



SPECIAL ANALYSES BUDGET OF THE UNITED STATES GOVERNMENT

FISCAL YEAR

1978

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THE BUDGET DOCUMENTS

Data and analyses relating to the budget for 1978 are published in six documents:

The Budget of the United States Government, 1978 contains the information that most users of the budget would normally need, including the Budget Message of the President. The *Budget* presents an overview of the President's budget proposals and includes explanations of spending programs and estimated receipts. This document also contains a description of the budget system and various summary tables on the budget as a whole. (Price \$3.45.)

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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, explanations of the work to be performed and the funds needed, proposed general provisions applicable to the appropriations of entire agencies or groups of agencies, and schedules of permanent positions. Supplementals and rescissions for the current year, and new legislative proposals, are presented separately. Information is also provided on certain activities whose outlays are not part of the budget totals. (Price \$13.00.)

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This document includes analytical information about: Government finances and operations as a whole and how they affect the economy; Government-wide program and financial information for Federal education, training and employment, health, income security, civil rights, and crime reduction programs; trends and developments in the areas of Federal aid to State and local governments, research and development, and environmental protection. (Price \$2.70.)

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The Budget of the United States Government, 1978—Supplement contains the President's recommendations on Executive, Legislative, and Judicial salaries and is transmitted pursuant to section 225 of Public Law 90-206 (2 U.S.C. 351 et seq.). (Price not available at time of publication.)

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

ECONOMIC AND FINANCIAL
ANALYSES

INTRODUCTION

Part 1 provides analyses and tabulations that cover Government finances and operations as a whole, and reflect the ways in which Government finances affect the economy. These special analyses encompass those designated A through H.

Special Analysis A presents the Federal budget estimates in terms of the national income accounts. It is designed to explain the relationships of the unified budget of the Federal Government to the national income accounts, which constitute the most widely used measure of aggregate economic activity in the United States.

Special Analysis B classifies budget information by the groups of funds (Federal and trust) that comprise the budget.

Special Analysis C describes current developments and trends in Federal borrowing and debt, and the investment by Government accounts in Federal securities. It summarizes Federal and federally assisted borrowing from the public in order to display some measure of the Government's impact on the credit markets.

Special Analysis D classifies budget outlays in terms of the duration and nature of the benefits derived, distinguishing those of an investment or development type from those that primarily yield current benefits. Apart from this analysis the U.S. budget, unlike those of some other governments, includes outlays that are for "capital" or investment-type activities in the same accounts in which "current" activities and costs are shown.

Special Analysis E covers Federal credit programs—direct loans guarantees of private loans, and loans of Government-sponsored enterprises. It includes estimates of loan subsidy costs, and provides an aggregate measure of total credit supplied to the public under Federal auspices.

Special Analysis F provides a discussion of revenue losses due to 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 G reflects obligation levels for the principal programs of the Federal Government for collecting current statistics, and current spending for periodic statistics obtained in census-type surveys usually conducted every 5 or 10 years. Also included are staffing levels for major statistical agencies.

Special Analysis H deals with the levels of civilian employment in the executive branch. It also contains figures on total Federal personnel costs (including military personnel).

SPECIAL ANALYSIS A

FEDERAL TRANSACTIONS IN THE NATIONAL INCOME ACCOUNTS

The budget is designed to serve several purposes:

- It is an *economic document* that reflects the taxing and spending policies of the Government for promoting economic growth, high employment, relative price stability, and a strong balance-of-payments position.
- It proposes an *allocation of resources* between the private and public sectors and within the public sector. Through its impact on consumption and investment decisions and the distribution of income it also affects allocation decisions within the private sector.
- It sets forth the *President's request to the Congress* for appropriation 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.

No single budget concept can satisfy all these purposes fully. The budget document and related Treasury reports provide 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 accounts (NIA) of the United States provide the most useful measures.

This special analysis shows the Federal budget as measured in the national income accounts. 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 1977 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 stated in seasonally adjusted annual rates, and the final section explains the major differences between the budget and the NIA concepts. A discussion of fiscal policy can be found in the *Economic Report of the President*.

FEDERAL SECTOR RECEIPTS AND EXPENDITURES

Table A-1 shows Federal sector NIA receipts, expenditures, and deficits for 1976-78, including the transition quarter (TQ).¹

¹ The transition quarter is the quarter from July 1 through Sept. 30, 1976. Starting in calendar year 1976 the Federal fiscal year converted from a July 1 through June 30 basis to an Oct. 1 through Sept. 30 basis. This 3-month period was required to make the conversion to a new fiscal year and is being maintained as a separate accounting period.

Table A-1. FEDERAL RECEIPTS AND EXPENDITURES IN THE NATIONAL INCOME ACCOUNTS (in billions of dollars)

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
RECEIPTS				
Personal tax and nontax receipts.....	137.2	40.5	158.6	177.5
Corporate profits tax accruals.....	51.0	14.0	60.6	65.5
Indirect business tax and nontax accruals.....	24.5	5.9	24.6	26.1
Contributions for social insurance.....	100.9	25.8	116.9	136.6
Total receipts.....	313.6	86.2	360.7	405.7
EXPENDITURES				
Purchases of goods and services.....	127.2	32.5	144.8	160.0
Defense.....	(85.8)	(21.7)	(94.8)	(105.4)
Nondefense.....	(41.4)	(10.8)	(50.0)	(54.6)
Transfer payments.....	156.7	40.4	171.0	179.4
Domestic ("to persons").....	(153.6)	(39.6)	(167.7)	(175.9)
Foreign.....	(3.1)	(.8)	(3.3)	(3.5)
Grants-in-aid to State and local governments.....	57.5	15.4	68.0	69.6
Net interest paid.....	25.8	6.8	28.8	30.0
Subsidies less current surplus of Government enterprises.....	5.8	1.6	7.3	8.1
Total expenditures.....	373.0	96.7	419.9	447.1
Deficit (-).....	-59.4	-10.5	-59.2	-41.4

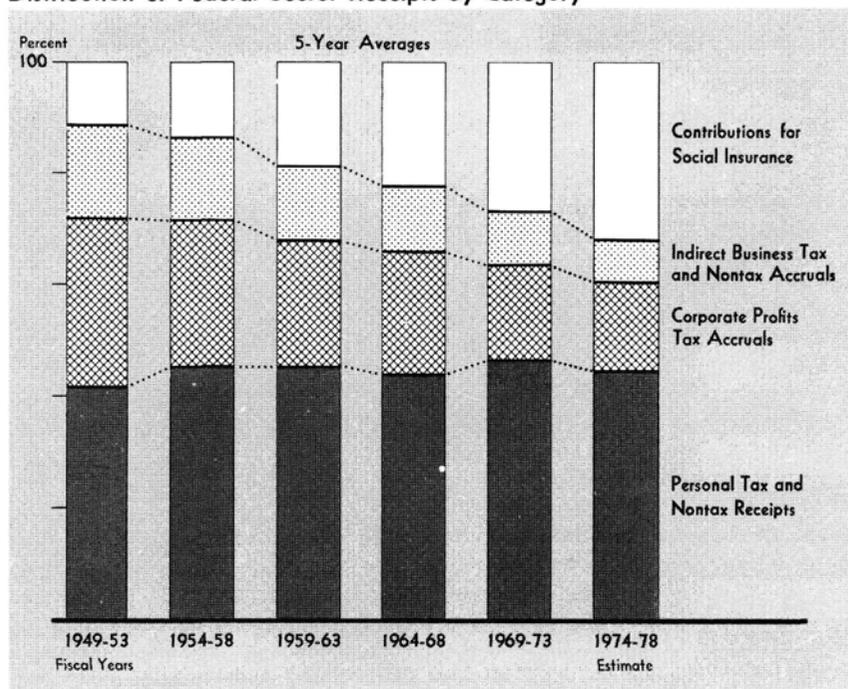
Trends in Federal sector receipts.—Table A-1 divides receipts into four major categories, which are also illustrated in the chart on the distribution of Federal sector receipts by category.

Personal tax and nontax receipts.—The largest receipt category—personal tax and nontax receipts—is composed primarily of individual income taxes but also includes estate and gift taxes and some miscellaneous receipts. Increases in income, because of both real growth and inflation, automatically increase these receipts. Since personal income taxes are progressive, these receipts normally grow at a faster rate than personal income. However, tax reductions have been enacted periodically over the past three decades that have offset most of the increase in effective tax rates resulting from the progressive tax structure. This is illustrated in table A-2, which shows Federal sector receipts at 10-year intervals as a percent of the gross national product (GNP).

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

Description	1948 actual	1958 actual	1968 actual	1978 estimate
Personal tax and nontax receipts.....	8.2	8.2	8.6	8.7
Corporate profits tax accruals.....	4.6	4.0	4.0	3.2
Indirect business tax and nontax accruals.....	3.2	2.6	2.1	1.3
Contributions for social insurance.....	1.9	2.8	4.6	6.7
Total receipts.....	17.8	17.7	19.3	19.9

Distribution of Federal Sector Receipts by Category



Corporate profits tax accruals.—These tax accruals are volatile because corporate profits are among the most volatile components of national income. The NIA corporate profits taxes generally differ from the corresponding budget category primarily because: (1) The NIA show the deposit of earnings by the Federal Reserve System as corporate profit taxes, while the budget treats them as miscellaneous receipts; and (2) the NIA record corporate profits taxes when the profits are earned (that is, accrued), while the unified budget records the cash receipts.

Estimates of corporate profits tax accruals are normally subject to greater error than any other category of receipts. The NIA estimate is derived from estimates of corporate profits before tax and effective tax rates. These estimates are subject to significant revisions based on later data. As is shown in table A-8, revised estimates of corporate profits raised estimated corporate profits tax accruals for 1975 by \$1.0 billion from the estimate of a year ago, even though both estimates were for a period that had ended. There is about a 3-year lag between initial estimates of corporate tax liability data; in the interim, successive estimates are made based on gradually improving data.

The secular decline in corporate profits tax receipts relative to GNP and to total receipts (as shown in the chart above) results 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) the nearly constant nominal tax rate on taxable corporate profits. This decline would be accelerated in future years by the proposed corporation income tax rate reductions and the proposed integration of individual and corporation income taxes.

Indirect business tax and nontax accruals.—These receipts are composed of excise taxes, customs duties, and various miscellaneous receipts such as rents and royalties. The import fees on crude oil and petroleum products, most of which have been ended, are classified as indirect business taxes. Over time, indirect business tax and nontax accruals have become a much less important part of total Federal sector receipts, partly because they normally do not rise in proportion to the increase in the economy and partly because some of them, such as the automobile and telephone excise taxes, have been repealed or reduced.

Contributions for social insurance.—This group of receipts constitutes the second largest category of Federal sector receipts. The rapid increase 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 the higher taxable wage base and contribution 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.

Major tax changes.—Federal sector receipts in the budget reflect both the impact of tax changes scheduled under current law and proposed tax legislation. The major changes in taxes reflected in the budget are the following:

- The recently enacted Tax Reform Act of 1976 extended temporary tax reductions that were scheduled to expire and enacted a number of major tax reforms. Had the provision of the temporary tax reductions previously in effect been permitted to expire, personal taxes would have been increased nearly \$13 billion and corporate taxes by about \$4 billion in 1977.
- Permanent individual and corporation income tax reductions are proposed to become effective retroactive to January 1, 1977. In comparison to current law, these reductions—which would include replacement of some of the temporary provisions of the Tax Reform Act (such as the \$35 per capita credit)—would reduce receipts by about \$9 billion in 1977 and \$27 billion in 1978. In comparison to the receipts that would result from extending the temporary provisions of the Tax Reform Act, the reductions are the same in 1977 and about \$13 billion in 1978.

- Income earned by corporations is currently taxed twice: first as corporation income and then as personal income when profits are passed on to the shareholder. It is proposed that this double taxation be eliminated in six annual phases, beginning in January 1978, through comprehensive corporation income tax integration. This proposal reduces 1978 corporate profits tax accruals by \$1.9 billion.
- The social security tax base increased from \$15,300 in 1976 to \$16,500 in calendar year 1977. Under existing law, the base will increase further to \$17,700 in calendar year 1978, and the combined employer-employee rate will rise from 11.7% to 12.1%. In addition, a rate increase of 0.2 percentage points—to 12.3%—is proposed for January 1978. This proposal would increase 1978 receipts by \$1.4 billion.
- These estimates also reflect the Unemployment Compensation Amendments of 1976, which increased the Federal unemployment insurance tax rate (from 0.5% to 0.7% effective January 1, 1977) and tax base (from \$4,200 to \$6,000 effective January 1, 1978). These increases raise receipts by \$0.3 billion in 1977 and \$2.6 billion in 1978.

Part 4 of the budget discusses tax changes and proposed legislation in greater detail.

Trends in Federal sector expenditures.—Federal sector expenditures are also divided into several major NIA categories. The primary division 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, included in GNP. The other expenditure categories consist primarily of payments to individuals and grants to State and local governments. These individuals and governments, in turn, can use the income to finance their own consumption or purchases of goods and services, to save, and—in the case of States and localities—to hold down taxes or make transfer payments.

A major shift in the composition of Federal sector expenditures has been underway for years. As the chart on expenditures shows, defense purchases of goods and services have been a declining share of Federal spending since the Korean war. There has been a corresponding rise in other components, especially grants-in-aid and domestic transfer payments. While this shift has been underway for two decades, it was accelerated in the past decade due to the sharp increases in Federal transfer payments and grants, while defense purchases in current prices dropped for several years in a row. In 1974 defense purchases in current prices were still below the 1968 and 1969 levels. Real (i.e., deflated) spending for defense has decreased substantially during this period.

Distribution of Federal Sector Expenditures by Category

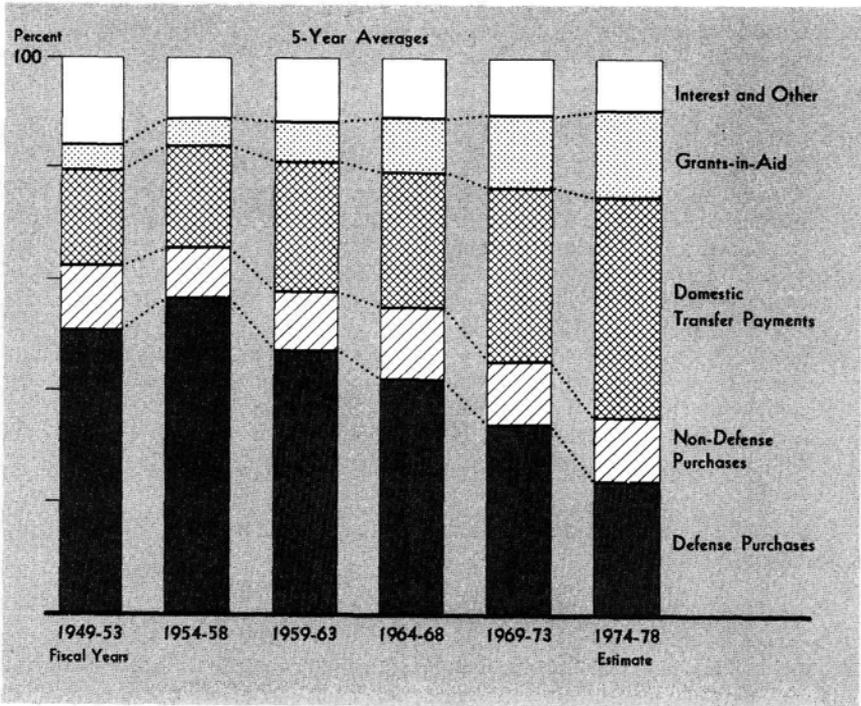


Table A-3 shows Federal sector expenditures by category as a percent of GNP at 10-year intervals.

Table A-3. FEDERAL SECTOR EXPENDITURES AS A PERCENT OF GNP

Description	1948 actual	1958 actual	1968 actual	1978 estimate
Defense purchases	3.9	10.1	9.0	5.2
Nondefense purchases	1.5	1.5	2.4	2.7
Domestic transfer payments	3.5	4.0	5.1	8.6
Foreign transfer payments	1.1	.4	.3	.2
Grants-in-aid to State and local governments	.7	1.1	2.1	3.4
Net interest paid	1.7	1.2	1.3	1.5
Subsidies less current surplus of Government enterprises	.2	.5	.5	.4
Wage disbursements less accruals		-.1		
Total expenditures	12.6	18.7	20.8	21.9

Defense purchases and foreign transfer payments are largely for the conduct of our national defense and foreign affairs.² In 1948 defense purchases—reduced by receipts from large-scale sales of World War II materials—were only 3.9% of GNP, while foreign transfer payments were 1.1% of GNP. The total of these, 5.0%, roughly reflects the cost of the conduct of external affairs. In 1958, after the Korean war defense buildup, they totaled 10.5% of GNP; by 1978 they will be back down to about 5.4% of GNP.

In contrast, spending on most other expenditure categories, especially nondefense purchases, domestic transfer payments, and grants-in-aid, has risen dramatically. In 1948, NIA spending for everything except defense purchases and foreign transfers was equal to 7.6% of GNP; in 1978 it is estimated at 16.6% 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. Almost all defense purchases are made by the Department of Defense—Military, but this category also includes defense-related purchases (related to atomic weapons) by the Energy Research and Development Administration and other accounts included in the defense function.

The 1978 budget calls for increases in defense purchases in 1977 and 1978. These increases more than offset the impact of inflation, thus reversing the pattern of declining defense spending in real terms. While NIA defense purchases are not estimated in constant prices (the Department of Commerce is working on constant price defense purchases, and according to current plans will publish estimates of them in calendar year 1978), the budget includes constant price estimates of outlays in the national defense function. There is sufficient similarity between this category and defense purchases in the NIA that these figures give a rough approximation of the same transactions. The unified budget estimates of national defense outlays in constant prices are as follows (in billions of fiscal year 1972 dollars):

1963.....	79.0
1968.....	102.2
1973.....	70.5
1976.....	64.6
1977 estimate.....	67.0
1978 estimate.....	70.2

Nondefense purchases of goods and services.—This category covers the goods and services purchased by Federal nondefense agencies. These include such programs as 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, and other scientific research; the capital outlay of Government enterprises; Federal law enforcement; and operation of veterans hospitals. Table A-4 shows the composition of this spending by agency for the years 1975 through 1978.

² However, in recent years a significant portion of foreign transfers arises from payments under general domestic social programs; for example, payments to social security retirees living abroad.

Table A-4. NONDEFENSE PURCHASES OF GOODS AND SERVICES BY AGENCY (in billions of dollars)

Description	1975 actual	1976 actual	1977 estimate	1978 estimate
Legislative branch.....	0.7	0.8	1.0	1.1
The Judiciary.....	.3	.3	.4	.4
Agriculture:				
Commodity Credit Corporation (CCC).....	.2	.3	.6	.2
Other.....	2.4	2.5	3.3	3.5
Commerce.....	.9	.9	1.2	1.3
Defense—Civil.....	2.1	2.2	2.5	2.7
Health, Education, and Welfare.....	5.3	5.9	6.3	6.7
Housing and Urban Development.....	.8	1.2	1.1	1.0
Interior.....	2.2	2.3	3.4	3.4
Justice.....	1.3	1.4	1.7	1.8
Labor.....	.7	.9	1.1	1.1
State.....	.7	.8	1.1	1.2
Transportation.....	3.0	3.2	3.6	3.8
Treasury.....	2.5	2.8	3.0	3.2
Civil Service Commission.....	.8	1.0	1.3	1.5
Energy Research and Development Administration.....	1.4	1.8	3.0	3.6
Environmental Protection Agency.....	.4	.5	.7	.7
Federal Energy Administration.....	.1	.1	.5	1.2
General Services Administration.....	.4	*	.2	.2
National Aeronautics and Space Administration.....	3.2	3.6	3.6	3.8
Postal Service ¹.....	.7	.7	.6	.6
Tennessee Valley Authority.....	1.0	1.0	1.4	1.5
Veterans Administration.....	4.1	4.4	5.2	5.5
All other ²	2.8	2.8	3.2	4.6
Total.....	38.0	41.4	50.0	54.6

*Less than \$50 million.

¹ Not included in budget outlays.

² Includes allowances for civilian agency pay raises and contingencies.

Note.—Excludes the transition quarter. Data on the transition quarter are shown in Table A-1.

Nondefense purchases consist mainly of the cost of operating the various nondefense agencies. In the case of Government enterprises (including the CCC and the Postal Service), however, the purchases figures represent net capital formation.

Domestic transfer payments.—This is now the largest category of Federal sector expenditures. Spending for domestic transfers has expanded rapidly in recent years, mainly because of more beneficiaries and higher benefit payments under the social insurance programs. Table A-3 shows the growth in domestic transfer payments as a percent of GNP at 10-year intervals, and the chart on the distribution of Federal sector expenditures by category shows this growth trend over time relative to total Federal sector expenditures. Table A-5 provides data on the composition of domestic transfer payments by major program and by functional category. As can readily be seen, spending on human resources programs—especially income security programs—dominates domestic transfer payments. Under budget proposals, this spending would continue to rise in 1978, but at a much slower rate than in most recent years. Program trends (on a unified budget basis) are extensively discussed in Part 5 of the budget and elsewhere in the budget documents.

Table A-5. FUNCTIONAL COMPOSITION OF DOMESTIC TRANSFER PAYMENTS

(In billions of dollars)

Description	Actual										Estimate	
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
HUMAN RESOURCES PROGRAMS												
Income security:												
Social security (OASDI).....	20.5	22.5	25.8	28.6	34.0	38.0	46.6	53.2	61.5	70.3	80.7	88.0
Railroad retirement.....	1.2	1.4	1.5	1.6	1.9	2.1	2.4	2.6	3.0	3.4	3.7	3.8
Civil service retirement.....	1.9	2.1	2.4	2.7	3.2	3.7	4.5	5.6	6.9	8.2	9.6	10.9
Unemployment benefits.....	2.1	2.2	2.2	3.0	5.6	6.5	4.8	5.5	12.2	18.3	15.3	12.8
Benefits for coal miners.....				*	.3	.4	.9	1.0	.9	1.0	.9	1.0
Supplemental security income.....								1.9	4.2	4.5	4.8	5.1
Food stamps.....	.1	.2	.2	.5	1.5	1.8	2.1	2.7	4.1	4.9	4.1	4.1
Special payments, Treasury ¹									1.7	.8	.8	
Other.....	.1	.2	.2	.2	.3	.3	.4	.4	.5	.5	.8	1.0
Subtotal, income security.....	26.0	28.5	32.3	36.7	46.7	52.8	61.7	72.8	95.2	112.0	120.8	126.7
Health:												
Medicare.....	3.0	5.0	6.2	6.7	7.5	8.3	9.0	10.9	14.0	16.8	20.8	23.2
Other.....	.3	.3	.3	.4	.4	.4	.4	.4	.5	.5	.5	.5
Subtotal, health.....	3.3	5.4	6.6	7.2	7.9	8.8	9.4	11.3	14.5	17.4	21.3	23.7

See footnote at the end of table.

