,929	3,014	3,066
Worker readjustment	.....	.....	948	.....	.....	29
Federal-State employment service	961	951	892	939	977	928
Community service employment for older Americans	74	73	74	68	75	73
Department of Education:						
Compensatory education for the disadvantaged	3,938	4,321	4,554	3,199	3,825	4,343
Impact aid	708	700	582	695	737	618
School improvement programs	861	937	1,032	785	682	957
Bilingual, immigrant, and refugee education	150	151	162	103	131	135
Indian education	60	62	64	37	27	51
Education for the handicapped	1,575	1,706	1,754	1,159	1,627	1,713
Vocational rehabilitation and handicapped research	1,356	1,458	1,486	1,280	1,451	1,470
Payments to institutions for the handicapped	6	5	5	6	6	6
Vocational and adult education	983	984	1,011	1,225	964	889
Student financial assistance [1]	76	73	.....	66	96	40
Higher education	26	23	8	15	21	19
Libraries	126	125	65	122	150	122
Chicago litigation settlement	83	.....	.....	.....	17	17
Community Services Administration:						
Community services programs	.....	.....	.....	−3	−2	−*
Corporation for Public Broadcasting:						
Public broadcasting fund	200	214	228	200	214	214
National Endowment for the Arts:						
National Endowment for the Arts	32	33	33	31	32	34
Institute of Museum Services:						
Institute of Museum Services	5	5	5	5	6	5

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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		
	1987 actual	1988 estimate	1989 estimate	1987 actual	1988 estimate	1989 estimate
Total, education, training, employment, and social services	**20,430**	**22,015**	**22,530**	**18,657**	**21,336**	**21,687**
HEALTH:						
Department of Agriculture:						
Food Safety and Inspection Service	33	35	37	34	35	37
Department of Health and Human Services, except Social Security:						
Medicaid [1]	27,612	30,657	32,733	27,435	30,664	32,733
Public health service management			140			70
Public health emergency fund	30				23	5
Health resources and services [1]	1,091	1,140	1,032	1,128	1,183	1,233
Health care improvement			15			8
Disease control, research and training	214	226	233	182	176	217
Alcohol, drug abuse, and mental health [1]	711	791	733	622	713	736
Department of Labor:						
Occupational Safety and Health Administration	59	47	48	59	46	47
Mine Safety and Health Administration	5	5	5	5	5	5
Total, health	**29,757**	**32,902**	**34,974**	**29,466**	**32,846**	**35,091**
INCOME SECURITY:						
Department of Agriculture:						
Child nutrition programs (incl. Sect. 32) [1]	4,637	4,701	4,845	4,289	4,649	4,867
Food stamp program administration [1]	1,056	1,129	1,189	1,107	1,154	1,181
Nutrition assistance for Puerto Rico [1]	853	879	908	852	876	907
Supplemental feeding programs [1]	1,703	1,850	1,921	1,701	1,859	1,919
Special milk program [1]	18	21	19	15	23	21
Cash and commodities for selected groups [1]	194	194	199	188	193	198
Rural housing preservation grants [1]	19	19		10	18	20
Rural housing for domestic farm labor [1]	10	10		9	11	11
Mutual and self-help housing [1]	8	8		6	8	8
Department of Health and Human Services, except Social Security:						
Family support payments to States (AFDC and CSE) [1]	10,460	11,125	10,723	10,540	10,784	10,933
Program administration	15	3	3	3	8	8
Payments to States from receipts for child support	*	*		*	*	
Low income home energy assistance [1]	1,822	1,532	1,187	1,829	1,558	1,218
Refugee and entrant assistance [1]	328	333	268	374	293	284
Department of Labor:						
Unemployment trust fund—administration	1,633	1,656	1,675	1,560	1,656	1,675
Department of Housing and Urban Development:						
Subsidized housing programs [1]	5,053	4,913	5,723	4,588	5,192	6,334
Supportive housing demonstration program [1]	85	64	75		29	45
Emergency shelter grants program [1]	60	8		2	37	30
Payments for operation of low income housing [1]	1,350	1,450	1,518	1,388	1,486	1,515
Low-rent public housing (forgiven loans) [1]	1,300	1,436	956	1,393	1,531	1,064
Congregate services program [1]	3	4		4	5	5

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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		
	1987 actual	1988 estimate	1989 estimate	1987 actual	1988 estimate	1989 estimate
Federal Emergency Management Agency:						
Emergency food and shelter [1]	125	114	80	114	125	80
Total, income security	**30,732**	**31,450**	**31,289**	**29,972**	**31,494**	**32,323**
VETERANS BENEFITS AND SERVICES:						
Veterans Administration:						
Medical care [1]	67	70	95	67	70	95
Grants for constructing State care facilities [1]	42	40	42	26	33	36
Other veterans	.....	.....	9	1	3	5
Total, veterans benefits and services	**110**	**111**	**146**	**95**	**106**	**136**
ADMINISTRATION OF JUSTICE:						
Department of Justice:						
Justice assistance	386	198	47	148	212	137
Crime victims fund	77	85	85	49	77	82
National Institute of Corrections	2	2	2	3	2	2
Department of the Treasury:						
Payments to the Government of Puerto Rico	8	8	.....	8	8	.....
Department of Housing and Urban Development:						
Fair housing assistance	6	5	10	6	8	10
Equal Employment Opportunity Commission:						
Equal Employment Opportunity Commission	20	20	20	20	20	20
Other Temporary Commissions:						
State Justice Institute: salaries and expenses	7	10	.....	*	9	8
Total, administration of justice	**506**	**328**	**165**	**234**	**336**	**260**
GENERAL GOVERNMENT:						
Department of Agriculture:						
Forest Service permanent appropriations	213	314	306	303	289	308
Department of Defense—Civil:						
Corps of Engineers permanent appropriations	8	6	6	7	5	6
Department of the Interior:						
Payments in lieu of taxes	105	105	105	105	105	105
Bureau of Land Management permanent appropriations	1	150	78	78	74	78
Payments to States - mineral leasing receipts	375	412	439	375	412	439
National wildlife refuge fund	11	12	12	11	11	11
Payments to the U.S. territories	69	70	70	71	70	70
Administration of territories	76	75	68	52	70	71
Trust Territory of the Pacific Islands	67	42	3	38	54	19
Department of the Treasury:						
General revenue sharing	.....	.....	.....	76	.....	.....
Internal revenue collections for Puerto Rico	185	205	205	225	205	205
Miscellaneous permanent appropriations	107	105	108	97	105	108
Department of Energy:						
Payments to States under the Federal Power Act	1	2	2	1	2	2

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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		
	1987 actual	1988 estimate	1989 estimate	1987 actual	1988 estimate	1989 estimate
District of Columbia:						
Federal payment to the District of Columbia	580	550	525	560	552	527
Total, general government	**1,799**	**2,049**	**1,927**	**2,000**	**1,955**	**1,948**
Total, grants-in-aid	**111,737**	**117,373**	**114,905**	**108,392**	**116,666**	**119,015**

[1] Programs included in the "grants for payments to individuals" category shown in Table H-8.

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Table H–12. **CREDIT ASSISTANCE TO STATE AND LOCAL GOVERNMENTS** [1]

(In millions of dollars)

Function, agency and program		1987 actual	1988 estimate	1989 estimate
Direct Loans				
Energy, natural resources and environment:				
Department of the Interior:				
Bureau of Reclamation loan program	Disbursements	51	29	23
	Net loans	*40*	*19*	*23*
	Outstandings	**520**	**539**	**561**
Drought emergency loan fund	*Net loans*	*−1*	*−1*	*−1*
	Outstandings	**13**	**12**	**12**
Environmental Protection Agency:				
Construction grants	Disbursements	1	.....	.....
	Net loans	*−11*	*−1*	*−1*
	Outstandings	**4**	**3**	**2**
Abatement, control, and compliance	Disbursements	4	49	31
	Net loans	*4*	*46*	*26*
	Outstandings	**27**	**74**	**100**
Total, energy, natural resources and environment	Disbursements	56	78	54
	Net loans	*32*	*64*	*47*
	Outstandings	**565**	**628**	**676**
Agriculture, commerce and housing credit:				
Department of Agriculture:				
Rural housing insurance fund (program)	Disbursements	25	22	18
	Net loans	*14*	*12*	*9*
	Outstandings	**395**	**407**	**416**
Transportation:				
Department of Transportation:				
Federal aid to highways (trust fund)	Disbursements	*	1	.....
	Net loans	*−38*	*−18*	*−21*
	Outstandings	**38**	**21**	.....
Right-of-way revolving fund	Disbursements	45	45	48
	Net loans	*−27*	.....	.....
	Outstandings	**104**	**104**	**104**
Total, transportation	Disbursements	45	47	48
	Net loans	*−65*	*−18*	*−21*
	Outstandings	**143**	**125**	**104**
Community and regional development:				
Department of Agriculture:				
Rural development insurance fund	Disbursements	466	450	504
	Net loans	*−1,796*	*−1,044*	*−798*
	Outstandings	**6,431**	**5,386**	**4,588**
Department of Commerce:				
Coastal energy impact fund	Disbursements	3	.....	.....
	Net loans	*−8*	*−3*	*−3*
	Outstandings	**89**	**85**	**82**
Department of Interior:				
BIA revolving fund for loans	Disbursements	7	9	.....
	Net loans	*3*	*4*	*−4*
	Outstandings	**55**	**60**	**55**

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Table H-12. **CREDIT ASSISTANCE TO STATE AND LOCAL GOVERNMENTS [1]—Continued**