Table A-5. FUNCTIONAL COMPOSITION OF DOMESTIC TRANSFER PAYMENTS—Continued

(In billions of dollars)

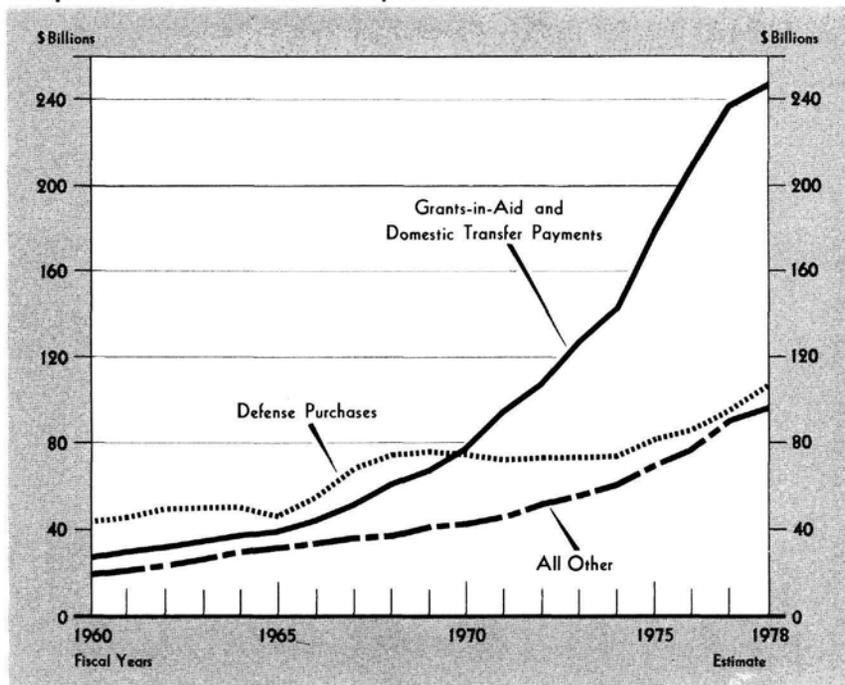
Description	Actual										Estimate	
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
HUMAN RESOURCES PROGRAMS—Con.												
Education, training, employment, and social services:												
Education.....	.4	.7	.7	.9	.9	.9	1.0	1.0	1.5	2.0	2.5	2.1
Training and employment ².....	.1	.1	.1	.2	.4	.6	.5	.5	.2	.3	.3	.3
Subtotal, education, training, employment, and social services.....	.6	.9	.9	1.0	1.3	1.5	1.5	1.5	1.8	2.3	2.8	2.4
Veterans benefits and services.....	5.3	5.6	6.2	6.9	8.0	8.8	9.7	10.4	12.8	14.3	13.7	13.1
Total, human resources programs.....	35.1	40.4	45.9	51.8	64.0	71.9	82.4	96.0	124.3	145.9	158.7	165.8
ALL OTHER FUNCTIONS												
National defense (military retired pay).....	1.8	2.1	2.4	2.8	3.3	3.8	4.3	5.1	6.2	7.2	8.2	9.0
All other functions (includes allowance for contingencies).....	.2	.3	.3	.4	.4	.4	.4	.5	.6	.6	.7	1.1
Total functions not included in human resources grouping.....	2.0	2.3	2.7	3.2	3.7	4.2	4.7	5.6	6.7	7.7	8.9	10.1
Total domestic transfer payments.....	37.2	42.7	48.7	55.0	67.7	76.1	87.1	101.7	131.0	153.6	167.7	175.9

*Less than \$50 million.

¹ Includes the \$50 tax rebate and the earned income credit to the extent that tax credits exceed tax liabilities otherwise owed.² Includes a relatively small amount classified as social services.

Note.—Excludes the transition quarter. Data on the transition quarter are shown in table A-1.

Composition of Federal Sector Expenditures



Grants-in-aid.—These expenditures help State and local governments to provide general public services or to finance programs for the needy. There is a substantial degree of substitutability between grants-in-aid and domestic transfer payments and—to a lesser degree—nondefense purchases. For example, low-income veterans could be eligible for free medical care under medicaid (grants), in a veterans hospital (nondefense purchases), or, perhaps, under medicare (transfer payments). The supplemental security income transfer payments have replaced the previous program of grants to States for public assistance for the elderly and handicapped. (The State and local spending of Federal grant money for public assistance programs is classified as State and local government transfer payments.) In addition, there is significant substitutability between different grant programs; for example, the substitution of block grants and general revenue sharing for categorical grants can result in significant changes in administrative controls without changing the total size of grants. In some cases a more meaningful picture of Federal efforts to meet domestic needs through income transfers is obtained by treating grants and domestic transfer payments together rather than separately.

Table A-6. FUNCTIONAL COMPOSITION OF FEDERAL GRANTS-IN-AID (in billions of dollars)

Description	Actual										Estimate	
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
HUMAN RESOURCES PROGRAMS												
Income security:												
Public assistance cash benefits	2.7	3.2	3.6	4.1	5.3	6.6	5.9	5.4	5.1	5.8	6.1	6.5
Child nutrition and related programs .....	.2	.2	.3	.4	.6	.9	1.1	1.2	1.7	2.3	3.0	2.5
Administration of unemployment benefits .....	.2	.2	.3	.3	.4	.4	.5	.5	.6	.9	.9	.9
Other .....		.1	.1	.1	.1	.1	.1	.2	.3	.4	.4	.4
Subtotal, income security	<u>3.2</u>	<u>3.7</u>	<u>4.2</u>	<u>4.9</u>	<u>6.6</u>	<u>7.9</u>	<u>7.6</u>	<u>7.3</u>	<u>7.7</u>	<u>9.4</u>	<u>10.4</u>	<u>10.3</u>
Health:												
Medicaid/General health financing assistance	1.2	1.8	2.3	2.7	3.4	4.6	4.6	5.8	6.8	8.5	10.2	12.0
Other (includes research, construction, services, and medical training) .....	.7	.9	.8	1.2	1.1	1.4	1.6	1.9	2.4	2.7	2.7	2.1
Subtotal, health	<u>1.9</u>	<u>2.7</u>	<u>3.1</u>	<u>3.9</u>	<u>4.5</u>	<u>6.0</u>	<u>6.2</u>	<u>7.6</u>	<u>9.2</u>	<u>11.2</u>	<u>12.9</u>	<u>14.0</u>
Education, training, employment, and social services:												
Education	2.8	3.3	3.2	3.6	3.9	4.1	4.1	3.9	4.8	4.8	5.6	5.6
Training and employment .....	.3	.5	.5	.5	.8	1.6	1.9	1.9	3.4	5.5	4.5	4.6
Social services .....	.6	.7	.9	1.1	1.4	2.6	2.3	2.2	3.2	3.4	4.2	3.9
Subtotal, education, training, employment, and social services	<u>3.7</u>	<u>4.5</u>	<u>4.5</u>	<u>5.2</u>	<u>6.1</u>	<u>8.2</u>	<u>8.4</u>	<u>8.1</u>	<u>11.4</u>	<u>13.7</u>	<u>14.3</u>	<u>14.1</u>
Veterans benefits and services	*	*	*	*	*	*	*	*	*	.1	.1	.1
Total human resources programs	<u>8.8</u>	<u>10.9</u>	<u>11.9</u>	<u>14.0</u>	<u>17.2</u>	<u>22.2</u>	<u>22.3</u>	<u>23.0</u>	<u>28.3</u>	<u>34.4</u>	<u>37.8</u>	<u>38.5</u>
ALL OTHER FUNCTIONS												
Natural resources, environment, and energy:												
Environment .....	.1	.2	.2	.2	.5	.5	.7	1.6	2.0	2.5	4.6	5.3
Other .....	.1	.1	.2	.2	.2	.3	.3	.3	.4	.8	1.1	1.2

Subtotal, natural resources, environment, and energy.....	.2	.3	.4	.4	.8	.8	1.1	2.0	2.4	3.3	5.7	6.5
Community and regional development:												
Urban renewal.....	.4	.5	.5	1.0	1.0	1.2	1.0	1.2	1.3	1.2	1.0	.7
Other HUD grants.....	.1	.1	.2	.3	.5	.7	.9	.8	.7	1.3	2.5	3.1
Area and regional development.....	.1	.2	.3	.3	.4	.4	.5	.5	.5	.6	1.4	1.4
Other.....	.3	.4	.3	.5	.4	.4	.5	.4	.4	.5	.6	.5
Subtotal, community and regional de- velopment.....	.8	1.2	1.3	2.2	2.4	2.8	2.9	2.9	3.0	3.6	5.5	5.7
Commerce and transportation:												
Highways (including safety).....	4.0	4.2	4.2	4.4	4.6	4.7	4.7	4.5	4.7	6.3	5.9	7.0
Urban mass transit.....		*	.1	.1	.2	.3	.4	.5	.8	1.0	1.6	1.5
Other (mainly airport construction).....	.1	.1	.1	.1	.1	.1	.2	.2	.4	.4	.5	.8
Subtotal, commerce and transportation..	4.1	4.3	4.4	4.6	4.9	5.1	5.3	5.3	5.9	7.7	8.0	9.3
General science, space, and technology (mainly research grants).....	.5	.6	.6	.7	.6	.6	.6	.7	.6	.6	.8	.7
Law enforcement and justice.....	*	*	*	*	.2	.3	.5	.7	.7	.8	.7	.7
Revenue sharing and general purpose fiscal assistance:												
General revenue sharing.....							6.6	6.1	6.1	6.2	6.8	6.8
Other (includes antirecession financial assist- ance).....	.2	.3	.2	.3	.3	.4	.4	.4	.6	.6	1.9	.9
Subtotal, revenue sharing and general purpose fiscal assistance.....	.2	.3	.2	.3	.3	.4	7.0	6.5	6.7	6.7	8.7	7.7
All other functions (includes allowance for contingencies).....	.3	.3	.3	.4	.4	.4	.5	.5	.6	.6	.7	.7
Total functions not included in the human resources grouping.....	6.0	6.9	7.3	8.6	9.6	10.4	18.1	18.6	20.0	23.2	30.2	31.1
Total grants-in-aid.....	14.8	17.8	19.2	22.6	26.8	32.6	40.4	41.6	48.3	57.5	68.0	69.6

*Less than \$50 million.

Note.—Excludes the transition quarter. Data on the transition quarter are shown in table A-1.

The chart on the composition of Federal sector expenditures combines grants-in-aid and domestic transfer payments. Table A-6 shows detail on grants-in-aid by budget function and major activity, and table A-5 shows similar detail for domestic transfer payments.

A discussion of grant expenditures may be found in Special Analysis O of this document. While the definition of Federal aid used in that analysis differs somewhat from the NIA definition, the two sets of data largely overlap. Special Analysis O explains the relationship between the two data series.

Foreign transfer payments.—There are three major types of foreign transfer payments: expenditure of dollars to assist foreign economic development, grants to foreign governments of foreign currencies that are earned from the sale of agricultural products, and payments under social security and similar programs to individuals living abroad. Although payments to individuals are gradually rising (roughly in proportion with the rise in GNP), total foreign transfer payments have been stable (and a declining proportion of GNP) for many years.

Net interest paid.—Net interest is highly dependent on the size of Federal debt, loans outstanding, and the interest rates on both borrowing and lending. In the late 1940's, net interest paid amounted to around 13% to 14% of total Federal sector NIA expenditures; but since 1952 it has generally been between 6% and 7% of the total.

Subsidies less current surplus of Government enterprises.—Subsidies less current surplus of Government enterprises consist of two elements: (1) Subsidy payments to resident businesses (including farms); and (2) the "current surplus" or "deficit" of Government enterprises. A subsidy is a monetary grant to a unit engaged in commercial activities. Examples are housing subsidies, payments to farmers for land retirement, payments to air carriers, and the construction and operating differential subsidies paid to operators of U.S.-flag merchant ships.

"Government enterprise" is the term used in the NIA to designate certain business-type operations of the Government (usually appearing 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, as distinguished from tax receipts. The difference between the sales and the current operating expenses of a Government enterprise constitutes its surplus or deficit. The largest of these enterprises are the Commodity Credit Corporation, the Postal Service (which is currently not included in the budget but is included in the NIA), and the Tennessee Valley Authority.

Table A-7 shows the composition of this aggregation by major category.

Table A-7. SUBSIDIES LESS CURRENT SURPLUS OF GOVERNMENT ENTERPRISES

(In billions of dollars)

Description	Actual										Estimate	
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
Subsidies:												
Commodity Credit Corporation.....	3.1	2.6	3.0	3.1	3.6	3.0	4.0	2.4	0.6	0.3	0.4	0.4
Maritime.....	.3	.3	.3	.3	.4	.4	.4	.4	.5	.5	.6	.6
Housing (HUD).....	.3	.3	.4	.5	.8	1.3	1.7	1.9	2.2	2.4	2.9	3.6
Railroad and mass transit.....					*	.1	.1	.1	.4	1.2	1.3	1.3
Small Business Administration.....							.7	*				
Other (mainly Agriculture).....	.6	.6	.5	.4	.4	.4	.4	.3	.5	.3	.3	.3
Subtotal.....	4.2	3.7	4.2	4.4	5.2	5.2	7.3	5.2	4.2	4.7	5.5	6.2
Enterprise surpluses (-) or deficits:												
Commodity Credit Corporation.....	.7	.3	.5	.6	.6	.6	1.3	1.5	.3	.1	.6	.5
Postal Service.....	1.0	.9	.9	1.3	2.0	1.4	1.3	2.0	2.2	2.0	2.1	2.3
Tennessee Valley Authority.....	-.1	-.1	-.1	-.2	-.2	-.2	-.2	-.3	-.3	-.4	-.4	-.4
Federal Housing Administration.....	-.2	-.2	-.2	-.2	-.3	-.3	-.3	-.1	-.2	-.2	-.3	-.4
Federal Deposit Insurance Corporation.....	-.1	-.1	-.1	-.1	-.1	-.2	-.1	-.1	-.2	-.2	-.2	-.2
Federal Savings and Loan Insurance Corporation.....	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.2	-.2	-.2	-.2	-.2
All other ¹	-.3	-.3	-.3	-.2	-.3	-.*	.1	-.2	-.2	.1	.2	.3
Subtotal.....	1.0	.4	.4	1.1	1.6	1.6	1.8	2.7	1.5	1.2	1.8	1.9
Total subsidies less current surplus..	5.2	4.1	4.6	5.4	6.8	6.4	9.1	7.9	5.7	5.8	7.3	8.1

*Less than \$50 million.

¹Includes impact of retroactive pay raises.

Note.—Excludes the transition quarter. Data on the transition quarter are shown in table A-1.

Wage disbursements less accruals.—This is an adjustment item occasionally made in the NIA to take account of the fact that wages and salaries are not always received at the same time as they are earned. The national income component of wages and salaries is counted in the GNP on an accrual basis; that is, when the income is earned rather than when it is received. Personal income, however, including wage and salary disbursements, is estimated on the basis of when the cash is received.

Ordinarily, wage and salary payments disbursed in one period but earned in the preceding period are approximately offset by payments disbursed in the next period but earned in the current period, thus making the adjustment between national income and personal income small or zero.

Estimating errors.—The process of estimating NIA receipts and expenditures is imprecise. Data are frequently not available when needed and in the detail desired, yet it is important that the estimates be prepared in a timely manner. The budget process does not generate all of the data needed to make precise NIA estimates, so approximations are required in the NIA translation. Table A-8 provides some indication of the magnitudes of the estimating errors. When the 1977 budget was issued, fiscal year 1975 had been over for 7 months, and the 1975 figures were labeled "actual"; yet, as table A-8 shows, the current figures for 1975 are now significantly different. These data, therefore, need to be recognized as approximations, not precise figures.

Table A-8. FEDERAL RECEIPTS AND EXPENDITURES IN THE NATIONAL INCOME ACCOUNTS FOR 1975: COMPARISON OF JANUARY 1976 AND CURRENT ESTIMATES (in billions of dollars)

Description	January 1976 "actuals"	Change	Current "actuals"
RECEIPTS			
Personal tax and nontax receipts.....	126.4	0.9	127.3
Corporate profits tax accruals.....	40.6	1.0	41.6
Indirect business tax and nontax accruals.....	22.4	-.3	22.1
Contributions for social insurance.....	92.0	.1	92.2
Total receipts.....	281.5	1.7	283.2
EXPENDITURES			
Purchases of goods and services.....	117.6	1.4	119.0
Defense.....	(80.3)	(.7)	(81.0)
Nondefense.....	(37.3)	(.7)	(38.0)
Transfer payments.....	134.8	-.7	134.1
Domestic ("to persons").....	(131.7)	(-.7)	(131.0)
Foreign.....	(3.1)	(*)	(3.1)
Grants-in-aid to State and local governments.....	48.3	*	48.3
Net interest paid.....	22.0	-.1	21.9
Subsidies less current surplus of Government enterprises.....	5.7	-.*	5.7
Wage disbursements less accruals.....	.4	-.*	.4
Total expenditures.....	328.7	.7	329.5
Deficit (-).....	-47.2	1.0	-46.3

*Less than \$50 million.

QUARTERLY ESTIMATES

Table A-9 presents quarterly NIA receipts and expenditures estimates (at seasonally adjusted annual rates) for the period covered by the budget.

Table A-9. FEDERAL RECEIPTS AND EXPENDITURES IN THE NATIONAL INCOME ACCOUNTS, QUARTERLY, 1976-78

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

Description	Actual						Estimated						
	July- Sept. 1975	Oct.- Dec. 1975	Jan.- Mar. 1976	Apr.- June 1976	July- Sept. 1976	Oct.- Dec. 1976 ¹	Jan.- Mar. 1977	Apr.- June 1977	July- Sept. 1977	Oct.- Dec. 1977	Jan.- Mar. 1978	Apr.- June 1978	July- Sept. 1978
RECEIPTS													
Personal tax and nontax receipts.....	130.5	135.1	137.7	141.9	147.2	154.5	157.2	157.7	166.4	171.7	171.3	177.1	189.9
Corporate profits tax accruals.....	47.4	49.4	53.1	54.8	56.5	59.6	60.0	60.2	62.6	63.8	64.5	65.5	68.0
Indirect business tax and nontax accruals.....	25.2	25.5	22.8	23.3	23.8	24.1	24.3	24.7	25.2	25.6	25.7	26.2	26.8
Contributions for social insurance....	94.7	96.6	102.9	104.6	106.6	109.3	116.8	120.3	123.1	125.7	138.5	140.8	143.1
Total receipts.....	297.7	307.6	316.5	324.6	334.0	347.5	358.3	362.9	377.3	386.8	400.0	409.6	427.8
EXPENDITURES													
Purchases of goods and services.....	124.6	130.4	129.2	131.2	134.5	138.9	141.8	146.5	151.8	157.2	159.2	160.8	162.7
Defense.....	(84.6)	(87.1)	(86.2)	(86.9)	(88.5)	(91.3)	(92.8)	(95.7)	(99.3)	(103.6)	(105.1)	(106.0)	(106.9)
Nondefense.....	(40.0)	(43.2)	(42.9)	(44.2)	(46.0)	(47.6)	(49.0)	(50.8)	(52.5)	(53.6)	(54.1)	(54.8)	(55.8)
Transfer payments.....	152.1	154.9	160.3	158.7	163.1	166.5	169.7	172.0	175.7	176.7	177.8	179.2	183.7
Domestic ("to persons").....	(149.2)	(151.8)	(157.2)	(155.6)	(159.8)	(163.3)	(166.4)	(168.7)	(172.3)	(173.3)	(174.3)	(175.7)	(180.1)
Foreign.....	(2.9)	(3.2)	(3.1)	(3.1)	(3.4)	(3.2)	(3.3)	(3.3)	(3.4)	(3.4)	(3.5)	(3.5)	(3.6)
Grants-in-aid to State and local governments.....	56.8	58.0	58.8	56.3	60.1	65.5	66.3	69.3	70.2	69.6	69.5	69.9	69.3
Net interest paid.....	23.6	25.6	26.6	27.4	27.7	28.4	28.6	28.9	29.3	29.6	29.9	30.2	30.3
Subsidies less current surplus Govern- ment enterprises.....	6.7	7.1	5.4	5.2	5.6	6.3	7.2	7.8	8.3	8.3	8.2	8.3	8.1
Total expenditures.....	363.7	376.0	380.3	378.7	391.1	405.6	413.6	424.5	435.3	441.4	444.6	448.4	454.1
Deficit (-).....	-66.0	-69.4	-63.8	-54.1	-57.1	-58.1	-55.3	-61.6	-58.0	-54.6	-44.6	-38.8	-26.3

¹Preliminary.

Note.—Because of the methods normally used in seasonally adjusting NIA data the average of seasonally adjusted data for the four quarters of a fiscal year may not be equal to the unadjusted fiscal year total.

The translation of the budget into national income accounts categories is necessarily inexact. The budget itself is a mixture of a forecast of what receipts and outlays are expected to be for some items under current law, and a Presidential request for congressional approval of proposed amounts for others. For this special analysis, each budget receipt and outlay is analyzed and translated into NIA categories. Imprecision and possible error are inevitable even when the translation is made using annual data. One can anticipate revisions similar to those shown in table A-8 for the "actuals" each year. The margin of error for the estimate years (1977 and 1978 in this budget) is inevitably even greater, since they involve estimating errors and differences between proposals and what is realized in the basic unified budget, as well as errors in translating unified budget transactions into NIA terms. When these annual estimates are converted into quarterly estimates seasonally adjusted at annual rates, the imprecision is further increased. The data presented in table A-9 are the best available estimates of the quarterly NIA receipts and expenditures consistent with the 1978 budget, but should be used with clear recognition of their limitations.