(In millions of dollars)

Function, agency and program		1987 actual	1988 estimate	1989 estimate
Department of Housing and Urban Development:				
Community development	Disbursements	63	22	20
	Net loans	*24*	*−57*	*−56*
	Outstandings	**324**	**267**	**211**
Revolving fund (liquidating programs)	*Net loans*	*−30*	*−327*	*
	Outstandings	**329**	**2**	**2**
Total, community and regional development	Disbursements	539	481	524
	Net loans	*−1,808*	*−1,427*	*−862*
	Outstandings	**7,228**	**5,801**	**4,939**
Education:				
Department of Education:				
College housing loans	*Net loans*	*−523*	*−295*	*−225*
	Outstandings	**569**	**274**	**49**
College housing and academic facilities	Disbursements	.....	3	21
	Net loans	.....	*3*	*21*
	Outstandings	.....	**3**	**24**
Higher education facilities loan and insurance fund	*Net loans*	*−59*	*−54*	*−60*
	Outstandings	**107**	**53**	**−7**
Student loans	Disbursements	.....	9	.....
	Net loans	.....	*−73*	*−37*
	Outstandings	**153**	**79**	**43**
Student financial assistance	*Net loans*	*−7*	*−9*	.....
	Outstandings	**9**	.....	.....
Total, education	Disbursements	.....	12	21
	Net loans	*−588*	*−429*	*−301*
	Outstandings	**839**	**409**	**108**
Health:				
Department of Health and Human Services:				
Medical facility guarantee and loan fund	*Net loans*	.....	*−1*	.....
	Outstandings	**15**	**14**	**14**
General purpose fiscal assistance:				
Other independent agencies:				
Loans to the District of Columbia	*Net loans*	*−293*	*−30*	*−31*
	Outstandings	**715**	**685**	**654**
Grand total, direct loans	*New loans*	*666*	*641*	*664*
	Net loans	*−2,708*	*−1,829*	*−1,158*
	Outstandings	**9,899**	**8,069**	**6,911**

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Table H–12. **CREDIT ASSISTANCE TO STATE AND LOCAL GOVERNMENTS [1]—Continued**

(In millions of dollars)

Function, agency and program		1987 actual	1988 estimate	1989 estimate
Guaranteed Loans				
Community and regional development:				
Department of Agriculture:				
Rural development insurance fund	*Net loans*	*—9*	*—8*	*—7*
	Outstandings	**343**	**335**	**329**
Department of Housing and Urban Development:				
Revolving fund (liquidating programs)	New guaranteed loans	14		
	Net loans	*12*		*
	Outstandings	**12**	**12**	**12**
Community development grants	New guaranteed loans	54	129	72
	Net loans	*54*	*127*	*46*
	Outstanding	**54**	**181**	**227**
Department of Interior:				
BIA, Indian loans	New guaranteed loans	31	25	
	Net loans	*27*	*14*	*—21*
	Outstanding	**118**	**132**	**111**
Total, community and regional development	New guaranteed loans	99	154	72
	Net loans	*84*	*133*	*19*
	Outstandings	**528**	**660**	**679**
Income security:				
Department of Housing and Urban Development:				
Low-rent public housing	*Net loans*	*—249*	*—275*	*—300*
	Outstandings	**6,252**	**5,977**	**5,677**
Grand total, guaranteed loans	New guaranteed loans	99	154	72
	Net loans	*—165*	*—142*	*—281*
	Outstandings	**6,780**	**6,638**	**6,356**

* $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"

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SPECIAL ANALYSIS I

CIVILIAN EMPLOYMENT IN THE EXECUTIVE BRANCH

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.

The Administration reduced nondefense full-time equivalent (FTE) employment by nearly 89,000 from 1981 through 1987. The Administration remains committed to continuing to restrain the size of the Federal workforce to the minimum necessary to carry out essential functions efficiently.

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 Title 10, chapter 4, section 140b of the United States Code 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 1988, 1989, and 1990 constitute upper limits on agency FTE employment. The 1988 through 1990 totals for "Civilian Agency Employment" contain adjustments to reflect the fact that actual nondefense employment tends to fall short of assigned employment ceilings. For 1988, a shortfall of 1.5 percent is projected; this decreases to 1.0 percent in 1989 and to 0.5 percent in 1990.

Significant Changes in Full-Time Equivalent Employment

Nondefense employment is expected to decrease by 1,025 from 1988 to 1989. From 1989 to 1990, an increase of about 49,000 is projected. Nearly all of this increase will take place in the Department of Commerce, which will hire temporary employees at the Bureau of the Census to conduct the 1990 decennial Census of Population and Housing.

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Table I–1. **FULL TIME EQUIVALENT OF FEDERAL CIVILIAN EMPLOYMENT** [1]

Agency	Fiscal year				
	1987 actual [2]	1988 estimate	1989 estimate	1990 estimate	Difference 1988–89
Agriculture	102,579	104,962	102,047	100,378	−2,915
Commerce	31,916	38,430	36,273	85,222	−2,157
Defense—civil functions	28,199	28,227	28,615	28,542	388
Education	4,412	4,495	4,489	4,489	−6
Energy	16,116	16,266	15,804	15,404	−462
Health and Human Services	122,656	119,624	115,045	110,972	−4,579
Housing & Urban Development	12,282	13,101	12,673	12,243	−428
Interior	69,662	70,468	69,725	69,725	−743
Justice	65,703	72,455	77,324	80,344	4,869
Labor	17,674	18,518	18,591	18,637	73
State	25,724	26,125	25,837	25,831	−288
Transportation	60,310	61,162	62,242	62,612	1,080
Treasury	138,353	151,801	153,358	154,641	1,557
Environmental Protection Agency	13,488	14,448	14,570	14,334	122
National Aeronautics and Space Administration	22,001	22,425	22,950	22,950	525
Veterans Administration	221,020	220,869	218,420	216,247	−2,449
Other:					
Agency for International Development	4,569	4,725	4,725	4,725	.....
General Services Administration	19,882	21,071	20,155	19,663	−916
Nuclear Regulatory Commission	3,376	3,250	3,180	3,120	−70
Office of Personnel Management	5,108	5,372	5,261	5,088	−111
Panama Canal Commission	8,433	8,665	8,665	8,665	.....
Small Business Administration	4,048	4,121	4,304	4,234	183
Tennessee Valley Authority	28,297	29,500	29,500	29,500	.....
United States Information Agency	8,849	8,950	8,870	8,700	−80
Miscellaneous	40,161	42,313	42,072	42,139	−241
Estimated nondefense lapse	.....	−16,670	−11,047	−5,742	5,623
Civilian agency employment	**1,074,818**	**1,094,673**	**1,093,648**	**1,142,663**	**−1,025**
Defense—military functions [3]	1,031,317	1,028,809	1,017,012	1,017,000	−11,797
Subtotal	2,106,135	2,123,482	2,110,660	2,159,663	−12,822
Postal Service Employment [4]	761,180	830,051	816,268	816,268	−13,783
Total, Executive Branch	2,867,315	2,953,533	2,926,928	2,975,931	−26,605

[1] Excludes 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] 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] By law (10 U.S.C., Chapter 4, section 140b), the Department of Defense is exempt from full-time equivalent employment controls. Data shown are estimated.
[4] Includes the Postal Rate Commission

A number of agencies show decreases, in Table I-1, from the 1988 estimates to the corresponding estimates for 1989. The agencies with a decrease of more than 100 FTE's from 1988 are:

- Postal Service (−13,783). The impact of anticipated cost reductions, together with an expected workload decline in response to postage rate increases will cause this employment decrease.
- Department of Defense—military functions (−11,797). This decrease is the result of severe budget constraints on the Department. Some of the reduction will be achieved through productivity and efficiency improvements. The remainder will

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be achieved through program reductions throughout the Department including adjustments in the force structure and reductions in logistical and base operating support activities.

- Department of Health and Human Services (−4,579). Most of this reduction results from increased productivity in the Social Security Administration, which is investing nearly $1 billion in its automated systems.
- Department of Agriculture (−2,915). 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 less. The Federal role in some conservation programs will be reduced and staffing levels adjusted accordingly. Other decreases reflect management improvements and increased contracting of services more appropriately conducted by the private sector.
- Veterans Administration (−2,449). This reduction reflects anticipated productivity increases in all areas. Staffing plans in the medical care area anticipate that all veterans who apply for care, and are in need of care, will be served and that during fiscal year 1988, the ratio of patients to staff will remain at the levels experienced during the first half of fiscal year 1987. In the area of non-medical benefits administration, staffing is being reduced slightly in recognition of decreased workload.
- Department of Commerce (−2,157). This decrease is due to completion of preliminary activities associated with the 1990 Decennial Census, the transfer of the Minority Business Development Agency to the Small Business Administration and the phase-out of the Economic Development Administration.
- General Services Administration (−916). This decrease is due primarily to contracting out under the guidelines of OMB Circular No. A-76.
- Department of the Interior (−743). This reduction is related primarily to the reorganization and reorientation of the Bureau of Reclamation.
- Department of Energy (−462). Employment will continue to decline due to implementation of management improvements, including increased reliance on private sector contractors, 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.
- Department of Housing and Urban Development (−428). This change is a result of decreased workloads in housing, public

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and Indian housing, and Community Planning and Development programs.

- Department of State (−288). This reduction reflects anticipated savings resulting from program efficiencies and productivity improvements, as well as implementation of the President's contracting out program.
- Office of Personnel Management (−111). OPM's decrease in FTE's results for the most part from scheduled contracting out and productivity savings.

Some agencies in Table I-1 show increases of 100 or more FTE's from 1988 to 1989:

- Department of Justice (4,869). Improved staffing and new activities at Federal Prisons, continued administration of immigration reform legislation, greater legal support for General Legal Activities and U.S. Attorneys, and key programs within the Federal Bureau of Investigation all contribute to this increase.
- Department of the Treasury (1,557). The dominant component of this increase is for the Internal Revenue Service (IRS), partially offset by decreases in other Treasury bureaus. Within the IRS, 1,015 will be added for returns processing, 520 for examinations, and 113 for tax fraud investigations.
- Department of Transportation (1,080). This change is primarily for Federal Aviation Administration staff increases for air traffic control, safety inspections, security, and systems maintenance.
- National Aeronautics and Space Administration (525). This increase provides the staffing required to restore the space shuttle to safe, routine flight activity. Additional staffing is also provided to the Office of the Inspector General.
- Department of Defense—civil functions (388). This increase, in the Army Corps of Engineers, enables the Corps to accommodate additional design and construction management, done on a reimbursable basis, for the Environmental Protection Agency's expanding Superfund program. The increase for the Superfund program is partially offset by scheduled savings from contracting out.
- Small Business Administration (183). The increase reflects the transfer of the Minority Business Development Administration from the Department of Commerce.
- Environmental Protection Agency (122). This change is due to the increase in scope of the Superfund hazardous waste cleanup program resulting from its reauthorization in 1986.

In addition to the employment changes shown above some smaller agencies which comprise a part of the "miscellaneous" line in

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Table I-1 will experience significant increases, relative to their size:

- Securities and Exchange Commission (156). Increases are required as a result of rising workload due to fundamental changes in the securities markets.
- Federal Deposit Insurance Corporation (99). This increase relates to heavier workload for the Corporation because of the rise in the number of troubled banks.

End-of-Year Employment Levels

Between January 1981, when this administration took office, and September 30, 1987, nondefense total employment fell from 1,232,181 to 1,155,959; a decrease of 76,222 employees. Total Federal civilian employment in the executive branch was 2,205,296 at the end of 1987, excluding Postal Service and special category employees.

Table I-2 shows Government-wide Federal civilian employment as of the end of fiscal years 1985, 1986, and 1987. 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 about 86 percent of executive branch employment (excluding the Postal Service) at the end of fiscal year 1987. The remainder was 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).

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Table I–2. **TOTAL FEDERAL EMPLOYMENT, END-OF-YEAR**

Description	Actual, as of September 30		
	1985	1986	1987
Civilian Employment in the executive branch:			
Full-time permanent	1,898,980	1,885,139	1,903,852
Other than full-time permanent	286,933	265,016	301,444
DOD—Military functions (total employment)	(1,043,240)	(1,027,853)	(1,049,337)
Non-DOD (total employment)	(1,142,673)	(1,122,302)	(1,155,959)
Subtotal	2,185,913	2,150,155	2,205,296
Postal Service:			
Full-time permanent	587,132	607,725	635,088
Other than full-time permanent	162,952	183,294	162,822
Subtotal	750,084	791,019	797,910
Special Categories [1]	27,546	25,558	26,865
Subtotal, executive branch civilian employment	2,963,543	2,966,732	3,030,071
Military personnel on active duty: [2]			
Department of Defense	2,151,032	2,169,112	2,174,217
Department of Transportation (Coast Guard)	38,487	37,284	38,783
Subtotal, military personnel	2,189,519	2,206,396	2,213,000
Total, executive branch employment	**5,153,062**	**5,173,128**	**5,243,071**
Legislative and judicial personnel: [3]			
Full-time permanent	32,644	33,115	34,446
Other than full-time permanent	24,345	22,341	23,716
Subtotal, legislative and judicial branches	56,989	55,456	58,162
Grand total	**5,210,051**	**5,228,584**	**5,301,233**

[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.

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Table I–3. **COMPENSATION AND BENEFITS FOR CURRENT PERSONNEL**

(In millions of dollars)

Description	1987 Actual	1988 est.	1989 est.
Civilian personnel costs:			
Executive branch (excluding Postal Service):			
Direct compensation	60,219	62,474	63,404
Personnel benefits [1]	13,998	17,553	18,036
DOD—Military functions, civilian personnel:			
Direct compensation	(27,424)	(27,711)	(27,959)
Personnel benefits	(3,871)	(6,557)	(6,652)
Subtotal	74,217	80,027	81,440
Postal Service:			
Direct compensation	22,070	23,557	24,593
Personnel benefits	4,228	5,886	6,042
Subtotal	26,298	29,443	30,635
Legislative and judiciary: [2]			
Direct compensation	1,213	1,305	1,455
Personnel benefits	164	222	271
Subtotal	1,377	1,527	1,726
Total, civilian personnel costs	**101,892**	**110,997**	**113,801**
Military personnel costs: [4]			
Direct compensation	48,386	49,278	[3] 50,931
Personnel benefits	23,203	23,806	24,329
Total, military personnel costs:	**71,589**	**73,084**	**75,260**
Grand total, personnel costs:	**173,481**	**184,081**	**189,061**
ADDENDUM			
Retired pay for former personnel:			
Civilian personnel	24,562	26,251	27,919
Military personnel	18,445	19,525	20,744
Total	**43,007**	**45,775**	**48,663**

[1] In addition to employing agency 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 $4,557 million in 1987 and are estimated to be $4,720 in 1988 and $4,858 million in 1989.
[2] Excludes members and officers of Congress.
[3] In 1989, includes allowances of $54 million for aviation bonus pay.
[4] Excludes reserve components.

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.

The 1989 Budget includes a proposal designed as an aid in gaining better control over the Government's expenditures as an employer. For 1989, the Administration will propose that the Postal Service and the government of the District of Columbia be required

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to contribute money to the civil service retirement fund to cover the full cost of providing cost-of-living adjustments to Postal Service and D.C. Government annuitants. Additional details on this proposal can be found under the income security, health, and allowances functions in Part 5 of the Budget of the United States Government, 1989.

The budget assumes a 4.3 percent military pay increase and a two percent increase in pay for Federal white- and blue-collar workers in January 1989. 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 indicated in table I-3, obligations for executive branch civilian personnel compensation and benefits in 1989 are projected to reach nearly $81.4 billion, excluding the Postal Service.

Government Employment and Labor Force Comparisons

As shown on the following chart, Government employment—Federal, State, and local—comprised nearly 15.5 percent of the total employed civilian labor force in 1987.

Within this segment, Federal civilian employment in the executive branch accounts for 2.68 percent of the total employed civilian labor force in 1987, 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 11.6 percent in 1967 to 12.8 percent in 1987.

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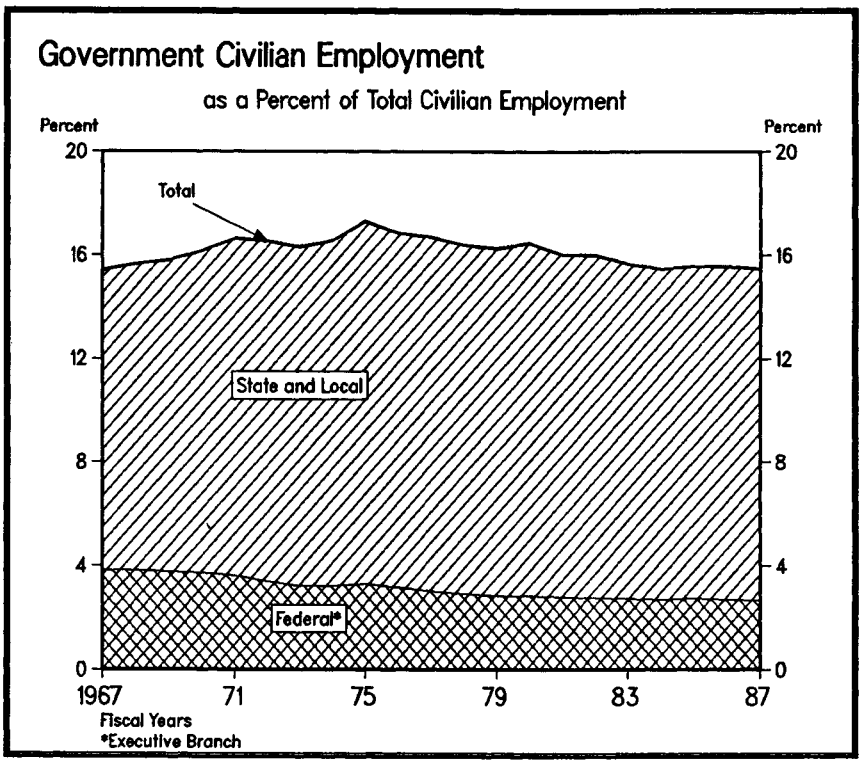

Government Employment and Population Comparisons

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 30.8 percent in 1957 to 17.3 percent in 1987. 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.