RELATIONSHIP OF THE BUDGET TO THE FEDERAL SECTOR OF THE NATIONAL INCOME ACCOUNTS

Table A-10 shows the major differences between the budget and the Federal sector of the NIA. These differences are explained below.

Table A-10. RELATIONSHIP OF THE BUDGET TO THE FEDERAL SECTOR, NIA (in billions of dollars)

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
RECEIPTS				
Total budget receipts	300.0	81.8	354.0	393.0
Government contribution for employee retirement (grossing).....	6.0	1.6	6.8	7.5
Other netting and grossing.....	2.3	.6	2.7	3.0
Adjustment to accruals.....	6.0	2.3	-1.8	3.2
Other.....	- .8	- .2	- 1.1	- 1.0
Federal sector, NIA receipts	313.6	86.2	360.7	405.7
EXPENDITURES				
Total budget outlays	366.5	94.7	411.2	440.0
Lending and financial transactions.....	-4.8	-1.3	-3.2	-3.8
Government contribution for employee retirement (grossing).....	6.0	1.6	6.8	7.5
Other netting and grossing.....	2.3	.6	2.7	3.0
Defense timing adjustment.....	2.6	.8	2.0	1.0
Bonuses on Outer Continental Shelf land leases.....	2.1	1.1	1.9	2.3
Other.....	-1.7	- .9	- 1.5	- 2.8
Federal sector, NIA expenditures	373.0	96.7	419.9	447.1

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

Most of the lending and financial transactions contained in table A-10 are shown in Special Analysis E. However, this total differs from the total for direct loans shown in Special Analysis E because: (a) The NIA records nonrecourse agricultural commodity loans as purchases rather than loans; (b) capital contributions to international financial institutions, while not technically loans, are financial transactions and, therefore, are excluded from the NIA; and (c) Special Analysis E shows separately the credit transactions of off-budget Federal entities, which do not require reconciliation with the NIA because they are also not included in the budget.

Government contribution for employee retirement.—The contributions of Government agencies to the retirement trust funds of their employees are not included in the budget totals. While the outlays are recorded in each agency's budget, they are offset by an intragovernmental deduction. However, the NIA counts Government payments for 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. This category includes contributions by Government enterprises such as the Postal Service; Government enterprise contributions increase the current deficit of enterprises rather than nondefense purchases, as do the contributions of the agencies. The receipt of these retirement contributions is treated in the NIA as contributions for social insurance. Since receipts and expenditures are increased by identical amounts, this treatment has no effect on the surplus or deficit. About 75% of these payments go to the Civil service retirement fund, while most of the remainder is for Federal employees insured under social security.

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, therefore, is normally shown as offsets against expenditures. For instance, receipts from two major insurance programs operated by the Veterans Administration (National Service Life Insurance and U.S. Government Life Insurance)

are netted against expenditures in the budget since these programs are voluntary, commercial-type activities. However, in the NIA these insurance premiums are treated as social insurance receipts just as are receipts from compulsory Government programs. Adjustments of this type affect total receipts and expenditures identically and, thus, do not alter the surplus or deficit of either the budget or the Federal sector, NIA. Other netting and grossing also includes some imputed contributions for social insurance for unemployment compensation and workmen's compensation for Federal employees.

Timing adjustments.—The budget records receipts at the time the cash is collected regardless of when the income is earned, while outlays (except interest) are generally recorded at the time the checks are issued. The NIA attempt to record most receipts from the business sector in the period in which the income is earned rather than when taxes are actually paid, 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 accrued or the cash is received by the Treasury.

The principal timing adjustment to expenditures is for defense purchases. The major defense timing adjustment normally involves procurement items (such as missiles or airplanes) purchased under most fixed-price contracts. These items are recorded in the Federal sector NIA as defense purchases at the time of delivery to the Federal Government, rather than when the payment is made (as the budget does) or when they are fabricated. Work in progress is counted as part of private business inventories until the goods are completed and delivered to the Government. 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 NIA. In both the budget and the NIA accounts, public debt interest to the public is recorded when it accrues.

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 NIA. The budget records these bonuses as proprietary receipts and, therefore, deducts them from budget outlays. The NIA excludes these transactions as being a transfer of assets, because the payments generally are not included in expenses in calculating book profits under current corporate accounting practice.

Other.—This category includes some miscellaneous adjustments, largely for certain specialized aspects of the national income accounts, such as the purchase and sale of land and geographical exclusions arising out of transactions with Puerto Rico, the Virgin Islands, and other U.S. territories. Certain nondefense timing adjustments—for example, the difference between State withdrawals of unemployment benefits and actual payments to individuals—are included here because of the difficulty in separating them from other adjustment categories. This category includes adjustments for certain foreign currency transactions that are not included in the budget, and transactions of Federal entities or activities that are excluded from the budget but included in the Federal sector NIA.

Table A-11. FEDERAL TRANSACTIONS IN THE NATIONAL INCOME ACCOUNTS, 1967-78

(In billions of dollars)

Description	Actual										Estimate	
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
RECEIPTS, NATIONAL INCOME BASIS												
Personal taxes and nontaxes.....	64.4	71.4	90.0	93.6	87.5	100.3	107.3	122.6	127.3	137.2	158.6	177.5
Corporate profits tax accruals.....	30.3	33.2	37.0	33.0	32.0	34.2	41.0	43.8	41.6	51.0	60.6	65.5
Indirect business tax and nontax accruals.....	15.8	17.1	18.6	19.2	20.0	19.9	20.7	21.4	22.1	24.5	24.6	26.1
Contributions for social insurance.....	35.5	38.4	44.5	49.2	52.9	59.1	71.5	84.1	92.2	100.9	116.9	136.6
Total receipts, national income basis...	146.0	160.0	190.1	194.9	192.5	213.5	240.4	271.9	283.2	313.6	360.7	405.7
EXPENDITURES, NATIONAL INCOME BASIS												
Purchases of goods and services.....	86.0	95.0	98.0	97.0	94.8	100.9	101.7	104.8	119.0	127.2	144.8	160.0
Defense.....	(67.0)	(74.9)	(76.1)	(75.3)	(72.1)	(72.5)	(73.3)	(74.2)	(81.0)	(85.8)	(94.8)	(105.4)
Nondefense.....	(19.0)	(20.1)	(21.9)	(21.7)	(22.7)	(28.4)	(28.4)	(30.6)	(38.0)	(41.4)	(50.0)	(54.6)
Transfer payments.....	39.3	44.8	50.9	57.0	70.1	78.9	89.7	104.7	134.1	156.7	171.0	179.4
Domestic ("to persons").....	(37.2)	(42.7)	(48.7)	(55.0)	(67.7)	(76.1)	(87.1)	(101.7)	(131.0)	(153.6)	(167.7)	(175.9)
Foreign.....	(2.2)	(2.1)	(2.2)	(2.0)	(2.3)	(2.8)	(2.7)	(3.0)	(3.1)	(3.1)	(3.3)	(3.5)
Grants-in-aid to State and local governments.....	14.8	17.8	19.2	22.6	26.8	32.6	40.4	41.6	48.3	57.5	68.0	69.6
Net interest paid.....	9.6	10.5	12.1	13.6	14.2	14.1	15.9	19.8	21.9	25.8	28.8	30.0
Subsidies less current surplus of Government enterprises.....	5.2	4.1	4.6	5.4	6.8	6.4	9.1	7.9	5.7	5.8	7.3	8.1
Wage disbursements less accruals.....				-.1	.1		.5	.2	.4			
Total expenditures, national income basis.....	154.9	172.2	184.7	195.6	212.7	232.9	256.2	278.9	329.5	373.9	419.9	447.1
Excess of receipts (+) or expenditures (-), national income basis.....	-8.9	-12.2	+5.4	-.6	-20.2	-19.5	-15.7	-7.1	-46.3	-59.4	-59.2	-41.4

Note.—Excludes the transition quarter. Data on the transition quarter are shown in table A-1.

SPECIAL ANALYSIS B

FUNDS IN THE BUDGET

This analysis classifies budget information by the groups of funds that comprise the budget. It also presents information on the nature of receipts and outlays for the largest trust funds.

DISTRIBUTION OF TOTALS, BY FUND GROUPS

Table B-1 shows the distribution of total budget receipts and outlays between the Federal funds and the trust funds. The two groups together, after deducting for transactions that flow between them, make up the budget totals.

Table B-1. BUDGET RECEIPTS AND OUTLAYS, BY FUND GROUP

(In millions of dollars)

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
RECEIPTS				
Federal funds:				
Total in fund accounts.....	209,248	57,291	247,715	271,057
Intrafund transactions.....	-1,473	-438	-1,828	-1,955
Proprietary receipts from the public.....	-5,767	-2,414	-6,427	-7,404
Receipts from off-budget Federal entities.....	-909	-354	-2,054	-2,772
Receipts, Federal funds.....	201,099	54,085	237,405	258,926
Trust funds:				
Total in fund accounts.....	144,078	35,025	165,788	183,051
Intrafund transactions.....	-1,244	-2	-1,330	-1,578
Proprietary receipts from the public.....	-8,131	-2,857	-9,715	-9,845
Receipts from off-budget Federal entities.....	-1,009	-95	-1,185	-1,113
Receipts, trust funds.....	133,695	32,071	153,558	170,515
Interfund transactions.....	-34,789	-4,383	-36,918	-36,425
Total budget receipts.....	300,005	81,773	354,045	393,017
OUTLAYS				
Federal funds:				
Total in fund accounts.....	278,119	68,312	313,445	331,466
Intrafund transactions.....	-1,473	-438	-1,828	-1,955
Proprietary receipts from the public.....	-5,767	-2,414	-6,427	-7,404
Receipts from off-budget Federal entities.....	-909	-354	-2,054	-2,772
Outlays, Federal funds.....	269,969	65,106	303,136	319,335
Trust funds:				
Total in fund accounts.....	141,669	36,977	157,256	169,593
Intrafund transactions.....	-1,244	-2	-1,330	-1,578
Proprietary receipts from the public.....	-8,131	-2,857	-9,715	-9,845
Receipts from off-budget Federal entities.....	-1,009	-95	-1,185	-1,113
Outlays, trust funds.....	131,286	34,023	145,026	157,057
Interfund transactions.....	-34,789	-4,383	-36,918	-36,425
Total budget outlays.....	366,466	94,746	411,243	439,967
Budget deficit.....	-66,461	-12,973	-57,198	-46,950

FEDERAL FUNDS

The Federal funds are derived mainly from taxes and borrowing, and are used for the general purposes of the Government. There are four types of Federal fund accounts—general funds, special funds, public enterprise (revolving) funds, and intragovernmental revolving and management funds.

Table B-2. FEDERAL FUND RECEIPTS AND OUTLAYS (in millions of dollars)

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
RECEIPTS BY SOURCE				
Individual income taxes.....	131,603	38,801	153,097	171,217
Corporation income taxes.....	41,409	8,460	56,604	58,910
Excise taxes.....	10,612	2,520	10,075	10,385
Estate and gift taxes.....	5,216	1,455	5,907	5,806
Customs duties.....	4,074	1,212	4,713	5,262
Miscellaneous receipts.....	8,185	1,637	7,009	7,346
Total receipts, Federal funds.....	201,099	54,085	237,405	258,926
OUTLAYS BY AGENCY				
Legislative branch.....	773	223	1,013	1,101
The Judiciary.....	324	85	428	439
Executive Office of the President.....	79	16	81	72
Funds appropriated to the President:				
Foreign assistance.....	3,515	1,813	4,031	4,080
Other.....	610	135	901	1,069
Agriculture.....	12,759	3,862	13,756	12,772
Commerce.....	2,036	531	3,030	2,921
Defense—Military ¹	88,054	21,390	98,072	109,526
Defense—Civil.....	2,106	578	2,460	2,613
Health, Education, and Welfare.....	42,465	10,658	49,525	52,119
Housing and Urban Development.....	7,079	1,397	7,673	8,722
Interior.....	2,374	781	3,587	3,577
Justice.....	2,242	551	2,436	2,445
Labor.....	15,681	2,985	11,916	8,115
State.....	1,049	300	1,219	1,272
Transportation.....	4,867	1,154	5,873	6,345
Treasury.....	44,632	9,829	50,057	50,204
Energy Research and Development Administration....	3,759	1,051	5,375	6,458
Environmental Protection Agency.....	3,118	1,108	5,295	6,006
General Services Administration.....	-92	4	176	263
National Aeronautics and Space Administration.....	3,668	951	3,704	3,901
Veterans Administration.....	18,211	3,962	18,226	18,100
Other independent agencies.....	13,323	2,512	16,901	17,665
Undistributed offsetting receipts: Rents and royalties on the Outer Continental Shelf.....	-2,662	-1,311	-2,600	-3,100
Allowances ²				2,651
Total outlays, Federal funds.....	269,969	65,106	303,136	319,335
Excess of outlays (-).....	-68,870	-11,021	-65,730	-60,409

¹ Includes allowances for civilian and military pay raises for Department of Defense.

² Includes allowances for civilian agency pay raises and contingencies.

Budget receipts and outlays.—The receipts of the general and special funds in 1978 are estimated at \$258.9 billion. Outlays of all the Federal funds are estimated at \$319.3 billion. The distribution of receipts by source, and outlays by agency, is shown in table B-2. The proprietary receipts of the general fund and special funds, the Federal intrafund receipts and the collections credited to public enterprise and intra-governmental funds, have all been offset in arriving at the outlays for each agency.

Obligations.—The obligations (net) for Federal funds are estimated at \$353.1 billion for 1978, as set forth in table B-3. These transactions largely flow from budget authority for Federal funds of \$349.1 billion for the year, although in part the obligations were authorized by prior years' budget authority.

Table B-3. OBLIGATIONS INCURRED, NET, IN FEDERAL FUNDS

(In millions of dollars)

Department or other unit	1976 actual	TQ actual	1977 estimate	1978 estimate
Legislative branch.....	957	229	1,001	1,089
The Judiciary.....	327	91	425	442
Executive Office of the President.....	66	18	75	72
Funds appropriated to the President:				
International Security Assistance.....	1,907	962	2,382	2,116
International Development Assistance.....	727	574	2,445	2,673
Other.....	479	198	1,431	673
Agriculture.....	13,736	4,440	14,670	12,114
Commerce.....	2,161	478	4,166	2,079
Defense—Military ¹	88,295	24,837	111,928	119,099
Defense—Civil.....	2,141	617	2,565	2,743
Health, Education, and Welfare.....	40,230	15,092	51,841	52,616
Housing and Urban Development.....	27,554	15,059	28,879	27,983
Interior.....	2,411	968	3,816	3,769
Justice.....	2,155	577	2,361	2,352
Labor.....	15,367	3,100	11,190	8,049
State.....	1,004	372	1,254	1,345
Transportation.....	5,054	1,195	7,481	7,421
Treasury.....	44,604	9,928	50,063	50,140
Energy Research and Development Administration.....	4,233	1,198	7,050	7,939
Environmental Protection Agency.....	4,835	983	7,416	6,148
General Services Administration.....	15	-21	224	267
National Aeronautics and Space Administration.....	3,591	945	4,063	4,018
Veterans Administration.....	18,542	4,076	18,380	18,256
Civil Service Commission.....	5,212	130	7,862	7,540
Export-Import Bank.....	728	384	1,274	1,602
Federal Home Loan Bank Board.....	-51	-171	-1,422	-438
U.S. Postal Service.....	1,708	934	2,272	1,472
Railroad Retirement Board.....	251	9	290	300
Other independent agencies.....	6,399	1,384	7,279	8,386
Undistributed offsetting receipts: Rents and royalties on the Outer Continental Shelf.....	-2,662	-1,311	-2,600	-3,100
Allowances:				
Civilian agency pay raises.....				1,199
Contingencies for other requirements.....				1,750
Total.....	291,975	87,274	350,059	353,112

¹ Includes allowances for civilian and military pay raises for Department of Defense.

Balances of prior authority.—Table B-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 may be carried over into the next year. Unobligated balances may be carried forward in accordance with specific provisions of law, usually in order to permit completion of projects as contemplated at the time the appropriations were first made, but also to provide funding for activities of a continuing nature (such as research and development) or for standby emergency purposes (such as backup financing for insurance of the Federal Deposit Insurance Corporation).

PUBLIC ENTERPRISE FUNDS

The public enterprise funds are a subgroup of Federal funds. They carry on a cycle of business-type operations, primarily with the public, on behalf of the Government. Some are incorporated enterprises; others are unincorporated. The general fund usually supplies them with capital, although in a few cases they may borrow from the public. In those cases most agencies borrow through the Federal Financing Bank. Data on public enterprise funds are included on a net outlay basis in tables B-2 through B-4. Gross outlays and applicable receipts are shown in table B-5.

Offsetting collections and outlays.—Collections of public enterprise funds are estimated at \$28.1 billion in 1978, and gross outlays are planned to total \$36.8 billion, resulting in net outlays of \$8.6 billion.

TRUST FUNDS

The trust funds are collected and used for specific purposes; in this sense they are administered in a fiduciary capacity by the Government. They include trust revolving funds, which, like the public enterprise funds, carry on a cycle of business-type operations and are normally stated net of collections by the funds.

Cash operations.—Trust fund receipts are estimated at \$170.5 billion in 1978, with outlays planned at \$157.1 billion, as shown in table B-6. The transactions of the Federal old-age and survivors and disability insurance funds are far larger than any other trust fund.

In fiscal periods 1976-78, this group of funds has excesses of receipts, except for the transition quarter,¹ of the following amounts (in millions of dollars):

	1976 actual	TQ actual	1977 esti- mate	1978 esti- mate
Total receipts, trust funds.....	133,695	32,071	153,558	170,515
Total outlays, trust funds.....	131,286	34,023	145,026	157,057
Excess of receipts or outlays (-), trust funds..	2,410	-1,952	8,532	13,459

Budget receipts by funds.—Table B-7 presents information classifying the trust fund receipts by major fund, and by source for each such fund.

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

¹ Outlays exceed receipts primarily because Federal payments to the trust funds for retirement benefits occur in fiscal year 1977.

Table B-4. FEDERAL FUND BALANCES OF BUDGET AUTHORITY (In millions of dollars)

Department or unit	Start 1976		End 1976		End TQ		End 1977		End 1978	
	Obligated	Unobligated	Obligated	Unobligated	Obligated	Unobligated	Obligated	Unobligated	Obligated	Unobligated
Legislative branch.....	-15	279	168	225	174	214	162	159	150	93
The Judiciary.....	29	13	32	30	38	12	35	6	38	3
Executive Office of the President.....	27	1	12	4	14	-----	7	-----	7	-----
Funds appropriated to the President:										
International security assistance.....	2,994	16	3,102	885	2,818	124	2,980	12	3,050	9
International development assistance.....	4,695	10,371	3,701	11,423	3,722	10,875	4,396	10,553	5,075	11,059
Other.....	1,292	461	1,017	574	1,070	327	1,513	16	1,038	6
Agriculture.....	4,329	12,530	5,249	13,677	5,814	12,086	6,727	10,108	6,068	10,164
Commerce.....	1,658	624	1,790	714	1,727	698	2,863	564	2,021	390
Defense—Military ¹	27,238	16,691	27,609	23,993	30,354	20,966	44,201	16,936	53,772	19,471
Defense—Civil.....	583	155	618	194	657	227	763	142	892	30
Health, Education, and Welfare.....	14,164	2,251	11,872	3,952	16,360	1,865	18,673	1,259	19,170	1,076
Housing and Urban Development.....	106,265	59,778	126,740	48,395	140,411	32,105	161,617	20,735	180,878	7,788
Interior.....	1,366	2,107	1,391	2,022	1,578	2,004	1,806	2,219	1,998	1,834
Justice.....	1,235	172	1,146	192	1,172	143	1,097	110	1,005	103
Labor.....	2,474	7,049	2,152	3,692	2,173	1,444	1,438	2,805	1,373	5
State.....	228	235	182	66	250	51	278	15	350	*
Transportation.....	2,838	12,822	3,021	12,633	3,057	12,360	4,664	9,237	5,741	6,679
Treasury.....	307	133	269	2,489	308	2,714	314	2,411	1,250	142
Energy Research and Development Agency.....	1,791	412	2,265	694	2,412	759	4,087	99	5,568	-----
Environmental Protection Agency.....	7,909	11,719	9,626	7,656	9,499	6,857	11,620	1,301	11,762	456
General Services Administration.....	208	47	317	193	292	200	341	96	345	62
National Aeronautics and Space Administration.....	897	462	819	422	814	406	1,173	66	1,289	66
Veterans Administration.....	1,323	1,983	1,641	2,546	1,754	2,946	1,907	3,038	2,063	2,340
Civil Service Commission.....	17	5	8	5	11	2	9	4	4	4
Export-Import Bank.....	7,637	-----	7,508	-----	7,619	-----	7,994	-----	8,632	-----
Federal Deposit Insurance Corporation.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Federal Home Loan Bank Board.....	-10	9,271	18	7,322	26	7,492	24	8,914	9	9,352
U.S. Postal Service.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Railroad Retirement Board.....	-----	-----	*	-----	-----	-----	-----	-----	-----	-----
Other independent agencies.....	2,892	2,823	3,917	11,606	3,956	11,942	4,238	9,536	4,816	8,000
Allowances ²	-----	-----	-----	-----	-----	-----	-----	-----	298	-----
Total.....	194,369	152,413	216,190	155,604	238,078	128,819	284,928	100,341	318,665	79,133

* Less than \$500 thousand.

¹ Includes balances of allowances for civilian and military pay raises for Department of Defense.

² Includes balances of allowances for civilian agency pay raises and contingencies.