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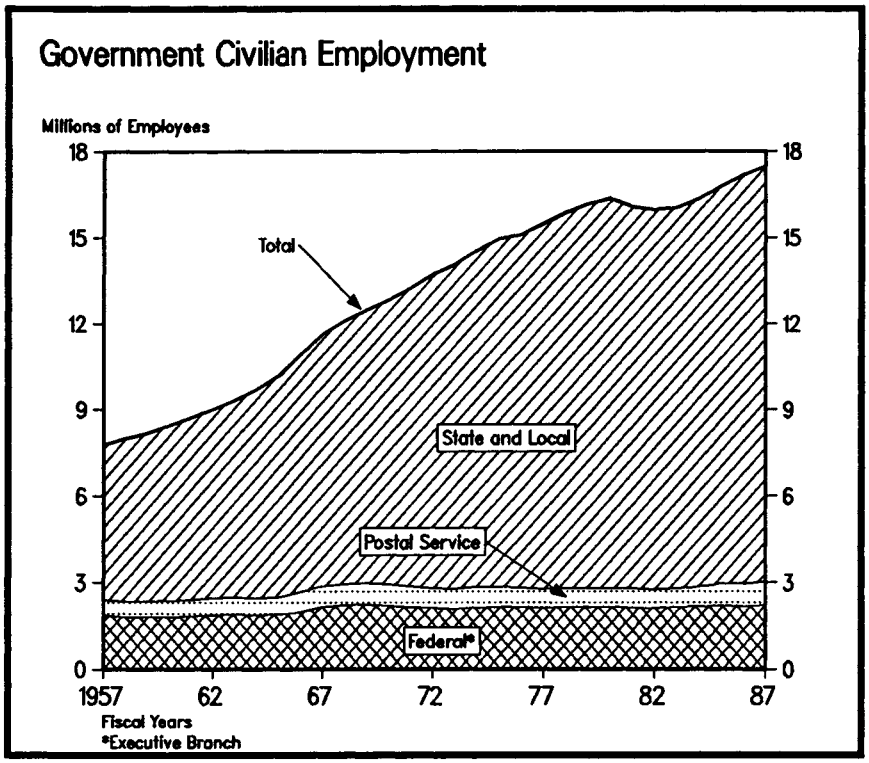

The ratio of Federal civilian employment to the total U.S. population was 12.4 per thousand in 1987. The main reason for the increase in this ratio from 1986 to 1987 is due to increases in overall executive branch employment; in the Postal Service, in the Department of Defense, and in a number of nondefense agencies (see table I–2).

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Table I–4. **GOVERNMENT EMPLOYMENT AND POPULATION, 1957–87**

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
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	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	13,220	16,039	17.6	[6] 235,439	12.0
1984	2,854	13,504	16,358	17.4	[6] 237,663	12.0
1985	2,964	13,827	16,791	17.7	[6] 239,951	12.4
1986	2,967	14,190	17,157	17.3	[6] 242,222	12.2
1987	3,030	14,451	17,481	17.3	[6] 244,425	12.4

[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 1957 through 1976 are as of June 30; for 1977 through 1987, as of Sept. 30.

[6] U.S. population data for 1981–1987 are the latest available from the Census Bureau.

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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 1989 budget. The second describes in more detail the R&D programs of 12 agencies whose R&D obligations individually exceed $150 million. In the aggregate, these agencies fund over 99 percent of total Federal R&D.

PART I. HIGHLIGHTS

In 1989, total Federal obligations for research and development, including R&D facilities, are estimated at $64.6 billion, an increase of about $2.7 billion or 4 percent above the 1988 estimated level of $61.9 billion as shown in table J–1. Support for the conduct of basic research, included within this total, is estimated to increase by 6 percent, from $9.7 billion in 1988 to $10.3 billion in 1989.

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 that the scientific and technological foundation is in place to support long-term economic growth and continued improvement in the quality of life for all citizens. Examples of such investments are those directed toward 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. In FY 1988 national spending for R&D is projected to total about $132 billion, a real increase of about 3 percent over 1987. Of this amount, about $65 billion is expected from Federal spending, $63 billion from industry, and the balance from universities, colleges and other non-profit organizations. The growth rate between 1987 and 1988 is projected to be the lowest in this decade, and is attributable both to tightening Federal budgetary con-

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straints, and, in the private sector, to corporate restructurings and other factors. However, the rate of growth in national R&D spending is still expected to show a real increase above inflation.

For 1989, the budget provides increased Federal support for R&D to meet key national needs. The budget also provides increased support for basic research, particularly interdisciplinary research 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.

The Federal Government will also continue to encourage and facilitate the transfer of technology and new knowledge from universities and Federal laboratories to the private sector. In addition to technology transfer, industry has also benefitted from other Federal actions that help to create a climate that encourages increased private sector support for R&D. Such actions have included revisions of policies on ownership of patents and other intellectual property to provide incentives for innovation, revisions of antitrust laws to encourage joint industrial R&D efforts, and revisons of the tax code (including a 1989 proposal to make the R&D tax credit permanent) to encourage increased R&D expenditure.

Even in the context of the Bipartisan Budget Agreement which places severe but necessary fiscal constraints on the budget as a whole, the 1989 budget reflects the continued high priority the Administration places on R&D that is appropriate for Federal support. The 1989 budget provides significant increases for R&D programs in key agencies including:

- selected R&D programs of the Department of Defense such as the Strategic Defense Initiative and the Advanced Tactical Fighter;
- most of the R&D programs of the National Aeronautics and Space Administration including the Space Station, Project Pathfinder, and other space science and technology programs;
- basic research support by the National Science Foundation including the establishment of Science and Technology centers;
- support in the Department of Energy for initiation of construction of the Superconducting Super Collider (SSC), and for a 5-year, $2.5 billion clean coal technology demonstration program; and
- Biomedical and AIDS R&D.

At the same time, the 1989 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 in the energy technology programs of the Department of Energy, as well as elimination of selected programs of the Department of Commerce (e.g.,

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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		
	1987 actual	1988 estimate	1989 estimate	1987 actual	1988 estimate	1989 estimate
Conduct of R&D	56.1	60.0	62.5	52.9	54.2	59.3
R&D facilities	1.7	2.0	2.1	1.5	1.8	1.9
Total	**57.8**	**61.9**	**64.6**	**54.3**	**56.0**	**61.2**

CONDUCT OF RESEARCH AND DEVELOPMENT

The budget for 1989 includes $62.5 billion in obligations for the conduct of R&D, an increase of $2.6 billion or 4 percent over 1988. The conduct of R&D associated with national defense (i.e. military-related R&D programs of the Departments of Defense and Energy) makes up about 65 percent of the total Federal spending on R&D. In 1989, however, civilian R&D will grow at a faster rate than defense-related R&D, due primarily to the constraints imposed by the Bipartisan Budget Agreement. The limitations on defense spending imposed by this agreement necessitated major reductions across the board in defense programs including R&D. Limitations were also imposed on domestic discretionary spending (which includes all civilian R&D). However, even with this constraint, the Administration continues to assign a high priority to support for appropriate R&D. Highlights of the proposed programs of the six major R&D agencies, which account for 96 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 $38.8 billion for 1989, an increase of $888 million (about 2 percent) above 1988. While funding for R&D is relatively constant from 1988 to 1989, it does allow growth for some important programs, including the Strategic Defense Initiative and the Advanced Tactical Fighter. There is also an increase for the joint DOD-NASA program to support development of the National Aerospace Plane.
- **Department of Energy** (DOE).—Obligations for the conduct of R&D by the Department of Energy are estimated to be $5.2 billion, an increase of $95 million from 1988. Funding for the National Defense Program will remain comparable to the 1988 level. High Energy and Nuclear Physics R&D in the General Science Program will increase from $625 million in

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1988 to $704 million in 1989. Included in this total are funds to enhance support for long-term basic research and to enhance substantially the R&D effort on the superconducting magnets and other technical components required for the Superconducting Super Collider accelerator facility and to increase the levels of operation of all major on-line high energy and nuclear physics accelerators. Obligations for Energy Programs will decrease by $27 million from 1988 to $2,026 million in 1989. Increases are proposed to enhance support for long-term basic energy research, and to implement a 5 year, $2.5 billion clean coal technology demonstration program. These increases are offset by proposed reductions in support for the energy technology programs such as fossil energy, conservation, and renewable energy where reliance is placed on the private sector to provide support for demonstrations and product development.

- **Department of Health and Human Services** (HHS).—HHS R&D activities in 1989 are estimated to be $7.9 billion, up from $7.2 billion in 1988. In 1989, the National Institutes of Health (NIH) will support about 20,700–21,000 research project grants and about 11,000 research trainees. In 1989, NIH obligations are estimated at $6.2 billion.
- **National Aeronautics and Space Administration** (NASA).—NASA obligations for the conduct of R&D are estimated at about $5.4 billion in 1989, an increase of $637 million over 1988. This increase is necessary primarily to continue development of the Space Station and to provide for two new initiatives, the Advanced X-Ray Astrophysics Facility (AXAF) and Project Pathfinder. AXAF will expand our ability to explore x-ray features in the universe and Pathfinder will explore a variety of advanced generic technologies underlying potential future space missions that will enable expanded human presence and activity beyond Earth's orbit. For other science and applications programs, the budget continues support for major flight projects such as the Space Telescope, the Galileo mission to Jupiter, the Global Geospace Science mission and the Ocean Topography Experiment (TOPEX), and increases support for the Explorer program.
- **National Science Foundation** (NSF).—Obligations for research supported by NSF are expected to increase by about $303 million, or about 20 percent—to $1.8 billion in 1989. This increase is part of the Administration plan to increase investments in basic research by proposing to double the NSF budget over the next five years. The budget principally provides enhanced support for basic research across a wide spectrum of high-priority scientific and engineering disciplines,

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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 new efforts in improving research and education at the undergraduate level, and the establishment of Science and Technology Centers with a one-time fully-funded appropriation of $150 million. These new centers, modeled after the Engineering Research Centers, are intended to foster and strengthen multidisciplinary research in the basic physical and life sciences as well as to speed the transfer of such knowledge to the private sector.