Table B-5. PUBLIC ENTERPRISE FUND TRANSACTIONS (in millions of dollars)

Description	Applicable collections				Gross outlays			
	1976 actual	TQ actual	1977 estimate	1978 estimate	1976 actual	TQ actual	1977 estimate	1978 estimate
Funds appropriated to the President:								
Foreign assistance.....	165	39	80	82	307	130	187	143
Other.....	*	*			1	*	2	2
Agriculture:								
Commodity Credit Corporation ¹	3,388	675	4,510	4,992	4,103	1,360	6,314	5,978
Farmers Home Administration.....	6,680	1,509	9,636	8,386	7,054	1,865	8,933	9,033
Federal Grain Inspection Service.....			13	48			21	48
Federal Crop Insurance Corporation.....	74	*	92	92	78	2	154	99
Commerce.....	68	18	77	78	25	3	88	115
Defense:								
Military.....	6	1	6	6	8	1	12	11
Civil (Panama Canal Company).....	250	65	289	311	248	64	291	311
Health, Education, and Welfare.....	122	25	175	238	270	121	387	666
Housing and Urban Development:								
Government National Mortgage Association.....	8,239	1,791	2,380	3,018	8,836	1,556	1,989	2,702
Urban renewal fund.....	362	93	233	255	1,550	408	1,208	905
Low-rent public housing fund.....	271	34	608	608	279	45	608	608
Federal Housing Administration.....	1,232	346	1,188	1,368	2,423	386	2,215	2,313
Other.....	265	67	275	285	462	164	755	605
Interior:								
Bonneville Power Administration fund.....	338	99	356	340	284	63	328	384
Bureau of Reclamation.....	90	22	106	111	131	40	252	252
Other.....	13	2	14	16	18	4	35	39
Transportation.....	62	13	45	49	1,382	306	1,911	2,256
Treasury.....	1,261	1,075	2,051	951	1,261	1,075	2,051	951
Environmental Protection Agency.....	1	*	1	*	*	*	1	*
General Services Administration.....	2	1	2	3	2	1	1	2
Veterans Administration.....	970	264	1,200	960	877	213	921	966

See footnotes at end of table.

Table B-5. PUBLIC ENTERPRISE FUND TRANSACTIONS (in millions of dollars)—Continued

Description	Applicable collections				Gross outlays			
	1976 actual	TQ actual	1977 estimate	1978 estimate	1976 actual	TQ actual	1977 estimate	1978 estimate
Other independent agencies:								
Emergency Loan Guarantee Board.....	7	2	6	4	*	-2	*	*
Export-Import Bank.....	1,906	451	2,017	2,319	2,762	724	2,916	3,284
Farm Credit Administration.....	7	2	9	10	8	2	9	10
Federal Home Loan Bank Board:								
Federal Savings and Loan Insurance Corporation.....	486	148	563	564	118	13	252	163
Revolving fund.....	77	53	1,157	70	364	9	45	47
National Credit Union Administration.....	37	10	46	53	17	14	19	22
Small Business Administration.....	690	135	741	567	1,093	207	1,206	1,037
Tennessee Valley Authority.....	1,757	514	2,079	2,355	2,738	746	3,282	3,827
Total.....	28,829	7,453	29,958	28,139	36,698	9,520	36,394	36,777
Offsetting collections from the public.....	(26,159)	(6,816)	(27,097)	(25,373)				
Offsetting collections from other accounts.....	(2,670)	(637)	(2,861)	(2,766)				

* \$500 thousand or less.

¹ Collections include advances from foreign assistance and special export programs of \$1,090 million in 1976, \$146 million in the TQ, \$1,169 million in 1977, and \$923 million in 1978.

Table B-6. OUTLAYS AND RECEIPTS OF TRUST FUNDS (in millions of dollars)

Description	Outlays				Receipts			
	1976 actual	TQ actual	1977 estimate	1978 estimate	1976 actual	TQ actual	1977 estimate	1978 estimate
Federal old-age, and survivors, and disability insurance trust funds.....	73,903	19,763	84,669	92,374	70,682	18,358	81,005	90,172
Health insurance trust funds.....	17,779	4,805	21,773	24,297	18,525	4,937	22,998	28,583
State and local government fiscal assistance trust fund.....	6,243	1,588	6,776	6,814	6,355	1,664	6,655	6,855
Unemployment trust fund.....	17,920	3,544	15,400	13,300	16,215	3,378	15,700	17,200
Railroad employees retirement funds.....	3,475	921	3,727	3,896	3,253	337	3,664	3,919
Federal employees retirement funds.....	8,352	2,284	9,855	11,276	13,197	1,486	16,665	16,646
Airport and airway trust funds.....	547	92	849	1,088	1,084	278	1,371	1,491
Highway trust funds.....	6,521	1,758	6,053	7,165	6,000	1,689	7,265	7,520
Foreign military sales trust fund.....	6,657	1,813	8,335	8,800	7,257	2,539	8,800	8,800
Veterans life insurance trust funds.....	704	148	696	759	889	157	964	1,031
Other trust funds (nonrevolving).....	547	200	533	708	622	201	702	835
Trust revolving funds.....	-978	62	-1,409	-884	-----	-----	-----	-----
Subtotal.....	141,669	36,977	157,256	169,593	144,078	35,025	165,788	183,051
Intrafund transactions.....	-1,244	-2	-1,330	-1,578	-1,244	-2	-1,330	-1,578
Proprietary receipts from the public.....	-8,131	-2,857	-9,715	-9,845	-8,131	-2,857	-9,715	-9,845
Receipts from off-budget Federal entities.....	-1,009	-95	-1,185	-1,113	-1,009	-95	-1,185	-1,113
Total.....	131,286	34,023	145,026	157,057	133,695	32,071	153,558	170,515

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

[Amounts under proposed legislation are shown separately]

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Federal old-age, survivors, and disability insurance trust funds:				
Social insurance taxes and contributions.....	66,389	18,016	76,579	84,599
Interest on Federal securities.....	2,813	93	2,704	2,392
Federal payment as employer for employee retirement.....	963	249	992	1,066
Other (mainly receipts of special Federal payments).....	517	*	730	741
Proposed legislation.....	-----	-----	-----	1,374
Subtotal Federal old-age, survivors, and disability insurance trust funds.....	<u>70,682</u>	<u>18,358</u>	<u>81,005</u>	<u>90,172</u>
Health insurance trust funds:				
Social insurance taxes and contributions.....	13,932	3,997	15,930	20,208
Interest on Federal securities.....	811	9	893	999
Federal payment as employer for employee retirement.....	175	45	178	228
Other (mainly receipts of special Federal payments).....	3,606	885	5,992	7,224
Proposed legislation.....	-----	-----	5	-76
Subtotal Health insurance trust funds.....	<u>18,525</u>	<u>4,937</u>	<u>22,998</u>	<u>28,583</u>
State and local government fiscal assistance trust fund:				
Deposits for general revenue sharing.....	6,355	1,664	1,664	6,855
Supplemental now requested.....	-----	-----	4,991	-----
Subtotal State and local government fiscal assistance trust fund.....	<u>6,355</u>	<u>1,664</u>	<u>6,655</u>	<u>6,855</u>
Unemployment trust fund:				
Social insurance taxes and contributions.....	8,054	2,698	11,514	15,046
Interest on Federal securities.....	283	55	335	354
Advances from general fund.....	7,878	625	3,851	1,800
Subtotal Unemployment trust fund.....	<u>16,215</u>	<u>3,378</u>	<u>15,700</u>	<u>17,200</u>
Railroad employees retirement funds:				
Social insurance taxes and contributions.....	1,525	328	1,860	1,855
Interest on Federal securities.....	246	16	235	235
Receipts from other trust funds.....	1,239	-----	1,319	1,577
Other (mainly receipts of special Federal payments).....	243	-7	250	240
Proposed legislation.....	-----	-----	-----	12
Subtotal Railroad employees retirement funds.....	<u>3,253</u>	<u>337</u>	<u>3,664</u>	<u>3,919</u>
Federal employees retirement funds:				
Social insurance taxes and contributions.....	2,811	720	2,994	3,007
Interest on Federal securities.....	2,474	72	2,771	3,193
Federal payment as employer for employee retirement (including payment on prior year liabilities):				
Entities included in budget.....	6,900	598	9,419	9,332
Entities excluded from budget.....	1,009	95	1,185	1,113
Other receipts.....	4	1	11	1
Supplemental now requested.....	-----	-----	286	-----
Subtotal Federal employees retirement funds.....	<u>13,197</u>	<u>1,486</u>	<u>16,665</u>	<u>16,646</u>

See footnote at end of table.

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

[Amounts under proposed legislation are shown separately]

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Airport and airway trust funds:				
Excise taxes.....	938	277	1,191	1,271
Interest on Federal securities.....	146	1	180	220
Subtotal, Airport and airway trust funds.....	1,084	278	1,371	1,491
Highway trust funds:				
Excise taxes.....	5,413	1,676	6,660	6,857
Interest on Federal securities.....	587	13	605	663
Other receipts.....	*			
Subtotal, Highway trust funds.....	6,000	1,689	7,265	7,520
Foreign military sales trust fund.....	7,257	2,539	8,800	8,800
Veterans life insurance trust funds:				
Interest on Federal securities.....	429	8	464	508
Other receipts.....	460	149	500	523
Subtotal, Veterans life insurance trust funds.....	889	157	964	1,031
Other trust funds (nonrevolving).....	622	201	702	835
Subtotal.....	144,078	35,025	165,788	183,051
Intrafund transactions.....	-1,244	-2	-1,330	-1,578
Proprietary receipts from the public.....	-8,131	-2,857	-9,715	-9,845
Receipts from off-budget Federal entities.....	-1,009	-95	-1,185	-1,113
Total receipts.....	133,695	32,071	153,558	170,515

*Less than \$500 thousand.

Balances of the trust funds.—The balances of the trust funds continue to increase, as shown in the following end-of-year figures (in millions of dollars):

	1975 actual	1976 actual	TQ actual	1977 estimate	1978 estimate
Open book balances.....	5,288	6,337	6,988	7,475	7,655
Investments in U.S. securities:					
Public debt.....	135,939	137,300	134,697	142,867	156,145
Agency debt.....	1,340	1,340	1,340	1,215	1,215
Total.....	142,567	144,977	143,025	151,557	165,015

A summary of the balances by fund is presented in table B-9. The amounts include both open-book balances with Treasury and investments in U.S. securities. These balances include both obligated and unobligated balances. The balances on a budget authority basis exceed the cash balances because for a few accounts budget authority is not the same as receipts; these differences are listed in the note appended to the table.

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

[Amounts under proposed legislation are shown separately]

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Federal old-age, survivors, and disability insurance trust funds:				
Benefit payments.....	71,363	19,431	81,951	90,307
Payments to other trust funds.....	1,239	-----	1,319	1,577
Administrative expenses and other.....	1,301	332	1,442	1,488
Proposed legislation.....	-----	-----	-43	-998
Subtotal Federal old-age, survivors, and disability insurance trust funds.....	<u>73,903</u>	<u>19,763</u>	<u>84,669</u>	<u>92,374</u>
Health insurance trust funds:				
Benefit payments.....	16,938	4,583	21,174	25,139
Administrative expenses and other.....	841	222	817	942
Proposed legislation.....	-----	-----	-218	-1,784
Subtotal Health insurance trust funds.....	<u>17,779</u>	<u>4,805</u>	<u>21,773</u>	<u>24,297</u>
State and local government fiscal assistance trust fund:				
Payments for general revenue sharing.....	6,243	1,588	3,449	5,150
Supplemental now requested.....	-----	-----	3,327	1,664
Subtotal State and local government fiscal assistance trust fund.....	<u>6,243</u>	<u>1,588</u>	<u>6,776</u>	<u>6,814</u>
Unemployment trust fund:				
Withdrawals for benefit payments.....	16,631	3,152	13,863	11,687
Administrative expenses and other.....	1,290	392	1,537	1,613
Subtotal Unemployment trust fund.....	<u>17,920</u>	<u>3,544</u>	<u>15,400</u>	<u>13,300</u>
Railroad employees retirement funds:				
Benefit payments and claims.....	3,448	913	3,694	3,863
Administrative expenses and other.....	27	7	33	33
Subtotal Railroad employees retirement funds.....	<u>3,475</u>	<u>921</u>	<u>3,727</u>	<u>3,896</u>
Federal employees retirement:				
Benefit payments and claims.....	8,142	2,209	9,609	10,967
Refunds to former employees.....	193	71	227	287
Administrative expenses and other.....	17	4	19	22
Subtotal Federal employees retirement.....	<u>8,352</u>	<u>2,284</u>	<u>9,855</u>	<u>11,276</u>
Airport and airway trust funds.....	547	92	849	1,088
Highway trust funds (mainly grants to States).....	6,521	1,758	6,053	7,165
Foreign military sales trust fund.....	6,657	1,813	8,335	8,800
Veterans life insurance trust funds.....	704	148	696	759
Other trust funds (nonrevolving).....	547	200	533	708
Trust revolving funds.....	-978	62	-1,409	-884
Subtotal.....	<u>141,669</u>	<u>36,977</u>	<u>157,256</u>	<u>169,593</u>
Intrafund transactions.....	-1,244	-2	-1,330	-1,578
Proprietary receipts from the public.....	-8,131	-2,857	-9,715	-9,845
Receipts from off-budget Federal entities.....	-1,009	-95	-1,185	-1,113
Total outlays.....	<u>131,286</u>	<u>34,023</u>	<u>145,026</u>	<u>157,057</u>

Table B-9. TRUST FUND BALANCES
(in millions of dollars)

Description	As of June 30			As of Sept. 30	
	1975 actual	1976 actual	TQ actual	1977 estimate	1978 estimate
Federal old-age, survivors, and disability insurance trust funds.....	48,153	44,933	43,528	39,864	37,663
Health insurance trust funds.....	11,294	12,040	12,172	13,397	17,683
State and local government fiscal assistance trust fund.....	1,674	1,786	1,862	1,741	1,782
Unemployment trust fund.....	7,412	5,706	5,540	5,840	9,740
Railroad retirement accounts.....	4,275	4,053	3,470	3,407	3,429
Federal employees retirement funds.....	38,821	43,666	42,868	49,678	55,048
Airport and airway trust funds.....	2,013	2,550	2,736	3,258	3,661
Highway trust funds.....	9,597	9,077	9,009	10,221	10,576
Foreign military sales trust fund.....	2,081	2,681	3,407	3,872	3,872
Veterans life insurance trust funds.....	7,651	7,836	7,844	8,112	8,384
Other trust funds (nonrevolving).....	717	792	793	962	1,089
Trust revolving funds.....	8,879	9,857	9,795	11,204	12,088
Total.....	142,567	144,977	143,025	151,557	165,015

Note.—The balances shown here cover the amounts on deposit with Treasury, and the U.S. securities held. In addition, certain funds have authority to obligate in advance of receiving money and to borrow from the public. The reconciliation is as follows:

	1975	1976	TQ	1977	1978
Balance available on an authorization basis.....	166,311	172,448	171,154	160,390	171,133
Unfinanced contract authority:					
Airport and airway trust fund.....	-514	-135	-542	-697	-917
Highway trust funds.....	-19,180	-17,280	-19,354	-16,226	-16,987
Foreign military sales trust fund.....	-15,046	-20,473	-19,067	-3,755	-1,872
Other.....	-7	-3	-1		
Unappropriated receipts:					
Available as needed, on an indefinite basis.....	35	54	11	11	11
Available for appropriation by Congress:					
Soldiers' Home permanent fund.....	94	92	92	93	95
Airport and airway trust fund.....	1,426	1,823	1,976	2,467	3,094
Highway trust funds.....	9,443	8,444	8,749	9,266	10,451
Other.....		1	1	2	2
Retained as permanent endowment.....	6	6	6	6	6
Balance available on a cash basis.....	<u>142,567</u>	<u>144,977</u>	<u>143,025</u>	<u>151,557</u>	<u>165,015</u>

For 1978 the largest net investments are expected to be those of the trust funds established by the Social Security Act as amended and by the Federal employees retirement fund.

Trust revolving funds.—The activities of the trust revolving fund subgroup are shown in table B-10. The largest of these funds are those used by the Civil Service Commission to buy insurance for Government employees.

Table B-10. TRUST REVOLVING FUND TRANSACTIONS (in millions of dollars)

Description	Offsetting collections				Gross outlays			
	1976 act.	TQ act.	1977 est.	1978 est.	1976 act.	TQ act.	1977 est.	1978 est.
Civil Service Commission (employees' life insurance and health benefits).....	3,085	801	3,753	4,116	2,657	763	3,298	3,667
Federal Deposit Insurance Corporation.....	1,201	244	883	1,005	722	377	22	626
All other trust revolving funds.....	314	85	413	399	243	53	320	343
Total trust revolving funds¹.....	4,600	1,130	5,049	5,520	3,622	1,193	3,640	4,636
Receipts from the public..	(2,771)	(675)	(2,809)	(3,050)				
Receipts from other ac- counts.....	(1,829)	(455)	(2,241)	(2,470)				

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

SPECIAL ANALYSIS C

BORROWING, DEBT, AND INVESTMENT

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

- The borrowing of cash to meet current requirements not covered by receipts and to refinance maturing debt;
- The investment of balances that trust funds and other Government accounts do not currently need for outlays; and
- The provision of assistance, including Government guarantees, for certain non-Federal borrowing.

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, agency borrowing, agency investment in U.S. Government securities, the statutory debt limit, 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 funds raised by the non-financial sectors in 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, employee retirement, and veterans compensation.¹

Special Analysis E examines the related subject of Federal credit programs, which include direct loans, Government-guaranteed loans, and loans by Government-sponsored enterprises. The factors discussed in both Special Analyses C and E are significant in appraising the impact on financial markets of the programs contained in the 1978 Federal budget.

BORROWING AND REPAYING DEBT

The Federal Government borrows from two principal sources. First, it sells debt to the public, including the Federal Reserve System, primarily in order to finance Federal deficits. Second, it sells debt to the Government agencies that accumulate surpluses in separate funds, primarily trust funds, required by law to be invested in Federal securities. Most Federal debt has been issued by the Treasury and is called "public debt" but a small portion has been issued by other Government agencies and is called "agency debt."²

Borrowing from the public—whether by the Treasury or by an agency—has a significant impact on financial markets and the rest of the economy, and it is consequently an important concern of

¹ Information on many of these liabilities is contained in Department of the Treasury, Bureau of Government Financial Operations, "Statement of Liabilities and Other Financial Commitments of the United States Government."

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 C-5 but also the debt of the Government-sponsored enterprises listed in table C-8 and certain Government-guaranteed securities.

Federal fiscal policy. For most purposes, borrowing from the Federal Reserve System 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 System, in contrast, 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 System is returned to the Treasury as receipts, called deposits of earnings, so the net cost to the Government of Federal Reserve holdings of debt is very small. The estimates in this analysis for the current and future years do not divide the debt held by the public between the Federal Reserve System and the rest of the public, despite the significance of this division, because the Federal Reserve's open market operations depend on future economic developments and on policy decisions not yet made.

Table C-1 summarizes Federal borrowing from 1976 through 1978. In 1976 the total Federal borrowing (net of the refunding of securities)—i.e., the rise in gross Federal debt—was \$87.3 billion. The borrowing from Government agencies was \$4.3 billion, and the borrowing from the public was \$82.9 billion. Of the amount borrowed from the public, \$9.7 billion was borrowed from the Federal Reserve System and \$73.2 billion from the rest of the public—commercial banks, foreign central banks, other financial institutions and businesses, and individuals.

Table C-1. FEDERAL BORROWING
(in millions of dollars)

Description	Borrowing or repayment (-) of debt				Debt outstanding end 1978 estimate
	1976 actual	TQ actual	1977 estimate	1978 estimate	
Gross Federal debt:					
Treasury debt.....	87,244	14,269	71,734	69,642	776,078
Agency debt ¹	19	244	-1,388	-1,394	8,895
Gross Federal debt ¹.....	87,263	14,513	70,346	68,248	784,973
Less debt held by Government agencies:					
Treasury debt.....	4,328	-3,506	8,511	12,819	167,435
Agency debt.....	13	-7	-165	-71	1,712
Debt held by Government agencies...	4,341	-3,514	8,346	12,748	169,146
Total, debt held by the public ¹.....	82,922	18,027	62,000	55,500	615,827
Composed of:					
Debt held by the Federal Reserve System..	9,721	1,988	NA	NA	NA
Debt held by others.....	73,202	16,039	NA	NA	NA

NA=Not available.

¹ Agency borrowing, gross Federal borrowing, and borrowing from the public in 1976 exclude the retroactive reclassification as of July 1, 1975, of \$471 million of Export-Import Bank certificates of beneficial interest from loan asset sales to debt.

Borrowing from the public—after rising from \$3.0 billion in 1974 to \$50.9 billion in 1975 and \$82.9 billion in 1976—is estimated to decline to \$62.0 billion in 1977 and \$55.5 billion in 1978. The exceptionally large borrowing in 1975 and 1976 occurred primarily because the recession automatically reduced tax receipts and raised unemployment benefits and because tax reductions and some expenditure programs were enacted to stimulate the economy. The estimated decline in borrowing in 1977 and 1978 is primarily due to the economic recovery. By the end of 1978 gross Federal debt is expected to be \$785.0 billion, with 78% held by the public (including the Federal Reserve System) and the remainder by the agencies. Almost all of the gross Federal debt will have been issued by the Treasury.

Until a few years ago the Federal debt was held almost entirely by individuals and institutions in the United States. After World War II the debt held in foreign balances and international accounts tended to grow gradually and at the end of 1969 amounted to \$10 billion.³ However, due to international monetary developments, the foreign and international holdings began to grow much faster in 1970, and by the end of the transition quarter they had risen to \$75 billion. Most of the Treasury debt held abroad is owned by foreign central banks. The annual borrowing from abroad since 1971 is shown below in comparison with the annual borrowing from the domestic public, exclusive of the Federal Reserve System (in billions of dollars):

	1970	1971	1972	1973	1974	1975	1976	TQ
Foreign and international.....	3.7	17.9	17.3	10.2	-2.5	9.1	3.8	4.8
Domestic (excluding Federal Reserve System).....	-3.5	-6.3	-3.8	5.3	*	37.4	69.4	11.2
Total borrowing from the public (excluding Federal Reserve System).....	.2	11.6	13.5	15.5	-2.5	46.5	73.2	16.0

*Less than \$50 million.

Whereas before 1970 total borrowing from the public was nearly the same as borrowing from the domestic public, the table shows that since that time they have sometimes been quite different. During 1970-73, \$49 billion was borrowed from abroad while \$8 billion of debt held by the domestic public (exclusive of the Federal Reserve System) was redeemed. Borrowing from abroad since 1973 has remained significant but not predominant, primarily because of the large size of the Government deficit.