- **Department of Agriculture** (USDA).—Obligations for the conduct of R&D are estimated at $985 million for 1989, a decrease of about 3 percent from the 1988 level of $1,018 million. Within the USDA total, the Cooperative State Research Service will provide $255 million for research and development, primarily conducted by colleges and universities. The Agricultural Research Service expects to obligate $529 million, an increase of $16 million over 1988. Emphasis is given to basic research on plant and animal productivity, biotechnology, new agricultural products, water quality, food safety, protection of stratospheric ozone, and human nutrition. The Forest Service will continue its research on land management planning and forest inventory.

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		
	1987 actual	1988 estimate	1989 estimate	1987 actual	1988 estimate	1989 estimate
Defense—Military functions	36,088	37,899	38,787	34,581	33,776	37,023
Health and Human Services	6,643	7,174	7,938	5,733	6,561	7,446
(National Institutes of Health)	(5,850)	(6,318)	(6,229)	(4,956)	(5,643)	(6,181)
National Aeronautics and Space Administration	3,787	4,779	5,416	3,250	3,962	4,820
Energy	4,724	5,071	5,165	4,682	4,941	5,082
National Science Foundation	1,464	1,524	1,827	1,410	1,492	1,618
Agriculture	946	1,018	985	921	968	961
Interior	403	419	396	389	420	393
Environmental Protection Agency	348	350	374	326	340	335
Transportation	322	325	317	324	352	341
Commerce	405	408	312	308	360	333
Veterans Administration	210	216	216	195	209	202
Agency for International Development	223	208	199	230	243	198
All other [1]	527	560	585	513	539	563
Total	**56,089**	**59,952**	**62,517**	**52,862**	**54,162**	**59,314**

[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.

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CONDUCT OF BASIC RESEARCH

The 1989 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. Over the course of this Administration (1981 to 1989), Federal support for basic research has increased by 52 percent in real terms.

Funding for basic research is included within the overall Federal support for the conduct of R&D. In 1989, obligations for the conduct of basic research are estimated at $10.3 billion, an increase of $617 million, or 6 percent above the level for 1988.

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 13 percent in 1989 to a total of $9.2 billion. This would represent a real increase of 54 percent over the period of this Administration (1981 to 1989).

Table J-3 summarizes Federal support for the conduct of basic research by agency.

R&D FACILITIES

In 1989, 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 1989, obligations for R&D facilities are expected to total $2.1 billion, an increase of $125 million from 1988. The budget provides for construction of two major new projects in DOE, the Superconducting Super Collider (SSC) accelerator facility and a 6-7 GeV synchrotron source at Argonne National Laboratory, as well as ongoing construction of a 1-2 GeV synchrotron source at Lawrence Berkeley Laboratory, an Accumulator/Booster Ring at the Brook-

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Table J–3. **CONDUCT OF BASIC RESEARCH BY MAJOR DEPARTMENTS AND AGENCIES**

(In millions of dollars) [1]

Department or agency	Obligations			Outlays		
	1987 actual	1988 estimate	1989 estimate	1987 actual	1988 estimate	1989 estimate
Agencies supporting primarily physical sciences and engineering: [2]						
National Science Foundation	1,382	1,439	1,734	1,329	1,404	1,526
National Aeronautics and Space Administration	1,014	1,229	1,374	865	1,017	1,223
Energy	1,061	1,185	1,265	1,040	1,175	1,259
Defense—Military functions	904	892	906	844	837	874
Interior	124	131	125	121	132	125
Commerce	26	27	27	26	25	27
Other Agencies [3]	8	7	6	9	11	6
Subtotal	4,519	4,911	5,437	4,233	4,601	5,039
Agencies supporting primarily life and other sciences: [4]						
Health and Human Services	3,859	4,160	4,260	3,282	3,767	4,204
(National Institutes of Health)	(3,578)	(3,854)	(3,965)	(3,007)	(3,429)	(3,891)
Agriculture	446	471	470	430	443	450
Smithsonian Institution	72	77	77	70	76	73
Environmental Protection Agency	31	32	31	30	30	27
Veterans Administration	17	18	18	16	16	18
Other Agencies [5]	19	20	12	18	19	15
Subtotal	4,444	4,777	4,868	3,845	4,352	4,787
Total	**8,963**	**9,689**	**10,306**	**8,078**	**8,953**	**9,826**

[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 Education, Labor, Justice, and Treasury, and the Agency for International Development.

haven Alternating Gradient Synchrotron, and a 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		
	1987 actual	1988 estimate	1989 estimate	1987 actual	1988 estimate	1989 estimate
Energy	775	939	1,132	723	918	1,026
National Aeronautics and Space Administration	309	429	549	314	386	479
Defense—Military functions	318	267	191	235	239	176
Agriculture	112	126	85	71	105	99
National Science Foundation	64	55	67	50	54	56
Health and Human Services	38	70	6	32	44	34
(National Institutes of Health)	(36)	(68)	(5)	(29)	(39)	(33)
All other [1]	63	75	56	39	65	57
Total	**1,680**	**1,961**	**2,086**	**1,464**	**1,810**	**1,926**

[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.

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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, and the Arctic as a natural laboratory.

Based on current activities and future needs, 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, prepared a comprehensive plan for the overall Federal effort in Arctic research.

This U.S. Arctic Research Plan was transmitteed to the President on June 23, 1987. The President sent the Plan to Congress on July 31, 1987.

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	1987 actual	1988 estimate	1989 estimate
National security	22,197	23,647	25,129
Rational development	30,535	29,250	29,525
Natural laboratory	38,362	41,464	40,626
Total	**91,094**	**94,361**	**95,280**

[1] Includes the Departments of Defense, Energy, Health and Human Services, Interior, Commerce, Agriculture, and Transportation, the National Science Foundation, the National Aeronautics and Space Administration, the Environmental Protection Agency, and the Smithsonian Institution.

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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

Research and development in the Department of Defense ranges from support of basic research 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. R&D efforts directly support the deployment of technologically superior systems to offset quantitative advantages of potential adversaries. Obligations for DOD research and development, including R&D facilities, total $39.0 billion, about 60 percent of total Federal funding for research and development, including R&D facilities, in 1989.

In 1989, DOD obligations for the conduct of R&D will increase by $888 million, or 2 percent above the 1988 level, to $38.8 billion. DOD funding of technology base programs (basic and applied research) will increase from about $3.1 billion in 1988 to about $3.3 billion in 1989. Increases for advanced technology development of $854 million primarily reflect increases for the Strategic Defense Initiative. Funding for R&D facilities will decrease by $76 million from 1988 to a total of $191 million in 1989.

By mission category, major R&D efforts for 1989 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. They are intended to provide choices for future system development and to help avoid technological surprise.

Two of the areas emphasized are materials research and electronics, including the Very High Speed Integrated Circuits program and Millimeter Wave Monolithic Integrated Circuits program. The private sector, with some DOD funding support, has formed a consortium, SEMATECH, to maintain world-class semiconductor manufacturing capability in this country. Funding in this area also supports the joint DOD/NASA National Aerospace Plane.

The Strategic Defense Initiative, a program to investigate the feasibility of defense against ballistic missiles, will increase to $4.6 billion in 1989.

—*Strategic Programs.*—Major programs for 1989 include the air-launched short-range attack missile, the B–2 Advanced Technology Bomber, the Advanced Cruise Missile, and the MILSTAR communi-

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cations satellite. The Trident II submarine-launched ballistic missile and the Peacekeeper missile development programs are near completion. The budget also contains funds for ICBM modernization, including development of the Small ICBM and the rail garrison basing mode for the Peacekeeper. Requested funding for the Small ICBM has been reduced substantially from the 1988 level, pending further review of this program.

—*Tactical Programs.*—These programs support the development of systems to increase the capability of U.S. general purpose and theater nuclear forces, and to improve the capability to project forces rapidly anywhere in the world where the vital interests of the United States are threatened. In 1989 these programs include:

- in the Army, continued development of advanced anti-tank weapon systems, cannon-fired precision munitions, and ground-based missiles and control systems to fulfill its air defense mission.
- in the Navy, a major effort to improve air, surface and submarine-based anti-submarine warfare capabilities, including development of the Seawolf attack submarine. Other key programs include the V-22 Osprey tilt-rotor aircraft, the Advanced Tactical Aircraft, and continuation of upgrades to the F-14 fighter. Several efforts are being continued to improve fleet air defenses.
- in the Air Force, continued development of the Joint STARS radar, the Advanced Tactical Fighter the C-17 transport aircraft, and various electronic warfare programs. Work on munitions for use against hardened targets, development of TR-1 surveillance aircraft sensors and ground stations, and AWACS radar system improvements also continue.

—*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 manned 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 ad-

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Table J-6. **DEPARTMENT OF DEFENSE—MILITARY RESEARCH AND DEVELOPMENT**

(In millions of dollars)

Type of activity	1987 actual	1988 estimate	1989 estimate
OBLIGATIONS			
Conduct of R&D:			
Research, development, test and evaluation:			
Technology base	2,817	3,141	3,311
Advanced technology development	4,855	5,534	6,389
Strategic programs	7,817	7,162	6,605
Tactical programs	10,761	12,509	13,008
Intelligence and communications	4,802	4,797	4,499
Program management and support	3,825	3,866	4,068
Other appropriations	1,211	889	908
Total conduct of R&D [1]	36,088	37,899	38,787
Total conduct of basic research, included above	(904)	(892)	(906)
R&D facilities	318	267	191
Total obligations	**36,406**	**38,167**	**38,978**
OUTLAYS			
Conduct of R&D	34,581	33,776	37,023
R&D facilities	235	239	176
Total outlays	**34,816**	**34,016**	**37,199**

[1] Includes funds for Operational Systems Development of $9,875 million in 1987, $9,370 million in 1988 and $9,493 million in 1989.

vancement. 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 1989, NASA obligations for R&D including facilities for the agency will be approximately $6.0 billion, a net increase of $757 million, or 15 percent, over 1988. 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 project in space science and applications. Within the total funding for R&D, basic research obligations in 1989 are estimated at $1.4 billion, an increase of $146 million or 12 percent over 1988.