BORROWING AND GOVERNMENT DEFICITS

Table C-2 shows how borrowing from the public is related to the Federal deficit. Until recent years the budget deficit constituted practically the entire deficit of the Federal Government, but the deficit of the off-budget Federal entities has now become significant. These entities are parts of the Federal Government that have been removed from the budget under provisions of law.

³ The estimates of Federal debt held in foreign balances and international accounts do not include agency debt, the holdings of which are believed to be small. The data were adjusted to exclude the special non-interest-bearing notes issued to the International Monetary Fund and international lending agencies. These notes are not part of gross Federal debt.

Table C-2. MEANS OF FINANCING THE FEDERAL DEFICIT

(In millions of dollars)

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Budget surplus or deficit (-).....	-66,461	-12,973	-57,198	-46,950
Deficit (-) of off-budget Federal entities ¹	-7,196	-1,767	-10,785	-9,156
Total, surplus or deficit (-).....	<u>-73,657</u>	<u>-14,740</u>	<u>-67,983</u>	<u>-56,107</u>
Means of financing other than borrowing from the public:				
Decrease or increase (-) in cash and monetary assets.....	-7,964	-2,860	5,714	.....
Increase or decrease (-) in liabilities for:				
Checks outstanding, etc. ²	-951	-546	-26	117
Deposit fund balances.....	-1,099	20	-153	-42
Seigniorage on coins.....	747	99	448	531
Total, means of financing other than borrowing from the public.....	<u>-9,265</u>	<u>-3,287</u>	<u>5,983</u>	<u>607</u>
Total, requirements for borrowing from the public.....	-82,922	-18,027	-62,000	-55,500
Reclassification of securities ³	-471	.....	.....	.....
Change in debt held by the public.....	<u>83,393</u>	<u>18,027</u>	<u>62,000</u>	<u>55,500</u>

¹ The off-budget Federal entities consist of the Rural Electrification and Telephone revolving fund, Rural Telephone Bank, Housing for the Elderly or Handicapped fund, Pension Benefit Guaranty Corporation, Exchange Stabilization fund, Federal Financing Bank, Postal Service, certain activities of the United States Railway Association, and Energy Independence Authority.

² Besides checks outstanding, includes military payment certificates, accrued interest (less un-amortized discount) payable on Treasury debt, and, as an offsetting change in assets, certain collections in transit.

³ As of July 1, 1975, Federal debt held by the public increased by \$471 million due to a retroactive reclassification of Export-Import Bank certificates of beneficial interest from loan asset sales to debt.

The Government deficit is financed either by borrowing from the public or by several other means. These other means of financing the deficit may be either positive, in which case they contribute to the financing of the deficit; or negative, in which case they, like the deficit, must themselves be financed by borrowing from the public. In 1976 the Government borrowed \$82.9 billion from the public. The major part, \$73.7 billion, was used to finance the Government deficit. The remainder was used to finance the other means of financing the deficit, which had a negative total amount. These other means were unusually large in absolute terms due to a sizeable accumulation of Treasury cash balances during the year. This accumulation of cash balances continued in the transition quarter but is planned to be reversed in 1977.

The means of financing a deficit other than borrowing from the public are:

- A decrease in cash or monetary assets;
- An increase in monetary liabilities for checks outstanding, etc.;
- An increase in deposit fund balances, which include amounts held by the Government as an agent for others (such as State income taxes withheld from Federal employees' salaries and not yet paid to the State) or amounts held in suspense temporarily before being refunded or paid into some other fund; and
- Seigniorage, which is the face value of minted coins less the cost of their production.

As the figures in table C-2 suggest, the extent to which a large deficit can be financed by means other than borrowing from the public is very limited. Consequently, the total Government deficit and the borrowing from the public tend to be closely related.

Borrowing from the agencies largely depends on the surpluses of the trust funds, which own 93% of the Federal debt held by Government agencies. Agency investment in Federal securities and the total trust fund surplus during 1975-78 are compared in the table below (in billions of dollars):

	1975 actual	1976 actual	TQ actual	1977 estimate	1978 estimate
Agency investment in Federal debt.....	7.0	4.3	-3.5	8.3	12.7
Total trust fund surplus or deficit (-).....	7.4	2.4	-2.0	8.5	13.5

As the table shows, the agency investment in Federal securities is similar in size to the total trust fund surplus throughout the period. The differences are accounted for by two factors. Certain agencies other than trust funds buy and sell Federal debt, as shown in table C-6, and the trust funds may increase or decrease their open book balances.⁴

SIZE AND GROWTH OF FEDERAL DEBT

Gross Federal debt has risen substantially over most of the past half century, from \$16 billion in 1929 to \$646.4 billion at the end of the transition quarter. Table C-3 presents the detail of Federal debt since 1954 and shows that a sizable part of the increase is held in Federal Government accounts (primarily trust funds) rather than being owed to the public. From the end of 1954 to the end of the transition quarter, gross Federal debt rose by 139% while Federal debt held by the public rose by 122%. Federal debt held by the public apart from the Federal Reserve System rose still less, by 101%—an annual compound rate of growth of 3.2% over the 22 years—because during this period the Federal Reserve System bought a large quantity of Federal debt in the market, thereby expanding the reserves of the banking system and providing for growth in the Nation's money stock.

⁴ Open book balances comprise cash assets not currently invested. As shown in Special Analysis B, they are very small relative to trust fund holdings of Federal debt.

Table C-3. COMPARISON OF TRENDS IN FEDERAL DEBT AND GROSS NATIONAL PRODUCT (in billions of dollars)

Fiscal year	Debt outstanding, end of year					GNP	Debt held by public as percent of GNP
	Gross Federal debt	Federal Government accounts	Held by				
			The public				
Total	Federal Reserve System	Other					
1954.....	270.8	46.3	224.5	25.0	199.5	363.6	61.7
1955.....	274.4	47.8	226.6	23.6	203.0	380.0	59.6
1956.....	272.8	50.5	222.2	23.8	198.5	411.0	54.1
1957.....	272.4	52.9	219.4	23.0	196.4	432.7	50.7
1958.....	279.7	53.3	226.4	25.4	200.9	442.1	51.2
1959.....	287.8	52.8	235.0	26.0	209.0	473.3	49.7
1960.....	290.9	53.7	237.2	26.5	210.7	497.3	47.7
1961.....	292.9	54.3	238.6	27.3	211.4	508.3	46.9
1962.....	303.3	54.9	248.4	29.7	218.7	546.9	45.4
1963.....	310.8	56.3	254.5	32.0	222.4	576.3	44.2
1964.....	316.8	59.2	257.6	34.8	222.8	616.2	41.8
1965.....	323.2	61.5	261.6	39.1	222.5	657.1	39.8
1966.....	329.5	64.8	264.7	42.2	222.5	721.2	36.7
1967.....	341.3	73.8	267.5	46.7	220.8	774.4	34.5
1968.....	369.8	79.1	290.6	52.2	238.4	829.9	35.0
1969 ¹	367.1	87.7	279.5	54.1	225.4	903.7	30.9
1970 ²	382.6	97.7	284.9	57.7	227.2	959.0	29.7
1971.....	409.5	105.1	304.3	65.5	238.8	1,019.3	29.9
1972.....	437.3	113.6	323.8	71.4	252.3	1,110.5	29.2
1973 ³	468.4	125.4	343.0	75.2	267.9	1,237.5	27.7
1974.....	486.2	140.2	346.1	80.6	265.4	1,360.9	25.4
1975.....	544.1	147.2	396.9	85.0	311.9	1,450.6	27.4
1976 ⁴	631.9	151.6	480.3	94.7	385.6	1,609.5	29.8
TQ.....	646.4	148.1	498.3	96.7	401.6	1,709.8	29.1
1977 estimate.....	716.7	156.4	560.3	NA	NA	1,827.6	30.7
1978 estimate.....	785.0	169.1	615.8	NA	NA	2,038.4	30.2

NA = Not available.

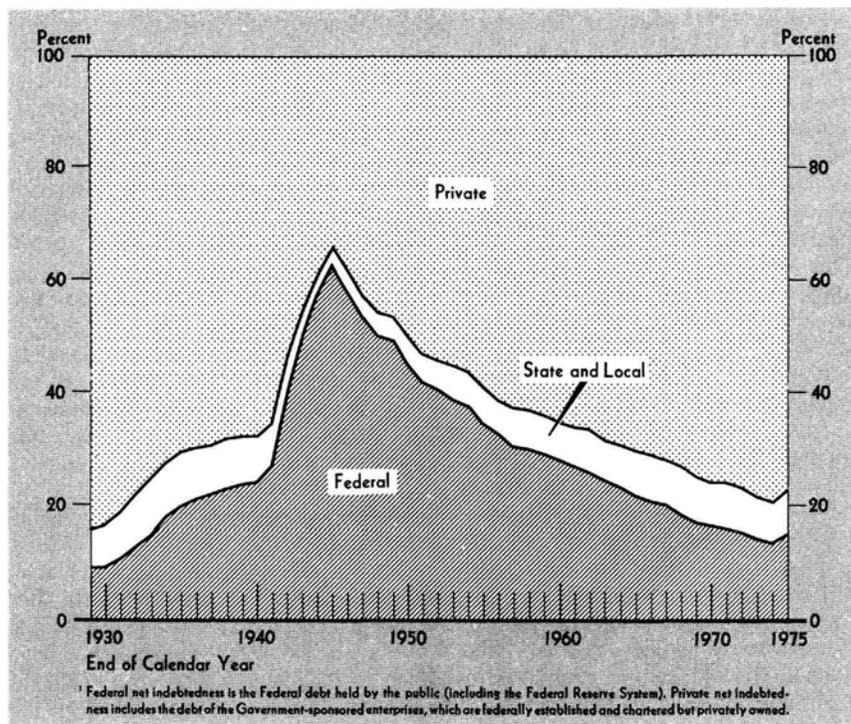
¹ During 1969, 3 Government-sponsored enterprises became completely privately owned, and their debt was removed from the totals for the Federal Government. At the dates of their conversion, gross Federal debt was reduced \$10.7 billion, debt held by Government accounts was reduced \$0.6 billion, and debt held by the public was reduced \$10.1 billion.

² Gross Federal debt and debt held by the public were increased \$1.6 billion due to a reclassification of the Commodity Credit Corporation certificates of interest from asset sales to debt.

³ 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.

⁴ 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 asset sales to debt.

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 following chart, as a proportion of total net indebtedness: Federal, State and local, and private. Whereas Federal debt held by the public was only 9% of total net debt at the end of calendar year 1929, it had risen to 62% by the end of calendar year 1945. Federal borrowing was large during these years, particularly 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.

Percent Distribution of Net Indebtedness¹

From 1945 to 1974, however, private debt increased as a proportion of total debt in every year, and in every year the Federal debt held by the public decreased as a proportion of the total. This uninterrupted trend ended in calendar year 1975 because of the large Federal deficit caused by the recession. Federal debt held by the public rose as a percentage of total debt, and private debt fell. Complete data are not yet available for calendar year 1976, but it is likely that the large Federal deficit again caused Federal debt held by the public to rise as a percentage of total debt. As the chart shows, the recent rise in the proportion of Federal debt does not appreciably affect the comparison of trends over the last three decades. From the end of calendar year 1955 to the end of 1975, for example, Federal debt held by the public rose 94%, whereas State and local government debt rose 438% and private debt rose 491%. By the end of calendar year 1975, Federal debt held by the public was only 15% of total debt. As a result of these trends, Federal debt and borrowing, although still important, have become relatively much smaller influences in the financial markets.

During the same period Federal debt has decreased relative to gross national product. As shown in table C-3, debt held by the public equaled 62% of gross national product at the end of 1954 but declined steadily to 25% by the end of 1974. In 1975, however, debt held by the public rose as a percentage of gross national product, and it rose

further in 1976 and the transition quarter. The percentage is expected to rise further this year before starting to fall again in 1978.

The interest cost of the debt may be more significant than the amount of the debt for some types of comparison designed to measure the importance of Federal indebtedness. Interest on the debt held by the public has risen much faster than the debt itself, due to a strong upward trend since World War II in the interest rates that must be paid on new borrowings and on refunded debt. Between 1954 and 1976 the Federal debt held by the public doubled, but, as shown in table C-4, the interest paid to the public increased more than five times. For this period as a whole, interest payments to the public grew faster than gross national product. In the first 5 years, 1954-58, interest was equal to 1.39% of gross national product, whereas by the last 5 years, 1972-76, the proportion had risen moderately to 1.63%. On the other hand, the proportion of budget outlays devoted to paying interest on the debt held by the public did not show any trend over the period as a whole. It ranged between 7.0% and 8.7% with an average of 7.7%. Interest as a percentage of both gross national product and budget outlays—assuming continuation of current market interest rates—remains about the same in 1977 and 1978 as in 1976.

Since the end of World War II the composition of the Federal debt has changed, with an increasingly large proportion of Federal securities having a relatively short maturity. One contributing factor is the statutory ceiling of 4¼% that has been maintained since 1918 on the interest rate that could be paid on Treasury bonds. Because long-term market rates exceeded 4¼% after 1965, the ceiling eventually prevented the Treasury from selling long-term obligations. Since 1965 the average maturity of Treasury marketable debt has declined from about 5 years to less than 3 years. During the past year the average maturity stopped declining, however, and even lengthened slightly, due to exemptions from the statutory ceiling.

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 years to 7 years in 1967 and to 10 years in March 1976. As of November 1976, the amount of notes outstanding with a maturity more than 5 years was \$98.5 billion, of which \$14.7 billion had a maturity more than 7 years. The other method of relaxing the restriction has been to make exceptions to the interest rate ceiling on bonds. In 1971 Treasury was allowed by law to issue up to \$10 billion of bonds at interest rates above 4¼%. In 1973 those bonds held by Government accounts and the Federal Reserve System were exempted from the interest rate limit, and in March and June 1976 the amount of the exception was raised in two steps to \$17 billion. As of November 1976, \$22.8 billion of bonds outstanding had been sold since the change of law in 1971, including bonds held by Government accounts and the Federal Reserve System. The effective interest rates have ranged from 6.1% to 8.4% with an average of 7.5%.

Table C-4. COMPARISON OF TRENDS IN INTEREST ON FEDERAL DEBT (in billions of dollars)

Fiscal year	Interest on the gross Federal debt						Interest on debt held by the public as a percent of	
	Total	Federal Government accounts	Paid to			GNP	Budget outlays ²	
			The public					
			Total	Federal Reserve System ¹	Other			
1954	6.4	1.3	5.2	0.5	4.7	1.42	7.29	
1955	6.4	1.2	5.2	.4	4.8	1.36	7.56	
1956	6.8	1.3	5.6	.5	5.1	1.35	7.90	
1957	7.3	1.4	5.9	.7	5.3	1.37	7.73	
1958	7.8	1.4	6.3	.7	5.6	1.43	7.68	
1959	7.8	1.4	6.4	.8	5.6	1.35	6.96	
1960	9.5	1.5	8.1	1.0	7.1	1.62	8.73	
1961	9.3	1.5	7.8	1.0	6.8	1.53	7.96	
1962	9.5	1.6	7.9	1.0	6.9	1.45	7.40	
1963	10.3	1.6	8.7	1.1	7.6	1.50	7.78	
1964	11.0	1.8	9.2	1.2	8.0	1.50	7.80	
1965	11.8	2.0	9.8	1.4	8.4	1.49	8.29	
1966	12.6	2.1	10.4	1.7	8.7	1.45	7.75	
1967	14.2	2.6	11.6	2.0	9.6	1.50	7.36	
1968	15.6	3.0	12.6	2.4	10.2	1.52	7.07	
1969	17.6	3.5	14.1	2.9	11.2	1.56	7.66	
1970	20.0	4.4	15.6	3.5	12.2	1.63	7.95	
1971	21.6	5.3	16.3	3.7	12.6	1.60	7.73	
1972	22.5	5.8	16.6	3.7	12.9	1.50	7.16	
1973	24.8	6.3	18.5	4.3	14.2	1.50	7.49	
1974	30.0	7.7	22.4	5.5	16.9	1.64	8.29	
1975	33.5	8.8	24.7	6.1	18.6	1.70	7.56	
1976	37.7	9.0	28.7	5.7	23.0	1.79	7.84	
TQ	8.3	.6	7.6	NA	NA	1.79	8.07	
1977 estimate	42.7	9.5	33.2	NA	NA	1.82	8.07	
1978 estimate	45.2	10.1	35.2	NA	NA	1.73	7.99	

NA=Not available.

¹ Estimated as the average of calendar year figures. The 1976 estimate is tentative.² Budget outlays for 1954-78 are given in the Budget, Part 9, table 23.

BORROWING BY FEDERAL AGENCIES

A few Government agencies are authorized to sell their own debt instruments to the public and to other Government agencies and funds. This agency borrowing is part of the gross Federal debt. For those agencies included in the budget, the authorization to borrow is budget authority and the disbursement of such borrowed money is a budget outlay. Agency debt includes the borrowings of off-budget Federal entities, which are Government owned and controlled but whose transactions have been excluded from the budget totals under provisions of law.

Agency borrowing was shown in total in table C-1 and is shown by agency in table C-5. In 1976, the repayment of agency debt was approximately the same as new agency borrowing. In 1977 and 1978, repayments are expected to exceed new borrowing by small amounts. The agency debt outstanding on September 30, 1978, is estimated to be \$8.9 billion, which is about 1% of gross Federal debt.

Table C-5. AGENCY BORROWING ¹ (in millions of dollars)

Description	Borrowing or repayment (-) of debt				Debt out- standing, end 1978 estimate
	1976 actual	TQ actual	1977 estimate	1978 estimate	
Borrowing from the public:					
Agriculture: Farmers Home Administration ²			-21	-76	219
Defense.....	-88	-32	-91	-93	812
Health, Education, and Welfare ²			-4	-9	116
Housing and Urban Development:					
College housing loans ^{2 3}			-1		
Federal Housing Administration.....	65	-2	40	50	569
Housing for elderly or handicapped ²				-4	60
Government National Mortgage Association ²	-41	-19	-106	-286	249
Revolving fund (liquidating programs) ^{2 3}			-3	-4	387
Veterans Administration ²	-39	-16	-54	-158	397
Export-Import Bank ⁴	109	421	-931	-724	1,936
Postal Service.....					250
Small Business Administration ²			-53	-19	210
Tennessee Valley Authority.....		-100			1,975
All other.....	*	*	*	*	2
Total, borrowing from the public ⁴..	7	252	-1,223	-1,323	7,184
Borrowing from other funds:					
Agriculture: Farmers Home Administration ²			-20	-58	99
Defense.....	-16	-3	-22	-23	97
Health, Education, and Welfare ²			-4	-6	59
Housing and Urban Development:					
College housing loans ^{2 3}			-1		
Federal Housing Administration.....	29	-1	-8	-2	88
Housing for elderly or handicapped ²				-3	31
Government National Mortgage Association ²			-57	117	564
Revolving fund (liquidating programs) ^{2 3}			-3	-3	207
Veterans Administration ²				-79	470
Export-Import Bank.....		-4			
Small Business Administration ²			-51	-14	97
Total, borrowing from other funds..	13	-7	-165	-71	1,712
Total, agency borrowing included in gross Federal debt ⁴.....	19	244	-1,388	-1,394	8,895
MEMORANDUM					
Borrowing from Federal Financing Bank:					
Export-Import Bank.....	936	-216	1,884	1,623	8,276
Tennessee Valley Authority.....	745	555	1,100	1,450	5,285
Postal Service.....	1,248	500	133	895	4,276
U.S. Railway Association.....	51	11	298		395
Total, agency borrowing from Federal Financing Bank.....	2,980	850	3,415	3,968	18,231

* Less than \$500 thousand.

¹ Excludes agency borrowing from Treasury.² Certificates of participation in loans issued by the Government National Mortgage Association on behalf of several agencies.³ The debt of the College housing fund (\$465 million) is scheduled to be transferred to the Revolving fund (liquidating programs) on Oct. 1, 1977.⁴ Borrowing in 1976 does not include the retroactive reclassification as of July 1, 1975, of \$471 million of Export-Import Bank certificates of beneficial interest as debt instead of loan asset sales.

Agency debt was retroactively increased by \$471 million as of July 1, 1975, due to reclassifying as Federal debt the certificates of beneficial interest in pools of loans issued by the Export-Import Bank and formerly classified as loan asset sales. Since this is a reclassification of existing securities, it does not constitute new Federal borrowing. Therefore agency borrowing, borrowing from the public, and gross Federal borrowing in 1976 are \$471 million less than the change in recorded debt from the end of 1975 to the end of 1976. Certificates redeemed after the reclassification show as repayment of Export-Import Bank debt in table C-5. The issuance of new certificates after the reclassification shows as borrowing, but the amount is small. The Export-Import Bank has not made new contracts to sell certificates of beneficial interest.

The retroactive reclassification took place in October 1976. At the same time, the Export-Import Bank's borrowings of \$150 million from Pefco (Private Export Funding Corporation) were also retroactively reclassified from loan asset sales to debt. Since the borrowing from Pefco was entirely during 1976 and the transition quarter, which are covered by the reclassification, the debt figures published in this budget are all consistent with the new classification.

A further adjustment within table C-5 arises from the transfer of all assets and liabilities of certain expiring funds to the Revolving fund (liquidating programs) in the Department of Housing and Urban Development. Debt of \$465 million is scheduled to be transferred from the College housing fund on October 1, 1977. This transfer does not constitute borrowing by the Revolving fund (liquidating programs) or repayment of debt by the fund that expires.

The Federal Financing Bank (FFB) was created in December 1973 under the Treasury Department as an off-budget Federal entity and began financial operations in May 1974. Its purposes were to assist and coordinate agency borrowing and Government-guaranteed borrowing and to reduce the cost to the Government of some of its borrowing activities. It was given the authority to purchase agency debt and Government-guaranteed obligations and, in turn, to finance 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 limitation on the amount.⁵ Since the FFB can borrow from the Treasury at lower interest rates than other agencies would have to pay in the market, this procedure reduces the cost of agency borrowing. 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 shown in the memorandum section of table C-5, the FFB is having a profound effect on agency borrowing.⁶ Four agencies that

⁵ The FFB also is authorized to have outstanding up to \$15 billion of publicly issued debt, which Treasury classifies as public debt. The FFB borrowed \$1.5 billion in 8-month bills from the public in July 1974. All of its other borrowing has been from Treasury, because Treasury can borrow from the public at slightly lower interest rates than FFB would have to pay. No further FFB borrowing from the public is planned.

⁶ FFB purchases of Government-guaranteed obligations are shown in table C-9.

would otherwise borrow mostly in the market borrowed \$3.0 billion from the FFB in 1976 and are expected to borrow \$3.4 billion in 1977 and \$4.0 billion in 1978. The only appreciable borrowing in the market by these agencies has arisen from special arrangements made by the Export-Import Bank. Because of this shift in the source of borrowing, very little new agency borrowing in the market took place in the last 2 years or is scheduled to take place in the future. The change in agency debt outstanding is thus determined almost solely by the repayment of maturing debt and consequently is very small or negative throughout the period. If FFB did not exist and if agency borrowing were the same, the agency component of gross Federal debt would be about \$16 billion higher at the end of 1978 than is now estimated and the Treasury component would be correspondingly lower.

By the end of 1978, \$4.2 billion of agency debt, or almost half of the total, will be obligations of the four agencies listed in table C-5 that plan to borrow in the future almost exclusively from the FFB. A total of \$3.2 billion, or a third of all agency debt, will consist 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 C-5. These certificates were not issued after 1968. A further \$0.9 billion of agency debt will be family housing mortgages assumed a number of years ago by the Department of Defense. The remaining agency debt, which is mostly for programs that will continue to borrow from the public, will constitute only 7% of the total—\$658 million of Federal Housing Administration debentures issued in payment of insurance claims for defaulted loans, and \$5 million of other obligations.

The Treasury provides capital to business-type Government enterprises both in the form of capital stock and in the form of debt. The provision of 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 figures on agency borrowing and debt in all other parts of the budget documents.

AGENCY INVESTMENT IN FEDERAL SECURITIES

Trust funds and some public enterprise funds accumulate cash in excess of current requirements in order to meet future claims and demands. Such cash surpluses are invested mostly in Treasury debt and, to a very small extent, in agency debt. Purchases of these securities are not counted as budget outlays, and redemptions are not counted as budget receipts.

Net investment by trust funds and other Federal agencies declined from \$7.0 billion in 1975 to \$4.3 billion in 1976. As shown in table C-6, this decline is expected to be reversed in 1977, with agency investment rising to \$8.3 billion in that year and \$12.7 billion in 1978.

Agency investment in 1975, 1976, and the transition quarter was less than in the preceding years. The major cause of this decrease was the large rise in unemployment, which substantially increased the benefit payments of the unemployment trust fund and to some lesser extent reduced the employment tax receipts of the social security trust funds. Disinvestment by the unemployment trust fund was limited in 1976, because some State funds had disinvested entirely and the Labor Department advanced \$7.9 billion to the trust fund. However, at the same time, the old age, survivors, and disability insurance trust funds had a large shift from investment to disinvestment. The expected rise in agency investment in 1977 is caused in large measure by continued economic recovery, which reduces unemployment benefits and raises trust fund tax receipts. Recently enacted legislation increases taxes for the unemployment trust fund by \$1.4 billion in 1978 and \$3.9 billion in 1979; proposals in this budget would increase social security taxes by \$1.3 billion in 1978 and \$6.4 billion in 1979.

The face value of Treasury debt held in several Government accounts was reduced by \$184 million in the transition quarter due to the redemption of \$1.1 billion of "flower bonds." These are bonds with which individuals can pay estate taxes at par value, even though the market value of the bonds is well below par because interest rates are now much higher than when the bonds were issued. The Secretary of the Treasury may designate new issues of bonds as flower bonds but since 1963 has not done so. In earlier years not all bonds were flower bonds, but the bonds from that period still outstanding were all so designated. The flower bond provision is valuable to individuals and so reduces the market yield of these securities but is, of course, worth nothing for Government accounts. The purpose of the redemption was to increase the long-run income of these accounts. The bonds were redeemed at market value and replaced by bonds that had a face value that was \$184 million less but yield higher income.

Since Federal debt is measured at par value, this transaction reduced gross Federal debt, debt held in Government accounts, and debt subject to the statutory limit by \$184 million. The transaction increased outlays of the respective Government accounts by an identical \$184 million, because the difference between the par value and the market value of the bonds was treated as a loss. Outlays for the interest on the public debt were decreased by an equal amount (less the very small unamortized discount), which represented the "gain" from redeeming bonds at less than the par value at which they would otherwise have been redeemed eventually. Thus, budget outlays and the deficit were virtually unchanged. Government accounts still hold \$4.4 billion of flower bonds, and Treasury is considering further redemptions.

Total agency holdings of Federal securities will reach an estimated \$169.1 billion by September 30, 1978. This will constitute 22% of the gross Federal debt. Two major groups of trust funds—the social security funds and the Civil Service Commission funds—will account for 66% of total agency holdings, and all the trust funds together will account for 93%. Almost all of the holdings will be Treasury debt, and the holdings of agency debt will continue to decline by small amounts each year.

Table C-6. AGENCY INVESTMENT IN FEDERAL SECURITIES

(In millions of dollars)

Description	Increase or decrease (-) in holdings				Holdings, end of 1978 estimate
	1976 actual	TQ actual	1977 estimate	1978 estimate	
Investment in Treasury debt:					
Health, Education, and Welfare:					
Federal old-age and survivors insurance trust fund.....	-1,925	-913	-1,738	-2,268	32,494
Federal disability insurance trust fund.....	-1,227	-477	-1,936	66	4,583
Federal hospital insurance trust fund.....	1,181	67	227	3,222	14,408
Federal supplementary medical insurance trust fund.....	-148	14	892	1,064	3,200
Housing and Urban Development:					
Federal Housing Administration.....	118	-13	151	160	1,823
Government National Mortgage Association.....	261	27	-107	-357	1,140
Other.....	29	1	9	10	190
Labor: Unemployment trust fund.....	-2,373	104	300	3,900	9,114
Transportation:					
Highway trust fund.....	-505	-79	1,218	356	10,526
Airport and airway trust fund.....	593	183	522	403	3,637
Treasury: Exchange stabilization fund ¹	60	18	-----	-----	1,529
Veterans Administration:					
National service life insurance trust fund.....	215	25	371	303	7,630
Other trust funds.....	9	-3	21	20	1,084
Other.....	33	4	26	26	406
Civil Service Commission:					
Civil Service retirement and disability trust fund.....	4,828	-770	6,702	5,304	54,296
Other trust funds.....	426	15	480	449	3,400
Federal Deposit Insurance Corporation:					
Trust fund.....	470	-128	883	371	7,861
Federal Energy Administration.....	1,712	-1,712	-----	-----	-----
Federal Financing Bank.....	96	38	29	59	212
Federal Home Loan Bank Board: FSLIC.....	368	135	320	447	4,870
Postal Service.....	125	603	-151	-920	360
Railroad Retirement Board: Trust fund.....	-246	-660	100	23	3,426
Other trust funds.....	64	18	128	66	486
Other Federal funds.....	146	7	50	101	670
Other off-budget Federal entities.....	19	-1	13	16	89
Total, investment in Treasury debt.....	4,328	-3,506	8,511	12,819	167,435
Investment in agency debt:					
Agriculture: CCC.....	-6	-----	-6	-6	23
Health, Education, and Welfare:					
Federal old-age and survivors insurance trust fund.....	-----	-----	-----	-----	555
Federal hospital insurance trust fund.....	-----	-----	-----	-----	50
Housing and Urban Development:					
Federal Housing Administration.....	*	*	*	*	192
Government National Mortgage Association.....	19	-3	-24	-19	196
Veterans Administration: National service life insurance trust fund.....					
-----	-----	-----	-75	-----	235
Civil Service Commission: Civil service retirement and disability trust fund.....					
-----	-----	-----	-----	-----	375

See footnotes at end of table.

Table C-6. AGENCY INVESTMENT IN FEDERAL SECURITIES—Continued

(In millions of dollars)

Description	Increase or decrease (-) in holdings				Holdings, end of 1978 estimate
	1976 actual	TQ actual	1977 estimate	1978 estimate	
Federal Home Loan Bank Board: FSLIC.....	-----	-----	-10	-46	86
Postal Service.....	-----	-4	-----	-----	-----
Railroad Retirement Board: Trust fund..	-----	-----	-50	-----	-----
Total, investment in agency debt...	13	-7	-165	-71	1,712
Total, agency investment in Federal debt.....	4,341	-3,514	8,346	12,748	169,146
MEMORANDUM					
Investment by Federal funds.....	2,680	-1,555	410	316	9,596
Investment by trust funds.....	1,361	-2,603	8,044	13,278	157,360
Investment by off-budget Federal entities..	300	644	-109	-846	2,190

* Less than \$500 thousand.

† The change in holdings is not estimated due to the uncertainties in foreign exchange, and the estimated 1978 year-end holdings are taken to be the actual holdings at the end of TQ.

LIMITATIONS ON FEDERAL DEBT

Statutory limitations have customarily been placed on Federal debt. Beginning with the enactment of the Second Liberty Bond Act in 1917, the limitation on the amount of debt developed in several steps from being an authorization of an amount for each specific issue to being an overall ceiling on the total amount of most outstanding Federal debt. The latter type of limitation has been in effect since 1917. The limit currently applies to the total of:

- Almost all 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 1968 under the Participation Sales Act of 1966; and
- Other debt issued by Federal agencies (and the District of Columbia Armory Board) that, according to explicit statute, is fully guaranteed as to principal and interest by the United States.

The debt subject to statutory limit includes virtually all Treasury debt and excludes the major part of agency debt. The small amount of Treasury debt not subject to statutory limit is shown in table C-7. Under proposed legislation the amount would be reduced during 1977 by writing off \$211 million of discontinued currencies, mostly silver certificates, that would be declared to have been destroyed or irretrievably lost. These currencies were included in Treasury debt when they were discontinued, and writing them off would be treated as a budget receipt.

Agency debt subject to this general statutory limit is now comprised exclusively of debentures issued by the Federal Housing Administration and participation certificates sold in 1968. These two categories together make up only about one-seventh of total agency debt. However, most other agency debt is subject to special statutory

limits. For example, the Postal Service is limited to \$2 billion of annual borrowing and \$10 billion of outstanding bonds.

All of the debt subject to the statutory limit is Federal debt except the small issue of District of Columbia Armory Board bonds. Until recently the debt subject to limit also included special non-interest-bearing notes issued by the Treasury to the International Monetary Fund or to various international lending organizations. These notes have all been redeemed and replaced by other instruments in accordance with a recommendation of the President's Commission on Budget Concepts. The Commission viewed these transactions as representing an exchange of assets (in the case of the International Monetary Fund) or an unpaid obligation or contingent liability (in the case of the international lending organizations) rather than a payment that had been made and that in turn had increased the Government's debt.⁷

The statutory limit on the Federal debt was \$577 billion from June 30, 1975, to November 13, 1975. This limit consisted of a permanent limit of \$400 billion and a temporary increase to that limit of \$177 billion. The statutory limit was increased to \$595 billion on November 14, 1975, and to \$627 billion on March 15, 1976. On June 30, 1976, new legislation provided that the debt limit would be increased successively to three temporary levels: \$636 billion on July 1, 1976; \$682 billion on October 1, 1976; and \$700 billion on April 1, 1977. The temporary increase to \$700 billion expires on September 30, 1977. According to the estimates in this budget, a further increase will be needed before then to permit the Federal Government to meet its obligations.

⁷ Report of the President's Commission on Budget Concepts (Washington: U.S. Government Printing Office, 1967), pp. 31-32 and 59.

Table C-7. DEBT SUBJECT TO STATUTORY LIMIT (in millions of dollars)

Description	End of year			
	1976 actual	TQ actual	1977 estimate	1978 estimate
Federal debt held by the public.....	480,300	498,327	560,327	615,827
Federal debt held by Government agencies.....	151,566	148,052	156,398	169,146
Total, gross Federal debt.....	631,866	646,379	716,725	784,973
Deduct:				
Treasury debt not subject to limit.....	613	613	402	402
Agency debt not subject to general limitation:				
Department of Defense.....	1,171	1,136	1,024	909
Export-Import Bank.....	3,174	3,591	2,661	1,936
Tennessee Valley Authority.....	2,075	1,975	1,975	1,975
Postal Service.....	250	250	250	250
Participation certificates ¹	3,045	3,010	2,633	2,031
Coast Guard.....	2	2	2	2
Total, Federal debt not subject to limit.....	10,330	10,578	8,947	7,505
Federal debt subject to statutory limit.....	621,535	635,802	707,779	777,469
District of Columbia Armory Board bonds.....	20	20	20	20
Total, debt subject to statutory limit.....	621,555	635,822	707,799	777,489

¹ Certificates of participation in loans issued by the Government National Mortgage Association on behalf of several agencies (excluding certificates issued during 1968).

The outstanding debt subject to limit is shown in table C-7 and compared with the gross Federal debt and the Federal debt held by the public. The debt subject to limit was \$621.6 billion at the end of 1976 and is expected to rise to \$707.8 billion and \$777.5 billion at the end of 1977 and 1978, respectively. These amounts are far more than the permanent debt limit of \$400 billion. The debt subject to limit equals about 99% of the gross Federal debt. As table C-7 shows, almost all of the difference is accounted for by agency debt not subject to the general limitation. Since the debt subject to limit is almost as large as gross Federal debt, it is much larger than the debt held by the public.

The debt subject to statutory limit is expected to increase more than the debt held by the public in both 1977 and 1978: \$72.0 billion compared to \$62.0 billion in 1977, and \$69.7 billion compared to \$55.5 billion in 1978. The slower growth in the debt held by the public is due primarily to the surpluses of certain funds in the Federal budget—principally the trust funds. These surpluses are largely invested in Federal debt, most of which is subject to the statutory debt limit. Agency investment in Federal debt thus reduces the growth in debt held by the public to an amount that is smaller than the growth in gross Federal debt; but it does not reduce the growth in debt subject to limit. The growth in debt subject to limit is about equal to the growth in gross Federal debt. Therefore, agency investment in Federal debt reduces the growth in debt held by the public to an amount that is smaller than the growth in debt subject to the statutory limit.

FEDERALLY ASSISTED BORROWING

The effect of the Government on borrowing includes not only its own borrowing to finance Federal operations but also its assistance to certain borrowing by the public. Federally assisted borrowing is of two types: borrowing by Government-sponsored enterprises, and Government-guaranteed borrowing by non-Federal borrowers.

The Government-sponsored enterprises were established and chartered by the Federal Government to perform specialized credit functions, but they are now entirely privately owned. The rule governing the budget treatment of these enterprises was established in 1967 in accordance with a recommendation by the President's Commission on Budget Concepts. The Commission, whose report led to the adoption of the unified budget, recommended that the budget exclude those Government-sponsored enterprises that are entirely privately owned.⁵ Therefore the transactions of these enterprises are not included within the Federal budget, and their debt is not part of gross Federal debt.

The seven Government-sponsored enterprises are essentially financial intermediaries, borrowing in the securities market and lending their borrowed funds for specifically authorized purposes either directly or by purchasing loans originated by the private group 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 Student Loan Marketing Asso-

⁵ *Ibid.*, pp. 29-30.

ciation borrows exclusively from the Federal Financing Bank.⁹ The Federal National Mortgage Association and the Federal home loan banks are required to obtain Treasury approval of the terms and timing of specific offerings. In addition to their Federal sponsorship, all of the enterprises have a history of successful financial performance. Hence, despite the absence of Federal guarantees, the obligations of these enterprises are sold at interest rates only moderately higher than the rates on comparable Treasury issues.

As shown in table C-8, the borrowing of the Government-sponsored enterprises was \$5.3 billion in 1976 and is expected to be \$8.3 billion in 1977 and \$12.9 billion in 1978. In order to show the borrowing by this sector as a whole from the rest of the market, these figures are calculated net of the borrowing by one Government-sponsored enterprise from another. This type of transaction consists primarily of the Federal Home Loan Mortgage Corporation borrowing from the Federal home loan banks or repaying its debt. During 1976-77 less of the borrowing than usual is due to support for the housing market from the Federal home loan banks, Federal National Mortgage Association, and Federal Home Loan Mortgage Corporation. This is primarily because the advances provided by the Federal home loan banks to their member savings institutions were less than repayments in 1976 and, though rising sharply, will exceed repayments only moderately in 1977. Three-fifths of the debt outstanding at the end of 1978 will have been issued by these enterprises. Special Analysis E discusses lending by the Government-sponsored enterprises.

⁹ The securities of the other Government-sponsored enterprises are not guaranteed by the Federal Government and therefore cannot be bought by the FFB.

Table C-8. **BORROWING BY GOVERNMENT-SPONSORED ENTERPRISES**
(in millions of dollars)

Description	Increase or decrease (-)				Debt out- standing end 1978 estimate
	1976 actual	TQ actual	1977 estimate	1978 estimate	
Health, Education, and Welfare: Student Loan Marketing Association.....	160	5	85	110	600
Housing and Urban Development: Federal National Mortgage Association.....	1,626	823	1,764	1,875	34,324
Farm Credit Administration:					
Banks for cooperatives.....	1,007	-60	618	534	5,266
Federal intermediate credit banks.....	1,054	433	1,447	1,617	14,131
Federal land banks.....	2,121	569	2,649	2,795	22,298
Federal Home Loan Bank Board:					
Federal home loan banks.....	-1,975	-101	-89	3,877	22,356
Federal Home Loan Mortgage Corporation ¹	1,355	-81	151	1,690	9,416
Total.....	5,348	1,588	6,625	12,497	108,391
Less increase in holdings of debt issued by Government-sponsored enterprises.....	47	-89	-1,694	-363	1,974
Total, borrowing by Government-sponsored enterprises.....	5,302	1,677	8,319	12,860	106,416

¹ Figures include the sale of participation certificates.

The other type of federally assisted borrowing, Government-guaranteed borrowing, consists of loans for which the Federal Government guarantees the payment of the principal and/or interest in whole or in part. Guaranteed (or insured) 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, it may be a security sold in the capital market, or it may be a security sold to the Federal Financing Bank. Government-guaranteed borrowing is the same as Government-guaranteed lending.

Guaranteed loans include most loan assets sold by Federal agencies. Loan asset sales occur when an agency makes a direct loan and then sells it. A guarantee is usually attached. In some cases the agency sells the direct loans themselves, and in other cases the agency sells securities (sometimes called participation certificates or certificates of beneficial ownership) that are backed by loans that the agency continues to hold and service. Loan asset sales are offsets to the outlays of the agency that sells them, so they reduce the amount by which the direct loans of Federal agencies add to budget outlays. The certificates of beneficial ownership sold by the Farmers Home Administration and Rural electrification and telephone revolving fund are a type of loan asset and would be classified as Federal debt instead of guaranteed loans according to the recommendations of the President's Commission on Budget Concepts.¹⁰ However, according to statute the sale of these certificates is required to be treated as the sale of loan assets instead of Federal borrowing.

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 guaranteed loans is to support housing, but in recent years guarantees have increasingly been used for other purposes. As shown in table C-9, Government-guaranteed borrowing net of repayments was \$16.2 billion in 1976 and is estimated as \$20.3 billion in 1977 and \$28.4 billion in 1978. Special Analysis E presents detailed data on guaranteed loans and loan asset sales.

TOTAL FEDERAL AND FEDERALLY ASSISTED BORROWING

Table C-9 summarizes Federal and federally assisted borrowing from the public. For the purposes of this table, Government-sponsored enterprises are excluded from the public and defined in the same sector as the Federal Government. Federal borrowing from the public is presented in total. Borrowing by Government-sponsored enterprises and Government-guaranteed borrowing are presented both in total and as net amounts, the latter having been adjusted in order to remove double counting in the derivation of total Federal and federally assisted borrowing from the public. Double counting would otherwise occur when a Federal agency or a Government-sponsored enterprise bought or sold Federal or federally assisted debt.

¹⁰ *Ibid.*, pp. 8, 47-48, and 54-55.

Table C-9. NET BORROWING FROM THE PUBLIC BY GOVERNMENT, GOVERNMENT-SPONSORED ENTERPRISES, AND GOVERNMENT-GUARANTEED BORROWERS (in billions of dollars)

Description	Borrowing or repayment (-)				Debt outstanding end 1978 estimate
	1976 actual	TQ actual	1977 est.	1978 est.	
Federal borrowing from the public ^{1 2}	82.9	18.0	62.0	55.5	615.8
Borrowing by Government-sponsored enterprises ³	5.3	1.7	8.3	12.9	106.4
Less increase in holdings of Federal debt.....	.2	.5	-1.1	-.1	2.5
Less increase in Government-sponsored debt held by Federal agencies:					
Federal Home Loan Bank Board.....	.3	*	-1.1	*	.4
Federal Financing Bank.....	.2	*	.1	.1	.6
Net Government-sponsored borrowing from the public.....	4.7	1.2	10.5	12.8	103.0
Government-guaranteed borrowing ⁴	16.2	2.7	20.3	28.4	268.6
Less increase in Government-guaranteed loans held by:					
Federal agencies:					
Federal Financing Bank.....	6.1	2.6	8.7	6.0	29.8
Government National Mortgage Corporation.....	-1.0	.3	-.7	-.3	3.3
Government-sponsored enterprises:					
Student Loan Marketing Association.....	.2	*	.1	.1	.6
Federal National Mortgage Association.....	.8	-.1	1.0	1.5	31.1
Federal Home Loan Banks.....	*	*	*	*	.1
Federal Home Loan Mortgage Corporation.....	-.2	*	-.1	-.1	1.4
Net Government-guaranteed borrowing from the public.....	10.3	-.1	11.3	21.2	202.3
Total, Federal and federally assisted borrowing from the public.....	97.9	19.1	83.8	89.6	921.1

*Less than \$50 million.

¹ See table C-1.

² Borrowing in 1976 excludes the retroactive reclassification as of July 1, 1975, of \$0.5 billion of Export-Import Bank certificates of beneficial interest from loan asset sales to debt.

³ See table C-8.