Space Station.—Obligations for Space Station R&D are estimated to increase from $415 million in 1988 to nearly $739 million in 1989. 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. In addition, the budget will propose a 3-year appropriation for the Space Station in order to provide necessary program and funding stability, and later

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in the year, legislation to establish a total program cost ceiling to ensure strong cost control discipline.

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.

Space transportation systems capability.—Obligations for space transportation systems capability are estimated in 1989 at $600 million, a slight decrease from 1988. The 1989 budget provides for sustained research support for the Space Shuttle program to achieve routine and reliable access to space for all planned users, and for continued research 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 maneuvering spacecraft and payloads in near-Earth orbit.

Space science and applications.—Obligations for space science and applications are estimated in 1989 at $1.8 billion, an increase of $39 million over the 1988 level. 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 1989 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.

For 1989, new proposals include:

- a major new science project proposed for initiation in 1989 is the Advanced X-ray Astrophysics Facility (AXAF). The AXAF mission will provide a space-based telescope for viewing in the X-ray portion of the spectrum, 1,000 times more capable than any previous or planned x-ray mission;
- augmentations for the Explorer program and for small payloads launched by SCOUT expendable launch vehicles;
- payloads will be developed for flight on promising commercial space facilities; and
- augmentations to the Microwave Observing program (formerly the Search for Extraterrestrial Intelligence activity) for the development of technologies necessary to analyze microwave signals from space for evidence of advanced life elsewhere in the galaxy.

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Continuing development efforts for ongoing major flight projects yet to be launched include:

- the Hubble 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 the origin of the universe;
- 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 1992, 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 1992; and
- the Ocean Topography Experiment (TOPEX) scheduled for a 1991 launch as part of a cooperative 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.

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Commercial Programs.—The goal of these programs is to support opportunities for expansion of U.S. private sector investment and involvement in civil space activities. These programs include the Technology Utilization program which promotes the dissemination of new developments in aerospace technology to non-aerospace industrial sectors, and the Commercial Use of Space program which encourages increased private sector awareness, participation and investment in space technologies. Support will continue for the 16 centers for the Commercial Development of Space which have been established in a wide range of disciplines including materials processing, robotics, and remote sensing. These centers were designed to create close working relationships between the private sector, the States, and academia to encourage investments in and use of space technology.

Transatmospheric research and technology.—In 1989, funding will increase as planned to continue research and advanced technology in the National Aerospace Plane (NASP) program leading to a transatmospheric flight research vehicle demonstration in the 1990's. The NASP program is jointly supported with DOD.

Aeronautical research and technology.—Obligations for aeronautical research and technology are estimated to increase from $289 million to $349 million in the 1989 budget. Research in fundamental aeronautical disciplines such as advanced materials and structures, and advanced propulsion will be augmented in recognition of the key role that these technologies play in ensuring the ability of the U.S. to remain competitive in international markets.

Space research and technology.—Obligations for space research and technology are estimated to increase from $277 million to $374 million in the 1989 budget. The 1989 budget continues the Civil Space Technology Initiative (CSTI) as planned and also proposes $100 million to begin a new program within space research and technology, Project Pathfinder. This effort will support research in a wide variety of technology areas including automated rendevous and docking, orbital transfer propulsion, optical communications and closed loop life support systems. Such technologies will be key to achieving the national long-range goal of expanding human presence and activity beyond the Earth's orbit into the Solar System. Pathfinder will involve researchers from all sectors, industry, universities and the Federal government.

Agency-wide support activities.—Obligations for agency-wide support activities will total $1.4 billion in 1989, a 10 percent increase above the 1988 level. These programs include primarily R&D-related NASA civil service and administrative costs; tracking and data acquisition system improvements; and safety, reliability and quality assurance.

Table J-7 provides the details of NASA's R&D funding.

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Table J–7. **NATIONAL AERONAUTICS AND SPACE ADMINISTRATION—RESEARCH AND DEVELOPMENT**

(In millions of dollars)

Type of activity	1987 actual	1988 estimate	1989 estimate
OBLIGATIONS			
Conduct of R&D:			
Space station	266	415	739
Space transportation systems capability	427	611	600
Space science and applications	1,497	1,793	1,832
Commercial programs	32	88	59
Transatmospheric research and technology	43	52	83
Aeronautical research and technology	324	289	349
Space research and technology	161	277	374
Agency-wide support activities:			
Safety, reliability and quality assurance	11	17	22
Tracking and data acquisition	18	18	19
Research and program management	1,009	1,218	1,340
Total conduct of R&D	3,787	4,779	5,416
Total conduct of basic research, included above	(1,014)	(1,229)	(1,374)
R&D facilities	309	429	549
Total obligations	**4,096**	**5,209**	**5,965**
OUTLAYS			
Conduct of R&D	3,250	3,962	4,820
R&D facilities	314	386	479
Total outlays	**3,564**	**4,348**	**5,299**

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 $5.2 billion in 1989, an increase of $95 million over 1988. Obligations in 1989 for R&D facilities, including the construction or upgrading of general purpose laboratories and other research support facilities, will amount to $1.1 billion, an increase of $193 million over 1988.

Obligations for the conduct of basic research, included in the total for the conduct of R&D, are estimated to be $1,265 million in 1989, an increase of $80 million over 1988. 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

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at the frontiers of science and thus help contribute to U.S. 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 be $2.4 billion in 1989, a level comparable to the 1988 level. Funding for conduct of R&D supports ongoing Department of Defense work including isotope separation techniques, weapons testing, and research in the basic physics of nuclear weapons. R&D in support of the Strategic Defense Initiative (SDI) will continue to focus on investigations of Nuclear Directed Energy Weapons (NDEW) to assess the Soviet NDEW capability to threaten a strategic defense system. SDI funding will be maintained at level of effort at $285 million in 1989.

The *General Science Program* supports basic research in high energy and nuclear physics. A proposed increase of $79 million, to $704 million in 1989, for the conduct of basic research will enhance support for theoretical and 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 $313 million to $490 million in 1989, mainly for the initiation of construction of the Superconducting Super Collider (SSC) accelerator facility. The SSC is the largest and most powerful high energy physics facility ever proposed for construction. It will be a 53 mile circumference proton-proton collider producing particle collisions with total energies approaching 40 trillion electron volts, an energy twenty times the highest energy available in the world today. In 1989, the R&D program for the SSC will also be significantly enhanced. The major new thrust in this research will be the initiation of fabrication of pre-production full-scale superconducting magnets by American industry. Industrial participation is especially crucial for this aspect of the project since the heart of the SSC is the collider which consists of two rings of superconducting magnets requiring some 8,000 dipoles and nearly 1,800 quadrupole magnets.

The 1989 budget request will also provide for:

- increased utilization of existing accelerator facilities, with major increases in levels of operation of the Stanford Linear Collider and of the recently upgraded PEP electron-positron collider at SLAC; the Alternating Gradient Synchrotron complex at Brookhaven National Laboratory and Tevatron I and II at Fermilab;

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- 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 (CEBAF) at Newport News, Virginia; and
- continued support for advanced accelerator and detector research and development activities related to effective utilization and novel exploitation of existing and 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 decrease by $27 million from the 1988 level to $2,026 million in 1989. This decrease 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 $215 million, a decrease of $104 million from 1988. This decrease consists almost entirely of the elimination of Congressional University Building add-ons for 1988.

The *basic energy sciences* programs will continue to support the conduct of research in the fields of nuclear science, chemistry, engineering, materials science, applied mathematics, biology, and the geosciences. The program will continue to provide the fundamental scientific and technical base for future advances in both nuclear and non-nuclear technology development.

Funding for basic energy sciences activities is proposed at a level of $516 million, an increase of $37 million for the core research and the user facilities programs. Support for the conduct of research will increase nearly $23 million, or 6 percent over the 1988 level. Increased funding is proposed to enchance the Department's high temperature superconducting materials research effort while still maintaining level of effort in other high priority advanced materials research such as ceramics, polymers, and semiconductors. Funds in 1989 are also proposed 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.

The 1989 budget also continues to provide support for construction of the 1-2 GeV synchrotron at at Lawrence Berkeley Laboratory, the experimental detection halls at the Los Alamos Neutron Scattering Center and the 3 GeV injector for the SPEAR Storage Ring at the Stanford Synchrotron Radiation Laboratory. In addi-

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tion, funds are proposed to initiate the construction of a 6-7 GeV synchrotron source at the Argonne National Laboratory.

In 1989 a new account will be created to suppport the operation and construction of the basic research user facilities formerly funded under the basic energy sciences program and the general science programs. These major national facilities, used by researchers from industry, universities and national laboratories, 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 as well as Fermilab, SLAC, LAMPF, and the Brookhaven high energy and nuclear physics accelerator facilities. Both the 6-7 GeV synchrotron source and the SSC will also be supported by this new account. Funds to maintain operations of all existing research facilities at the 1988 level are also included in the 1989 basic research user facility budget.