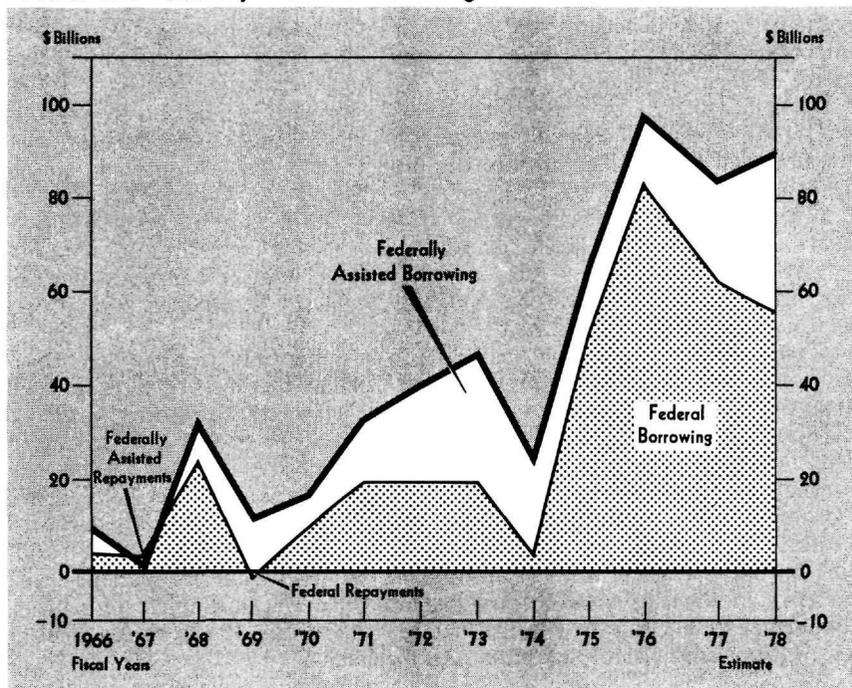
⁴ The same as Government-guaranteed lending. See table E-7.

Federal and federally assisted borrowing from the public during 1976-78 is made up predominantly of Federal borrowing to finance the large budget deficits. Federal borrowing also finances the Federal Financing Bank's purchases of guaranteed obligations (net of repayments), which are one-third of the total increase in guaranteed obligations outstanding. Since the FFB finances these acquisitions by borrowing from the Treasury, which in turn borrows from the public, these transactions substitute Federal borrowing for guaranteed borrowing in the market. As shown in table E-6 of Special Analysis E, the FFB expects to buy a smaller share, about one-sixth, of the gross new loans guaranteed (before repayments) in these years.

The following chart depicts the trends in Federal and federally assisted borrowing from the public between 1966 and 1978. The series is volatile, and the recent and expected fluctuations are dominated by the Federal deficit. Total Federal and federally assisted borrowing fell to \$24.1 billion in 1974 because of a sharp drop in the Federal deficit and rose dramatically to \$64.7 billion in 1975 and to \$97.9 billion in 1976 because of large and rising deficits in these years. The total is

expected to be a little less in 1977 and 1978 because of the falling Federal deficit. The size of federally assisted borrowing—both relative to Federal borrowing and in absolute size—is expected to rise in both these years.

Federal and Federally Assisted Borrowing



As the chart shows, Federal and federally assisted borrowing is now substantially higher than a decade ago. Much of the increase parallels the growth in the economy and in the total funds raised by the non-financial sector through the sale of debt securities and other forms of borrowing and through the sale of corporate equities. However, although the existence of trends is difficult to discern because of the volatility of the series, to some extent the total Federal and federally assisted borrowing from the public seems to have increased as a proportion of the total funds raised. This proportion increased from 12% during 1960-67 to 21% during 1968-74 and to 38% during 1975-76. Thus, Government programs since 1968 have influenced the allocation of funds raised in financial markets more than they did in the immediately preceding years. In 1975 and 1976 the Government impact was unusually large, and the estimated totals for Federal and federally assisted borrowing imply that it will remain large relative to most years in 1977 and 1978. Since the rest of the economy will be expanding, however, Federal and federally assisted borrowing will probably be a declining proportion of total funds raised in both these years.

SPECIAL ANALYSIS D

INVESTMENT, OPERATING, AND OTHER BUDGET OUTLAYS

This analysis divides outlays between those that are of an investment or "capital" nature and those directed to operating or "current" purposes. Budget outlays are classified into three categories: investment, current, and other. Each of the major classifications is further subdivided so that civil and national defense outlays can be separately analyzed. The national defense category uses the same definitions as the national defense function in the budget; the civil grouping includes all other functions.

Investment-type outlays.—These outlays yield benefits over several years: purchases of Federal physical assets, loans (both domestic and foreign); State, local, and private physical assets; and developmental expenditures that add to the Nation's capacity for better education, technical innovation, and health services.

Current outlays.—These outlays provide benefits in the year that they are made. Included are aid and special services to agriculture, business, labor, homeowners, tenants, and veterans; payments to other nations; and Federal welfare payments, whether directly or through State and local governments. Also included are: payments for retirement and social insurance trust funds established to provide an assured income to contributors or their families in the event of unemployment, retirement, disability, or death; and other services and current operating expenses. Finally, this category includes transactions such as: operation and administration of Federal departments and agencies; repair, maintenance, and operation of physical assets; regulatory and control activities; and interest.

Other outlays.—These outlays cannot be precisely classified in either of the above two categories and are placed in this residual classification. Included are: allowances for contingencies, and certain financial adjustments that cannot be distributed—such as proprietary receipts and the employer share of employee retirement.

These three categories of outlays are summarized in table D-1 for 1976-78.

Table D-1. SUMMARY OF INVESTMENT, OPERATING, AND OTHER BUDGET OUTLAYS (in billions of dollars)

	1976 actual	TQ actual	1977 estimate	1978 estimate
INVESTMENT-TYPE OUTLAYS				
Additions to Federal assets:				
Civil:				
Loans and other financial investments.....	4.7	1.6	3.4	4.4
Physical assets:				
Public works.....	4.5	1.2	6.6	6.7
Major commodity inventories.....	.2	-.1	*	1.4
Major equipment and other physical assets.....	.8	.2	1.3	1.4
National defense.....	19.5	4.5	22.3	27.4
Additions to State, local, and private assets:				
Civil.....	12.3	3.5	15.4	17.2
National defense.....	.1	*	*	*
Developmental outlays:				
Civil.....	35.5	9.6	40.6	41.9
National defense.....	9.8	2.5	11.0	12.4
Subtotal, investment-type outlays:				
Civil.....	58.1	16.0	67.3	73.1
National defense.....	29.4	6.9	33.3	39.8
Total.....	87.5	23.0	100.6	112.9
CURRENT OUTLAYS				
Current expenses for aids and special services:				
Civil.....	64.2	16.0	68.4	66.7
National defense.....	7.7	2.9	9.4	9.7
Retirement and social insurance benefits—civil.....	118.4	31.1	132.3	141.0
Other services and current operating expenses:				
Civil:				
Interest.....	26.8	7.0	29.8	31.1
Other.....	19.0	5.4	24.3	25.1
National defense.....	60.7	15.4	66.8	69.9
Allowances, Department of Defense.....				2.3
Subtotal, current outlays:				
Civil.....	228.3	59.6	254.7	263.9
National defense.....	68.4	18.3	76.2	82.0
Total.....	296.7	77.8	330.9	345.8
OTHER				
Allowances for:				
Civilian agency pay raises.....				1.2
Contingencies.....				1.5
Employer share, employee retirement (—).....	-4.2	-1.0	-4.6	-4.7
Proprietary receipts from the public (—):				
Civil.....	-5.7	-2.4	-6.3	-7.2
National defense.....	-7.8	-2.7	-9.4	-9.6
Subtotal, other outlays:				
Civil.....	-9.9	-3.4	-10.9	-9.2
National defense.....	-7.8	-2.7	-9.4	-9.6
Total.....	-17.7	-6.1	-20.3	-18.8
Total budget, outlays:				
Civil.....	276.5	72.2	311.1	327.8
National defense.....	90.0	22.5	100.1	112.2
Total.....	366.5	94.7	411.2	440.0

*Less than \$50 million.

Table D-2 shows civil investments and current operating outlays as a percentage of total budget outlays. Net civil outlays are estimated to be 73.5% of total budget outlays in 1977 and 72.4% in 1978. Investment-type outlays are projected to increase from 16.4% of total budget outlays in 1977 to 16.6% in 1978, while current outlays drop from 61.9% in 1977 to 60.0% in 1978.

Table D-2. CIVIL INVESTMENTS AND CURRENT OPERATING OUTLAYS
(Percent of total budget outlays)

	1974 actual	1975 actual	1976 actual	TQ actual	1977 estimate	1978 estimate
INVESTMENT-TYPE OUTLAYS						
Additions to Federal assets:						
Loans.....	0.7	1.3	1.0	1.3	0.6	0.8
Other financial investments.....	.2	.2	.2	.4	.2	.2
Public works—sites and direct construction.....	1.3	1.3	1.2	1.3	1.6	1.5
Major commodity inventories.....	-.1	.1	.1	-.1	*	.3
Major equipment.....	.1	.1	.1	.1	.1	.1
Other physical assets—acquisition and improvement.....	.2	.2	.2	.2	.2	.2
Subtotal, additions to Federal assets.....	2.3	3.1	2.8	3.2	2.7	3.2
Additions to State, local, and private assets:						
State and local assets.....	3.0	2.7	3.1	3.4	3.5	3.7
Private assets.....	.3	.3	.3	.3	.3	.2
Subtotal, additions to State, local and private assets.....	3.3	3.1	3.4	3.6	3.7	3.9
Developmental outlays:						
Education, training, and health.....	6.0	6.3	6.8	7.1	6.9	6.5
Research and development.....	3.0	2.7	2.8	2.9	2.8	2.9
Engineering and natural resource surveys.....	.1	.1	.1	.1	.1	.1
Subtotal, developmental outlays	9.0	9.1	9.7	10.1	9.9	9.5
Total investment-type outlays..	14.6	15.2	15.8	16.9	16.4	16.6
CURRENT OUTLAYS						
Current expenses for aids and special services:						
Agriculture.....	1.2	.5	.3	.4	.5	.5
Business.....	1.5	1.2	1.2	1.0	1.2	1.1
Labor.....	.6	.6	.8	.7	.6	.7
Homeowners and tenants.....	.6	.6	.8	.8	.8	.9
Veterans.....	5.0	5.1	5.1	4.2	4.6	4.2
International aids.....	.5	.7	.7	.5	.7	.6
Welfare aids.....	5.8	6.5	6.8	6.4	6.4	5.5
Other aids and special services.....	2.4	2.2	2.0	2.8	1.9	1.7
Subtotal, current expenses for aids and special services.....	17.6	17.1	17.5	16.9	16.6	15.2

Table D-2. CIVIL INVESTMENTS AND CURRENT OPERATING OUTLAYS
(Percent of total budget outlays)—Continued

	1974 actual	1975 actual	1976 actual	TQ actual	1977 estimate	1978 estimate
CURRENT OUTLAYS—CON.						
Retirement and social insurance benefits:						
Insurance benefits.....	25.1	25.1	25.1	26.4	26.0	26.5
Unemployment benefits.....	1.9	3.9	4.7	3.8	3.6	2.7
Other retirement and social insurance benefits.....	2.1	2.4	2.5	2.6	2.6	2.8
Subtotal, retirement and social insurance benefits.....	29.1	31.3	32.3	32.8	32.2	32.0
Other services and current operating expenses:						
Repair, maintenance and operation of physical assets (excluding special services).....	.6	.4	.4	.3	.4	.5
Regulation and control.....	1.1	1.2	1.2	1.2	1.2	1.2
Other operation and administration.....	4.4	3.8	3.6	4.2	4.3	4.1
Net interest.....	8.0	7.2	7.3	7.4	7.2	7.1
Subtotal, other services and current operating expenses...	14.1	12.5	12.5	13.1	13.2	12.8
Total current outlays.....	60.8	61.0	62.3	62.9	61.9	60.0
Total civil investments and current operating outlays.....	75.4	76.2	78.2	79.8	78.3	76.6
Civil other.....	-4.7	-2.9	-4.8	-6.3	-4.9	-4.2
Net civil outlays.....	70.7	73.3	73.4	73.5	73.5	72.4

*Less than .05%.

OUTLAYS OF AN INVESTMENT NATURE

Outlays of an investment nature are divided into three categories: (1) additions to Federal assets; (2) additions to State, local, and private assets; and (3) development outlays. Civil investment outlays are estimated to be \$73.1 billion, 16.6% of total outlays, while defense investment outlays are estimated to be \$39.8 billion, 9.0% of the 1978 total.

Additions to Federal assets.—This category comprises additions to both financial and physical assets of the Federal Government. Investment in Federal civil assets in 1978 is projected to be \$13.9 billion, increasing by \$2.6 billion, or 18.9% from such investment in 1977. Investment in defense assets in 1978 is estimated to be \$27.4 billion, an increase of \$5.1 billion, or 22.9%, over investment in 1977. Financial assets are primarily direct loans; for example, loans to finance private housing construction and encourage homeownership, to help small businesses, and to promote economic development abroad. Federal financial assets include both loans and other financial investments. Other financial investments include the capital provided for certain international organizations such as the World Bank.

Civil loans and financial investments are estimated to be \$4.4 billion, an increase of \$1.0 billion from 1977. Civil loans are expected to increase by \$0.8 billion. Special Analysis E ("Federal Credit Programs") discusses financial investments in greater detail.

Additions to physical assets include outlays for public works, such as dam construction, flood control projects, Federal power systems, changes in major commodity inventories, and outlays for major equipment (including military equipment), and for the acquisition and improvements of real property and other physical assets.

Additions to civil physical assets are estimated to be \$3.5 billion in 1978, as compared to additions of \$8.0 billion in 1977. Public works investments, the largest part of this total, are estimated to be \$6.7 billion in 1978 as compared to \$6.6 billion in 1977.

Additions to State, local, and private assets.—Federal outlays in this category add to State, local, and private assets. Grants that add to the physical assets of State and local governments are primarily for the construction of highways (mainly through the highway trust fund), mass transit, airports, waste-treatment plants, watershed protection projects, schools in federally affected areas, and public facilities under economic development programs for depressed regions.

Outlays that increase the value of privately owned assets are largely for the conservation and improvement of private farmland and water resources, for grants for construction of private, nonprofit hospitals and other health facilities, and for construction subsidies to the merchant fleet.

Civil additions to State, local, and private assets in 1978 are estimated to be \$17.2 billion, an increase of \$1.8 billion more than in 1977. The major area of increased spending is in the Federal highway trust fund and Environmental Protection Agency grants for construction of local sewage treatment plants.

Developmental outlays.—Federal outlays of this type are principally for research and development, education and health, and other programs that improve the knowledge, technical skills, and physical vigor of America. The Federal outlays shown in this category do not fully reflect the Government's contribution to the productivity of the economy. Certain other programs that further this end are classified in accordance with their principal purpose; thus, veterans educational benefits are listed as current expenses for veterans aid rather than as developmental outlays. Similarly, the training of military personnel and other Government employees is treated as an operating expense and not as part of the Government's education and training programs.

Civil developmental outlays are projected to be \$41.9 billion, an increase of \$1.1 billion from 1977. This includes increases for the financial assistance for health care, Energy Research and Development Administration (ERDA), the Airport and airway trust fund, and the National Aeronautics and Space Administration (NASA).

Civil developmental outlays for education, training, and health are projected to be \$28.8 billion in 1978, or 6.5% of total outlays.

Civil outlays for research and development are projected to be \$12.6 billion in 1978, an increase of \$1.0 billion from 1977. The bulk of this increase is: \$.5 billion for energy research, \$.5 billion for health research, and \$.2 billion for NASA.

OUTLAYS OF A CURRENT NATURE

Outlays of a current nature are divided into the following categories: (1) current expenses for aids and special services; (2) retirement and social insurance benefits; and (3) other services and current operating expenses.

Current outlays for civil functions are estimated to be \$263.9 billion in 1978, an increase of \$9.1 billion from 1977. The rate of increase will drop from 6.9% in 1977 to 3.6% in 1978. Current outlays for defense functions are estimated to be \$82.0 billion, an increase of \$5.8 billion from 1977.

Current expenses for aids and special services.—Outlays classified under this heading provide aids or special services to certain groups, mainly in the year in which the outlays are made. In addition to such items as outlays for the farm programs of the Commodity Credit Corporation (CCC), maritime operating subsidies, veterans pensions, and grants to foreign nations for economic and military assistance, this category includes: (1) administrative and other operating expenses attributable to investment-type programs that benefit specific groups; and (2) the costs of maintaining the physical assets related to those programs.

Only part of the Federal Government's aid to special groups is reflected in this classification, which is limited by definition to current expenses. For example, subsidies for the construction of private merchant ships are classified as additions to private assets. Similarly, outlays for which the Federal Government increases its holdings of assets for collateral (as the acquisition of farm commodities by the CCC) are treated as additions to Federal assets. Many indirect Government aids are excluded from this classification because they either are not reflected in outlays or cannot be readily measured. Examples of such indirect benefits are loan guarantees, a subject discussed in Special Analysis E.

Although outlays in this category essentially provide a direct aid or special service yielding immediate benefits, some of the items included contribute indirectly to the Nation's future development. Among these are grants for several community development purposes.

Aids to agriculture are expected to increase slightly, reaching \$2.3 billion in 1978, an increase of \$0.3 billion from 1977. Federal aid to labor will increase \$0.3 billion, reaching \$3.0 billion in 1978. Aid to homeowners and tenants is expected to be \$3.9 billion in 1978, an increase of almost \$0.7 million over 1977.

Retirement and social insurance benefits.—This category applies only to trust funds. It covers benefit programs that are financed from special taxes or contributions and private insurance against the loss of income due to unemployment, retirement, disability, or death. It does not include outlays for Government employees' health and life insurance programs, which are in the form of premium payments to approved companies and are included with "other services and current operating outlays."

The growth in retirement and social insurance benefits is the result of both a growing number of recipients. Outlays for these benefits

are expected to increase 6.6% in 1978, to \$141.0 billion, and will be 32.0% of total outlays in 1978. A large part of this increase, \$10.0 billion, is estimated to come from the increase in social security, railroad retirement, and medicare payments.

Other services and current operating outlays.—The outlays reported under this heading support a wide range of activities. They consist mainly of: pay and subsistence of military personnel; repair, maintenance, and operation of physical assets of the national military establishment and general-purpose public buildings; conduct of foreign affairs; tax collection; interest on the public debt; and operation and administration of other direct Federal programs not elsewhere classified.

These outlays are expected to increase by \$7.5 billion and to be \$128.4 billion in 1978. Net interest accounts for \$1.3 billion and national defense accounts for \$5.4 billion of this increase. Defense costs will rise primarily due to pay and price increases.

OTHER OUTLAYS

Certain outlay estimates cannot be classified precisely into any of the categories described above and allowances are provided for them. These include allowances for contingencies and for future pay increases of Government workers.

Intragovernmental receipts arise as a result of transactions between Government agencies or funds. These transactions occur entirely within Government accounts and are deducted from outlays to avoid double counting. In order to provide a measure of outlays by category, most intragovernmental receipts are allocated to a particular category whenever possible. Government agency contributions for employee retirement, which help to finance retirement benefits, cannot be and are deducted a lump-sum amount.

Proprietary receipts from the public, arising from business-type activities of the Government, are also offset against total outlays.

RELATIONSHIP TO CAPITAL BUDGET

The U.S. Government does not produce a capital budget in the sense of a long-range program for the acquisition of assets, with separate financing of capital outlays. Some foreign governments and some State and local governments fund a portion of their capital expenditures by separate borrowing. They exclude most or all such expenditures from the computation of budget totals, except for annual charges to amortize these capital outlays over a number of years. The U.S. Government does not.

While this analysis does not provide a precise measure of the difference between capital and current items, it does indicate useful general magnitudes. It does not make any allowance for depreciation and obsolescence on existing physical assets, anticipated losses on loan programs, or profit or loss on sales of assets at figures different from their book value. Agencies record such allowances for transactions only where the data will serve program and management needs, as in the

case of the public enterprise funds. As a result, this analysis does not estimate the net addition to the value of federally owned assets.

Recoverability of outlays.—In general, Government outlays for assets are not expected to be recovered by specific revenues. However, most loans, investment in commodity inventories, the construction of powerplants, and outlays for range and forest improvements on public domain and national forest lands are offset in whole or in part by receipts to the Treasury through repayments and sales, specific charges, or recoveries. Where activities are carried on through revolving funds, such as in the case of most loan programs, receipts are credited directly against disbursements and only the difference is included in the total of outlays in the budget and in this analysis. All other receipts from the public arising from market-oriented or business-type activities of the Government are offset against total outlays.

Whether recovered by specific receipts or not, investment and developmental outlays for both physical and human capital add to the wealth and income of the Nation, and by helping to expand the tax base, augment the Government's potential future receipts. However, this analysis does not attempt to measure the degree of recoverability of developmental outlays, the potential gain in public receipts that will be forthcoming, or the duration of future benefits and their discounted present value.

Table D-3. INVESTMENT, OPERATING, AND OTHER BUDGET OUTLAYS
(In millions of dollars)

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Investment-type outlays				
ADDITIONS TO FEDERAL ASSETS				
Loans:				
Civil:				
To domestic and private borrowers:				
Department of Agriculture:				
Commodity Credit Corporation: Price support and related programs.....	178	447	964	-13
Farmers Home Administration:				
Rural housing insurance.....	-152	536	-746	-20
Agricultural credit insurance.....	189	-165	-459	-55
Other agriculture ¹	33	-13	-26	1
Department of Health, Education, and Welfare:				
Office of Education:				
Higher education.....	286	65	261	-----
Student loan insurance.....	128	57	150	159
Other health, education, and welfare.....	44	23	20	4
Department of Housing and Urban Development:				
Federal Housing Administration fund and other housing programs.....	900	-90	615	566
Government National Mortgage Association: Special assistance functions and other.....	-44	-480	-748	-743
Rehabilitation loans and new communities fund.....	39	40	126	60
Department of Transportation: Railroad rehabilitation and improvement financing and other.....	*	-----	31	80

See footnotes at end of table.