In 1988 the *Energy Program* was expanded to include the *clean coal technology* demonstation program. The goal of this program is to provide support for projects to demonstrate technologies that will burn coal more cleanly. The Department solicits proposals from the private sector for at least 50 percent cost-shared, full-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 proposed 1989 budget requests advance appropriations to provide full funding for the government's share of a five-year, $2.5 billion clean coal technology program. Congress, to date, has provided the program $200 million for 1988 and $525 million for 1989. The current request seeks additional advance appropriations totaling $1,775 million, including $575 million for 1990, $600 million for 1991, and $600 million for 1992. These funds will then be available to implement the demonstration program consistent with the recommendations made in the Report of the U.S. and Canadian Special Envoys on Acid Rain, that both the President and the Canadian Prime Minister have endorsed.

The 1989 budget will continue the redirection of the on-going non-nuclear R&D programs to limit federal support for nearer-term technology development. To increase the involvement of the private sector in the direction and management of industry-based R&D programs and to leverage scarce Federal funds, $14 million will, however, be available in 1989 to support DOE participation in industry-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 *con-*

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servation programs are expected to be $379 million in 1989, a decrease of about $251 million from 1988.

Funding proposed for the conduct of fossil related R&D and associated facilities will be $168 million in 1989, a decrease of $159 million from 1988. The 1989 request continues to support high priority research in coal chemistry and use, environmental controls, coal conversion to liquid and gaseous fuels, and better extraction methods for petroleum and natural gas. In addition to an enhanced geosciences program, a program to support industry formed cooperative R&D ventures at a level of $9 million is also proposed.

Research in support of *solar and other renewable energy* technologies, proposed at a level of $125 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. In 1989, the electrical energy transmission and storage systems research budget includes a $13 million initiative to study potential electrical utility applications of the new high temperature superconducting materials and also an industry-cooperative R&D venture program to provide support for industry driven applied R&D.

The total request in 1989 for the *energy conservation* R&D program is $86 million and includes research in buildings and community systems, industry, and transportation. In 1989, support will continue for the recently conpleted materials engineering user facility at Oak Ridge National Laboratory (the High Temperature Materials Laboratory) and for the advanced materials research that is a major focus of the core research program in energy conservation. The proposed 1989 budget also proposes a new materials research initiative to explore end-use applications of the new high temperature superconductors.

The 1989 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 $715 million in 1989, an increase of $33 million over the 1988 level. In the *fission* program, obligations of $241 million are estimated for the conduct of R&D in 1989, approximately the same as in 1988. Total obligations for R&D facilities in 1989 will be $111 million. The nuclear fission R&D program will continue to focus major effort on the advanced civilian reactor program and R&D on reactor concepts that can meet space and military nuclear power requirements. The program will continue to serve national security interests as well as maintain a technical and industrial base for any future deployment of advanced nuclear technologies in the commercial sector.

In the *magnetic fusion* program, funding of $360 million is proposed for the conduct of R&D, an increase of $25 million over 1988.

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In 1989, 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, of the Oak Ridge National Laboratory's ATF torsatron, and of the free electron laser heating experiment (MTX) at Livermore National Laboratory. Fabrication of three smaller toroidal devices also will continue in 1989: 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). Funds are also provided to continue the R&D and design effort for a Compact Ignition Tokamak (CIT), a machine that will prove a plasma can ignite and burn in a predictable and controllable way. Other research that supports the President's Geneva Initiative on expanded cooperation with the Soviets in fusion research will also continue in 1989.

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 $249 million in 1989, providing a 10 percent increase for the core research program. 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. In 1989 support for the human genome project initiated in 1988 will continue to increase. The new tools and methodologies to be developed by the research effort are expected to markedly increase the pace and lower the cost for mapping and sequencing human DNA. Results from the 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 new thrust in 1989 will be an expanded program of research to develop new noninvasive tools and methods for detecting and decontaminating subsurface toxic wastes. Research into the health effects of radon and a survey of factors affecting possible methods of mitigating radon levels in indoor environments will also continue in 1989. Proposed funding in 1989 for radon-related, acid rain-related, and carbon dioxide-related research is over $38 million, nearly 12 percent higher than 1988.

Table J-8 provides the details of funding for the Department of Energy.

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Table J-8. **DEPARTMENT OF ENERGY**

(In millions of dollars)

Type of activity	1987 actual	1988 estimate	1989 estimate
OBLIGATIONS			
Conduct of R&D:			
National defense program	2,358	2,393	2,435
General science program	569	625	704
Energy program	1,797	2,053	2,026
Total conduct of R&D	4,724	5,071	5,165
Total conduct of basic research, included above	(1,061)	(1,185)	(1,265)
R&D facilities	775	939	1,132
Total obligations	**5,499**	**6,010**	**6,297**
OUTLAYS			
Conduct of R&D	4,682	4,941	5,082
R&D facilities	723	918	1,026
Total outlays	**5,405**	**5,859**	**6,108**

DEPARTMENT OF HEALTH AND HUMAN SERVICES

The Department of Health and Human Services is expected to obligate a total of $7.9 billion in 1989 for the conduct of R&D. Within this total, funding for basic research is estimated to be $4.3 billion. Direct obligations for R&D facilities will total $6.3 million in 1989, with Federal overhead payments providing additional funds which can be used to replace or modernize existing R&D facilities.

Health.—About 80 percent of the Department's funds for the conduct of R&D will be obligated by the National Institutes of Health (excluding AIDS R&D) 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)* consists of 12 separate institutes which will obligate $6.2 billion (excluding AIDS R&D) in 1989 for the conduct of R&D, a 5 percent increase over the comparable 1988 level. (All Public Health Service AIDS funds will be requested under a single account in 1989.) NIH will fund about 20,600–21,000 research project grants and about 11,000–11,100 research trainees. Continued emphasis will be given to support of basic research in 1989. About 64 percent, or $4.0 billion, of NIH's proposed R&D budget will support basic research.

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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 1989 budget continues to emphasize research into drug abuse, and stabilizes ADAMHA's extramural research programs in biomedical, behavioral and clinical areas by supporting between 1,650 and 1,825 research project grants per year. ADAMHA will obligate a total of $522 million in 1989 for R&D.

The *Food and Drug Administration* supports research relevant to its mission of regulating food, drugs, biologics, medical devices and radiological products. In 1989, obligations for these activities are estimated at $88 million.

The *Centers for Disease Control* support studies on the epidemiology and control of communicable diseases and on health promotion and disease prevention. In 1989, obligations for these activities are estimated at $63 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.

In 1989, the Administration is proposing the Health Care Improvement Fund, to be administered through the Health Resources and Services Administration. The Fund would be dedicated to selectively supporting assessments of medical technologies and medical practices with the potential to reduce costs without impairing quality of care. The Administration proposes $15 million for this activity in 1989.

Human services.—Most of the 1989 funding for HHS' human services R&D activities is included in the $77 million requested for Human Services Research, Training, and Demonstrations under the Office of Human Development Services (OHDS). OHDS will support a variety of development and social services research on

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the Head Start program, the elderly, child abuse and neglect,and family and community support systems.

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	1987 actual	1988 estimate	1989 estimate
OBLIGATIONS			
Conduct of R&D:			
Health:			
National Institutes of Health	5,850	6,318	6,229
Acquired Immune Deficiency Syndrome (AIDS) [1]			900
Alcohol, Drug Abuse, and Mental Health Administration	506	561	522
Food and Drug Administration	85	91	88
Centers for Disease Control	65	72	63
Health Care Financing Administration	28	27	32
Office of the Assistant Secretary for Health	24	23	23
Health Resources and Services Administration	10	11	11
Subtotal, Health	6,568	7,103	7,868
Human Services:			
Office of Human Development Services	50	51	51
Social Security Administration	14	12	10
Family Support Administration	3	3	3
Departmental Management	8	5	5
Subtotal, Human Services	75	71	70
Total conduct of R&D	6,643	7,174	7,938
Total conduct of basic research, included above	(3,859)	(4,160)	(4,260)
R&D facilities	38	70	6
Total obligations	**6,680**	**7,244**	**7,944**
OUTLAYS			
Conduct of R&D	5,733	6,561	7,446
R&D facilities	32	44	34
Total outlays	**5,765**	**6,605**	**7,480**

[1] All Public Health Service AIDS funds will be requested under a single account in 1989.

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 1989 NSF budget provides $1.8 billion in obligations for the conduct of R&D, an increase of $303 million or about 20 percent above 1988. Within this total, support for basic research will also increase by about 20 percent. This increase is part of the Adminis-

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trations plan to increase investments in basic research by proposing to double the NSF budget over the next five years.

For 1989, emphasis will be placed on three major themes:

- *Education and Human Resources* ($285 million, a 18 percent increase over 1988): will provide increased support for the NSF Graduate Fellowship Program 100 additional Fellows, for a total of about 860 new awards and for the Presidential Young Investigators program 200 new awards, for a total of about 800 new awards. An increase for undergraduate programs will provide opportunities for faculty enhancement, and student research participation as well as providing for much needed instrumentation. There will also be an enhancement of support to encourage the participation of underrepresented groups in scientific and engineering research.
- *Basic Science and Technology Centers and Groups* ($473 million, a 61 percent increase over 1988): will provide increases for ongoing efforts such as the Engineering Research Centers (ERCs), the Materials Research Laboratories, and the interagency Plant Science Centers, as well as the establishment of Science and Technology Centers, with a one-time $150 million appropriation in 1989. This 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 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 funded over the next five years. In addition to the centers, a number of research areas, including global geosciences, mathematics, materials research and biotechnology, will be the focus for research by a number of coordinated groups.
- *Strengthened Disciplinary Programs and Facilities* ($1.2 billion, an increase of 9 percent over 1988): 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., materials chemistry, cosmology, manufacturing processes). In addition, specialized research facilities including the Very Long Baseline Array radio-telescope, Advanced Scientific Computing Centers and supercomputer networks will receive priority attention. Continuing support for the National Center for Atmospheric Research and the National Astronomy Centers is provided. Three physics facility upgrades will

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be completed and become operational in FY 1989; the Cornell Electron Storage Ring, the Indiana University Cyclotron Facility, and the Michigan State University National Superconducting Cyclotron Laboratory. The FY 1989 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. These funds include significant upgrades of research laboratory facilities at the McMurdo Station and the refurbishment of a LC-130 research aircraft. 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 $985 million in 1989, compared to the $1,018 million in 1988. Of the total, $470 million will support basic agricultural research, maintaining the 1988 estimated level. The Department's 1989 Budget for research and development is highlighted below by major bureau.

The *Agricultural Research Service* expects to obligate $529 million in 1989 to conduct basic and applied research in plant and animal productivity; water quality; food safety; protection of stratospheric ozone; human nutrition; and new agricultural products. This is a 3 percent increase over the 1988 level. In 1989, 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 $255 million will be obligated in 1989. 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 $129 million will be obligated for research and development in 1989. This represents a decrease from the $136 million obligation estimate in 1988. 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 $71 million for R&D in 1989, covering a broad spectrum of research

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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 1989 are estimated at $312 million, a decrease of $96 million from 1988. 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 $282 million in 1988 to $180 million in 1989 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. Funding of $15 million is proposed for an integrated program in Earth System Science that will provide a new coordinated approach to conducting research to improve predictions of global climate change. 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 1989, NBS is expected to obligate $120 million for the conduct of R&D. This represents an increase of $10 million from the 1988 estimated level. Funding increases will support development of measurements and standards for superconductors, process and quality control, high-performance composites, fiber optics, and bioprocess engineering. Funding for 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 $13 million in 1989, a decrease of $4 million from the 1988 level.

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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 1989 are estimated at $396 million. This represents a decrease of $23 million from the 1988 level.

About 92 percent of the Department's 1989 funds for the conduct of R&D will be obligated by the Geological Survey ($224 million), Fish and Wildlife Service ($54 million), and the Bureau of Mines ($86 million). Highlights of the 1989 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 1989, obligations will decrease by $12 million, to a total of $224 million.

Research in 1989 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 $54 million in 1989.

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.

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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 $10 million to $86 million in 1989. 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 1989 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 $33 million in 1989, an increase of about $3 million from 1988.

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 $317 million for 1989, a decrease of $9 million from 1988.

The *Federal Aviation Administration (FAA)* is expected to obligate $165 million in 1989. This funding level is consistent with the needs of the National Airspace System Plan. Major initiatives include enchancing the capability of a wide range of radar systems to meet new operational requirements; continuing the Traffic Alert and Collision Avoidance System (TCAS) Program; increasing systems and airports capacity; continuing developmental efforts for Advanced Traffic Management (ATF) and Automated Enroute Traffic Control (AERA); continuing development of radars for detection and tracking of severe weather; and continuing emphasis on initatives in aviation security through expedited development of devices for detection of weapons, explosives and flammable liquids.

The *National Highway Traffic Safety Administration* will obligate $30 million for motor vehicle, highway safety research, and demonstrations including: National Occupant Protection, alcohol, enforcement and emergency services and the National Driver Register. In 1989, increases are requested for crashworthiness and

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crash avoidance research, highway safety research, the National Occupant Protection Program, enforcement and emergency services and the National Driver Register.

The *Urban Mass Transportation Administration (UMTA)* is expected to obligate $2 million to conduct research, training, and human resources programs in all phases of urban 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 $82 million to continue research programs in highway planning, design, construction, and maintenance to ensure an effective and efficient highway system. Research will also be conducted in identifying and correcting impediments to highway safety and improving common carrier safety.

The *Federal Railroad Administration* will obligate $9 million in research and development efforts in support of safety regulation responsibilities.

The *U.S. Coast Guard* will obligate $19 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 which benefit all Coast Guard programs. The proposed FY 1989 figure represents no change over the FY 1988 level.

The *Research and Special Programs Administration* will obligate $3 million for R&D in hazardous materials, pipeline safety, radionavigation, transportation statistics, and emergency transportation.

The *Office of the Secretary* will obligate $7 million for broad-based policy research on domestic and international transportation issues of importance to the nation, and research in support of licensing of expendable launch vehicles.

ENVIRONMENTAL PROTECTION AGENCY

The Environmental Protection Agency's (EPA) Research and Development Program supports EPA's statutory and regulatory responsibilities to protect human health and the environment. Since 1984, four of EPA's eight major environmental laws have been substantially amended. The 1989 budget proposes $374 million in total obligations, representing an increase of 7 percent above 1988, to meet environmental statutory mandates and to understand emerging environmental concerns. The 1989 budget emphasizes: (1) expanded efforts to understand the phenomena related to stratospheric ozone; (2) techniques for mitigating human exposure to

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radon; (3) continued development of scientific information about acid deposition; (4) support of the 1987 Clean Water Act Amendments; and (5) reducing uncertainties in risk assesssments.

The *air research* program will expand to further characterize the effects of stratospheric ozone depletion. Research on other emerging environmental concerns such as global climate change and indoor air pollution will continue. Research on ambient air quality standards and toxic hazardous air pollutants will also continue.

The *radon research* program will continue to demonstate techniques of reducing exposure to indoor radon gas in a variety of housing structures. The number of mitigation demonstrations initiated in homes will be increased.

The *acid disposition* program will continue to support the objective of the National Acid Precipitation Assessment Program (NAPAP) Interagency Task Force which is to understand and predict the phenomenon of acid disposition. Such research will ultimately provide information and predictive tools for the 1990 Assessment Report to Congress on acid deposition.

The *water quality* research program will continue to support the mandates of the 1987 Clean Water Act Amendments. Research will emphasize risk assessments, monitoring methods, pretreatment, sludge, biological monitoring, complex effluent toxicity, and water assessments to control toxic pollutants. Research on wetlands will attempt to determine attainable standards and load limits of critical pollutants.

The *pesticides research* program will continue to develop methods to assess risks to human health and the environment from exposure to pesticide products. Research will be increased to support the evaluation of new technologies for destruction and disposal of pesticides cancelled or suspended under FIFRA. Research efforts on environmental effects from biotechnology products will continue.

The *toxic substances* research program will continue to support EPA's Office of Toxic Substances by performing research in the areas of test methods development and evaluation; structure activity relationships; environmental engineering and technology; and biotechnology. Technical support in the areas of exposure assessment/monitoring procedures and risk assessment methodologies will also continue.

The *hazardous waste* research program will develop scientific and technical information to support regulatory development and implementation. Alternatives to conventional means of disposing of and destroying wastes will continue to be evaluated as will controls for emissions from municipal waste combustors.

The *interdisciplinary* research program will expand to support a new program to reduce uncertainties in risk assessments. This research is designed to improve EPA's assessments of environmen-

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tal and health risks in order to reduce uncertainties in risk management decisions.

The *Superfund* research program will continue to support EPA, States, and industry in resolving technical problems which inhibit the effective implementation of removal and remedial actions. In addition, research and development will support the commercialization of alternative and innovative treatment techniques for use in response actions through the Superfund Innovative Technology Evalutation (SITE) program.

Finally, the *leaking underground storage tanks (LUST)* program will provide technical support to EPA's Office of Underground Storage Tanks, EPA regions, States, and local agencies responsible for the implementation of the LUST Trust Fund Program. Technical support will focus on providing scientific expertise on low cost approaches for assessing site contamination and evaluating remedial technologies.

VETERANS' ADMINISTRATION

The Veterans' Administration (VA) conducts and administers an intramural program of medical, rehabilitation and health services research designed to improve the quality and increase the effectiveness of health care for veterans. In 1989, the VA will obligate $216 million for the conduct of R&D.

The VA's medical research program covers a wide range of medical problems, with special emphasis on the health problems of women veterans, the biological processes of aging, the health consequences of exposure to Agent Orange, the health problems of former prisoners of war, the treatment of alcoholism, Acquired Immune Deficiency Syndrome (AIDS), and post traumatic stress disorder.

Rehabilitation research is committed to meeting the health care needs of aging, disabled veterans with state-of-the-art devices that minimize their disability and improve the quality of their lives. Rehabilitation research is making use of such concepts as: voice controlled robotics for the totally paralyzed; computer controlled electrical stimulators to restore function to paralyzed limbs; new ultra light materials for artificial limbs; advanced mobility aids for the blind using cellular radio networks and computer assisted hearing aids.

Health services research is putting in place an information network designed to generate and disseminate to health care systems managers, providers and consumers the kind of information that will help make the most effective use of research findings directed at improving health care services for veteran patients. Emphasis will be placed on such areas as technology transfer, aging, preventive health and cost effectiveness.

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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 $199 million for 1989, a decrease of $9 million from 1988.

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 $585 million in 1989, for the conduct of R&D, an increase of about 5 percent from the 1988 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 1989 are the U.S. Army Corps of Engineers, and the Departments of 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.

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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	38.4	17.6	56.1	9.0
1988 (estimate)	40.3	19.7	60.0	9.7
1989 (estimate)	41.2	21.3	62.5	10.3

[1] Includes military-related programs of the Departments of Defense and Energy.
[2] Included in totals for conduct of R&D.

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