Table D-3. INVESTMENT, OPERATING, AND OTHER BUDGET OUTLAYS
(In millions of dollars)—Continued

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Investment-type outlays—Continued				
ADDITIONS TO FEDERAL ASSETS—Continued				
Loans—Continued				
Civil—Continued				
To domestic and private borrowers—Continued				
Veterans Administration:				
Loan guaranty revolving fund.....	-76	-38	-76	16
Direct loans.....	-32	-12	-224	-54
Other ¹	18	8	24	12
Federal Home Loan Bank Board:				
Federal Home Loan Bank Board revolving fund.....	286	-43	-1,112	-23
Federal Savings and Loan Insurance Corpora- tion.....	-18	-23	-8	-3
Small Business Administration: Business loans and investments and disaster loans.....	-4	42	159	234
United States Railway Association: Payment for the purchase of ConRail securities.....	309	-----	600	500
Other agencies.....	17	17	60	46
Total to domestic and private borrowers.....	2,102	370	-387	766
To State and local governments:				
Department of Commerce: Coastal energy impact fund and other.....	4	*	56	84
Department of Housing and Urban Develop- ment: Community planning and development and housing programs.....	-6	27	-14	-51
Department of Transportation: Federal High- way Administration and other.....	113	46	76	-27
District of Columbia.....	156	95	216	176
Other agencies.....	16	15	39	5
Total to State and local governments.....	283	182	374	186
To foreign borrowers:				
Funds appropriated to the President:				
International security assistance.....	37	18	140	150
International development assistance.....	423	114	429	361
Balance of payments loan for Portugal.....	-----	-----	300	130
Department of Agriculture: Public Law 480 credit sales.....	496	297	679	659
Export-Import Bank of the United States.....	474	262	1,022	1,097
Other agencies.....	-8	-5	-10	-10
Total to foreign borrowers.....	1,421	686	2,561	2,387
National defense:				
To domestic and private borrowers: Department of Defense—Military.....				
	*	*	1	*
To foreign borrowers: Funds appropriated to the President: International security assistance.....				
	363	*	47	21
Total loans.....	4,168	1,239	2,595	3,361

See footnotes at end of table.

Table D-3. INVESTMENT, OPERATING, AND OTHER BUDGET OUTLAYS
(In millions of dollars)—Continued

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Investment-type outlays—Continued				
ADDITIONS TO FEDERAL ASSETS—Continued				
Other financial investments—civil:				
Investments in quasi-public institutions, trust funds and international institutions: Funds appropriated to the President: International financial institutions.....	902	345	868	1,059
Public works—sites and direct construction:				
Civil:				
Legislative branch: Architect of the Capitol and other.....	13	4	54	67
Department of Agriculture:				
Agricultural Research Service.....	5	11	32	22
Forest Service:				
Forest roads and trails.....	88		155	108
Other ¹	43	52	40	143
Department of Defense—Civil:				
Corps of Engineers:				
Construction, general.....	1,136	311	1,329	1,391
Flood control, Mississippi River and tributaries.....	154	53	180	156
Trust funds.....	41	13	33	39
Other ¹	19	3	18	18
Department of Health, Education, and Welfare:				
Indian health facilities and other health services.....	71	18	67	86
National Institutes of Health biomedical research and buildings and facilities.....	52	35	65	69
Other ¹	10	20	41	39
Department of the Interior:				
Bureau of Reclamation:				
Construction and rehabilitation.....	318	120	680	399
Colorado River Basin project.....	26	6	71	91
Upper Colorado River storage project and other ¹	41	29	123	93
National Park Service ¹	109	23	140	161
Bonneville Power Administration.....	119	24	112	139
Bureau of Indian Affairs: Construction of schools and roads.....	120	40	162	164
Other.....	37	5	63	68
Department of State.....	17	3	20	55
Department of Transportation:				
Coast Guard: Acquisition, construction, and improvements.....	67	11	95	56
Federal Aviation Administration: Airway system investment and development (Airport and airway trust fund) and other.....	201	49	234	220
Other ¹	8	2	21	12
Energy Research and Development Administration: Plant and capital equipment.....	404	78	670	909
National Aeronautics and Space Administration: Construction of facilities.....	121	26	125	132
Veterans Administration: Hospitals and other.....	188	43	295	350
Federal Energy Administration: Strategic petroleum reserve.....		3	253	129
Tennessee Valley Authority.....	1,045	247	1,417	1,528
Other agencies.....	48	9	57	99

See footnotes at end of table.

Table D-3. INVESTMENT, OPERATING, AND OTHER BUDGET OUTLAYS
(In millions of dollars)—Continued

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Investment-type outlays—Continued				
ADDITIONS TO FEDERAL ASSETS—Continued				
Public works—sites and direct construction—Continued				
National defense:				
Department of Defense—Military:				
Military construction.....	1,897	349	1,991	1,945
Family housing.....	312	64	340	212
Energy Research and Development Administration: Plant and capital equipment.....	180	45	226	316
Total public works—sites and direct construction.....	<u>6,888</u>	<u>1,695</u>	<u>9,108</u>	<u>9,216</u>
Major commodity inventories:				
Civil:				
Funds appropriated to the President: Petroleum reserves.....			44	502
Department of Agriculture: Commodity Credit Corporation: Agricultural commodities.....	242	-51	-5	144
Federal Energy Administration: Strategic petroleum reserve.....				781
Other agencies.....	-2	*	3	2
National defense:				
Other agencies.....	-1	28	*	
Intragovernmental transactions (-).....	-2	*		
Total major commodity inventories.....	<u>237</u>	<u>-24</u>	<u>42</u>	<u>1,429</u>
Major equipment:				
Civil:				
Department of Transportation: Coast Guard and other.....	59	23	66	175
Energy Research and Development Administration.....	117	44	155	204
Other agencies.....	85	-9	85	84
National defense:				
Department of Defense—Military: Procurement.....	15,964	3,766	18,710	23,786
Energy Research and Development Administration.....	87	20	98	114
Total major equipment.....	<u>16,311</u>	<u>3,845</u>	<u>19,113</u>	<u>24,363</u>
Other physical assets—acquisition and improvement:				
Civil:				
Department of Agriculture: Reforestation and other.....	188	37	115	160
Department of Housing and Urban Development: Federal Housing Administration and other.....	254	115	330	333
Department of the Interior:				
Land and water conservation.....	113	42	271	314
Other.....	39	15	43	60
Energy Research and Development Administration.....	-66	-13	133	-40
Tennessee Valley Authority.....	16	5	69	46
Other agencies.....	18	-14	27	34

See footnotes at end of table.

Table D-3. INVESTMENT, OPERATING, AND OTHER BUDGET OUTLAYS
(In millions of dollars)—Continued

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Investment-type outlays—Continued				
ADDITIONS TO FEDERAL ASSETS—Continued				
Other physical assets—acquisition and improvement—Continued				
National defense: Energy Research and Development Administration.....	751	207	873	1,032
Total other physical assets—acquisition and improvement.....	1,314	393	1,860	1,938
Total additions to Federal assets.....	29,820	7,493	33,586	41,366
ADDITIONS TO STATE, LOCAL, AND PRIVATE ASSETS				
State and local assets:				
Civil:				
Funds appropriated to the President: Appalachian regional development programs, and other.....	253	59	246	243
Department of Agriculture:				
Rural water and waste disposal grants, and other rural development.....	89	29	184	220
Watershed and flood prevention operations and other conservation.....	127	30	128	103
Department of Commerce:				
Economic Development Administration:				
Economic development assistance programs..	168	46	144	157
Local public works program.....			791	802
Regional Action Planning Commissions.....	21	2	19	20
Department of Health, Education, and Welfare:				
Health resources.....	361	64	304	107
Education and other.....	44	15	39	37
Department of Housing and Urban Development:				
Housing programs.....	136	24	140	53
Department of the Interior:				
Land and water conservation.....	156	43	180	200
U.S. Fish and Wildlife Service.....	69	17	81	93
Other.....	25	7	52	47
Department of Justice: Law enforcement assistance.....	59	20	53	43
Department of Transportation:				
Federal Aviation Administration: Grants-in-aid for airports (Airport and airway trust fund) ..	269	26	308	548
Federal Highway Administration:				
Federal-aid highways (trust fund).....	6,117	1,595	5,589	6,721
Other ¹	29	13	124	170
Urban mass transportation.....	799	213	1,151	1,353
National Highway Traffic Safety Administration.....	*	*		*
Environmental Protection Agency: Construction grants.....	2,429	919	4,430	5,160
Washington Metropolitan Area Transit Authority..	170	52	315	179
Other agencies ¹	11	7	26	63
National defense: Department of Defense—Military.	60	9	30	26
Total State and local assets.....	11,392	3,189	14,335	16,346

See footnotes at end of table.

Table D-3. INVESTMENT, OPERATING, AND OTHER BUDGET OUTLAYS
(In millions of dollars)—Continued

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Investment-type outlays—Continued				
ADDITIONS TO STATE, LOCAL, AND PRIVATE ASSETS—Continued				
Private assets—civil:				
Department of Agriculture:				
Agricultural conservation program.....	118	121	137	219
Other stabilization and conservation.....	59	7	57	37
Commodity Credit Corporation: Conservation loans.....				
Conservation operations.....	50	-50	50	-50
Watershed and flood prevention operations.....	207	57	221	227
Other.....	53	23	124	77
Department of Commerce: Ship construction.....	34	13	42	38
Department of Health, Education, and Welfare:	203	42	236	205
Health resources and other.....	215	55	159	110
Other agencies ¹	31	7	59	37
Total private assets.....	970	275	1,086	899
Total additions to State, local, and private assets..	12,362	3,464	15,421	17,245
OTHER DEVELOPMENTAL EXPENDITURES				
Education, training, and health:				
Civil:				
Funds appropriated to the President: Appalachian regional development programs.....				
Department of Agriculture: Extension Service and other.....	45	8	52	50
Department of Commerce: Job opportunities program and other.....	235	73	275	261
Department of Health, Education, and Welfare:	283	82	146	20
Health services.....	900	143	852	339
Indian health services.....	272	75	341	358
Preventive health services.....	137	27	145	56
Biomedical research.....	196	45	155	149
Alcohol, drug abuse, and mental health.....	730	212	606	543
Health resources and other.....	334	125	344	319
Financial assistance for health care.....				12,302
Other health services ¹	29	*	25	198
Financial assistance for elementary and secondary education.....				336
Elementary and secondary education.....	2,167	707	2,239	2,433
School assistance in federally affected areas.....	576	66	825	476
Emergency school aid.....	213	55	271	273
Education for the handicapped.....	183	53	306	369
Occupational, vocational, and adult education.....	700	84	665	637
Higher education.....	2,149	523	2,801	2,336
Library resources.....	144	17	172	162
Student loan insurance.....	5	1	*	223
Other education.....	181	85	257	288
Public assistance.....	8,670	2,258	10,374	132
Other social and rehabilitation service.....	32	2	20	11
Social Security Administration ¹	152	56	133	160
Howard University and other special institutions.....	111	24	128	142
Human development.....	500	135	495	518

See footnotes at end of table.

Table D-3. INVESTMENT, OPERATING, AND OTHER BUDGET OUTLAYS
(In millions of dollars)—Continued

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Investment-type outlays—Continued				
OTHER DEVELOPMENTAL EXPENDITURES—Continued				
Education, training, and health—Continued				
Civil—Continued				
Department of the Interior: Operation of Indian programs.....	228	65	256	259
Department of Justice:				
Federal Prison System.....	35	13	42	47
Law enforcement assistance.....	87	15	93	93
Department of Labor:				
Program administration.....	61	14	70	73
Employment and training assistance.....	3,113	1,046	3,170	3,099
Community service employment for older Americans.....	46	11	64	91
Temporary employment assistance.....	1,887	519	2,358	1,000
Veterans Administration: Medical care and other.....	225	60	275	301
Corporation for Public Broadcasting.....	70	26	103	107
National Foundation on the Arts and the Humanities.....	152	44	308	351
National Science Foundation.....	61	5	46	51
Smithsonian Institution.....	67	18	72	79
Other agencies.....	68	50	93	145
National defense: Department of Health, Education, and Welfare.....	*			
Total, education, training, and health.....	25,045	6,742	28,579	28,785
Research and development:				
Civil:				
Funds appropriated to the President: Functional development assistance.....	40	1	37	56
Department of Agriculture:				
Agricultural Research Service ¹	242	58	295	301
Cooperative State Research Service.....	105	29	132	140
Forest Service and other agriculture ¹	115	24	121	129
Department of Commerce:				
National Oceanic and Atmospheric Administration.....	129	39	148	154
Science and technical research.....	49	13	55	58
Other.....	43	10	40	42
Department of Health, Education, and Welfare:				
Health services.....	10	11	63	40
Preventive health services.....	35	18	76	23
Biomedical research and other National Institutes of Health.....	2,098	548	1,958	1,859
Alcohol, drug abuse, and mental health.....	145	41	140	123
Health resources and Assistant Secretary for Health.....	4	60	55	538
Education.....	126	23	180	226
Human development and other ¹	136	-119	318	149
Department of Housing and Urban Development:				
Research and technology and other.....	56	12	63	60
Department of the Interior: Geological surveys, mines and minerals and other ¹	308	73	355	372

See footnotes at end of table.

Table D-3. INVESTMENT, OPERATING, AND OTHER BUDGET OUTLAYS
(In millions of dollars)—Continued

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Investment-type outlays—Continued				
OTHER DEVELOPMENTAL EXPENDITURES— Continued				
Research and development—Continued				
Civil—Continued				
Department of Transportation:				
Federal Aviation Administration.....	106	26	109	124
Federal Highway Administration ¹	52	33	60	65
Other ¹	171	41	162	164
Energy Research and Development Administra- tion.....	1,540	543	2,437	2,932
Environmental Protection Agency.....	229	68	290	256
National Aeronautics and Space Administration..	3,551	928	3,582	3,770
Veterans Administration.....	96	25	109	112
National Science Foundation ¹	623	194	654	728
Other agencies ¹	160	49	187	168
National defense:				
Department of Defense—Military:				
Military personnel.....	413	105	422	426
Research, development, test, and evaluation...	8,923	2,206	9,993	11,350
Special foreign currency program.....	5	1	3	3
Energy Research and Development Administra- tion.....	478	143	541	588
Total research and development.....	19,988	5,200	22,586	24,958
Engineering and natural resources surveys—civil:				
Funds appropriated to the President: Petroleum reserves.....				
			98	210
Department of Defense—Civil: Corps of Engineers..	57	14	62	67
Department of the Interior:				
Geological Survey.....	115	29	142	148
Other ¹	62	17	71	89
Other agencies ¹	51	13	67	42
Intragovernmental transactions (—).....	—3	—1	—5	—7
Total engineering and natural resources sur- veys.....	282	73	434	548
Total other developmental expenditures.....	45,315	12,015	51,599	54,291
Total investment-type outlays.....	87,497	22,971	100,606	112,902
Current outlays				
CURRENT EXPENSES FOR AIDS AND SPECIAL SERVICES				
Agriculture—civil:				
Department of Agriculture:				
Departmental administration.....	48	6	53	54
Agricultural Stabilization and Conservation Service.....	162	37	158	161
Federal Crop Insurance Corporation.....	15	5	74	19
Commodity Credit Corporation.....	101	293	774	904

See footnotes at end of table.

Table D-3. INVESTMENT, OPERATING, AND OTHER BUDGET OUTLAYS
(In millions of dollars)—Continued

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Current outlays—Continued				
CURRENT EXPENSES FOR AIDS AND SPECIAL SERVICES—Continued				
Agriculture—civil—Continued				
Department of Agriculture—Continued				
Farmers Home Administration:				
Salaries and expenses.....	148	37	180	180
Rural housing insurance.....	153	-22	305	417
Agricultural credit insurance.....	106	6	146	197
Rural development insurance.....	43	12	73	105
Other.....	1	3	3	3
Agricultural Marketing Service.....	80	17	83	82
Other ¹	95	25	112	118
Other agencies.....	12	6	13	14
Total agriculture.....	<u>966</u>	<u>426</u>	<u>1,974</u>	<u>2,253</u>
Business:				
Civil:				
Department of Commerce:				
Bureau of the Census.....	49	11	61	71
Domestic and international business ¹	62	14	59	52
Minority business development.....	53	14	54	54
Patent and Trademark Office.....	84	20	90	90
Maritime operating-differential subsidies and other ¹	304	86	391	372
Other ¹	75	23	92	97
Department of Defense—Civil:				
Corps of Engineers.....	338	100	390	460
The Panama Canal.....	-23	-7	-26	-26
Department of Transportation:				
Office of the Secretary.....	1	2	-1	-2
Coast Guard navigation aids and other ¹	642	178	745	781
Federal Aviation Administration operations and other ¹	1,439	335	1,619	1,680
Federal Railroad Administration:				
Rail service assistance and other.....	385	6	87	86
Northeast Corridor improvement program.....		*	85	180
Grants to National Railroad Passenger Corporation.....	354	117	752	617
Civil Aeronautics Board: Payments to air carriers..	71	17	77	69
Small Business Administration:				
Business loans and investments.....	303	28	176	128
Disaster loans.....	96	3	119	98
Other.....	54	9	57	67
Other agencies.....	51	11	74	76
Intragovernmental transactions (-).....	-19	-6	-20	-21
National defense: General Services Administration..	*	*		
Total business.....	<u>4,319</u>	<u>984</u>	<u>4,880</u>	<u>4,930</u>
Labor—civil:				
Department of Health, Education, and Welfare:				
Work incentives.....	200	54	238	238
Department of the Interior: Mining enforcement and safety ¹				
	79	20	99	105
See footnotes at end of table.				

Table D-3. INVESTMENT, OPERATING, AND OTHER BUDGET OUTLAYS
(In millions of dollars)—Continued

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Current outlays—Continued				
CURRENT EXPENSES FOR AIDS AND SPECIAL SERVICES—Continued				
Labor—civil—Continued				
Department of Labor:				
Employment and Training Administration:				
Federal unemployment benefits and allowances	981	88	420	640
Grants to States for unemployment insurance and employment services	182	-26	99	54
Unemployment trust fund	1,289	391	1,536	1,612
Other ¹	34	3	34	33
Employment Standards Administration ¹	99	25	127	132
Occupational Safety and Health Administration	106	31	125	129
Bureau of Labor Statistics ¹	56	16	72	82
Departmental management	34	14	51	58
Equal Employment Opportunity Commission	59	16	68	72
Occupational Safety and Health Review Commission	6	1	7	7
Railroad Retirement Board: Regional rail transportation protective account	1	9	40	50
Intragovernmental transactions (-)	-250		-250	-250
Total labor	2,876	644	2,666	2,962
Homeowners and tenants—civil:				
Department of Housing and Urban Development:				
Housing programs:				
Housing payments	2,264	516	2,378	3,063
Payments for operation of low-income housing projects	178	128	507	560
Federal Housing Administration	17	10	92	45
Other	-23	-3	-23	-13
Government National Mortgage Association:				
Special assistance functions and other	653	238	368	432
Federal Insurance Administration: National flood insurance and national insurance development	95	21	181	205
Other	-6	-1	-4	3
Federal Home Loan Bank Board	-340	-106	-299	-397
Other agencies	1	*	10	7
Total homeowners and tenants	2,840	804	3,210	3,906
Veterans—civil:				
Department of Health, Education, and Welfare: Payments to social security trust funds				
	295		622	656
Veterans Administration:				
Compensation and pensions	8,178	2,088	8,983	9,030
Readjustment benefits	5,527	783	4,130	3,358
Medical care	3,493	899	4,127	4,319
General operating expenses	476	114	526	556
Supply fund	75	-12	9	10
National service life insurance	624	130	623	680
U.S. Government life insurance	76	13	70	74
Veterans special life insurance	-48	-6	-54	-55
Other ¹	10	13	41	59

See footnotes at end of table.

Table D-3. INVESTMENT, OPERATING, AND OTHER BUDGET OUTLAYS
(In millions of dollars)—Continued

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Current outlays—Continued				
CURRENT EXPENSES FOR AIDS AND SPECIAL SERVICES—Continued				
Veterans—civil—Continued				
Railroad Retirement Board: Payments to railroad retirement trust fund.....	250	-----	250	250
Other agencies ¹	11	3	13	14
Intragovernmental transactions (-).....	-297	-1	-624	-658
Total veterans.....	18,668	4,025	18,716	18,293
International aids:				
Civil:				
Funds appropriated to the President:				
International security assistance.....	564	266	1,317	1,281
Indochina postwar reconstruction assistance....	65	-3	11	-----
International development assistance:				
International organizations and programs....	144	85	207	223
Functional development assistance program..	408	-43	370	455
International disaster assistance.....	26	8	78	63
Operating expenses of the Agency for International Development.....	15	196	202	219
Other ¹	51	71	49	69
Other.....	80	15	121	94
Department of Agriculture: Foreign assistance programs and special export programs: Public Law 480 donations of agricultural commodities..	594	-151	490	263
ACTION ¹	69	23	87	71
Export-Import Bank of the United States.....	382	11	-124	-132
Other agencies ¹	61	13	54	38
Intragovernmental transactions (-).....	-20	-20	-20	-20
National defense:				
Funds appropriated to the President: International security assistance ¹.....				
7,614	2,837	9,315	9,665	
Department of Defense—Military: Military construction.....	71	20	76	81
Total international aids.....	10,124	3,328	12,233	12,370
Welfare aids—civil:				
Funds appropriated to the President: Disaster relief..	291	71	300	150
Department of Agriculture:				
Commodity Credit Corporation: Price support and related programs.....	143	47	21	1
Funds for strengthening markets, income, and supply (section 32) and other marketing services..	283	63	38	4
Food stamp program.....	5,632	1,325	4,754	4,712
Special milk program.....	89	47	181	18
Child nutrition programs.....	1,802	346	2,842	153
Special supplemental food program (WIC).....	143	41	276	47
Child nutrition reform.....	-----	-----	-----	2,000
Other.....	8	*	47	98
Department of Health, Education, and Welfare:				
Public assistance.....	8,000	2,139	8,883	8,944
Work incentives.....	107	32	127	106

See footnotes at end of table.

Table D-3. INVESTMENT, OPERATING, AND OTHER BUDGET OUTLAYS
(In millions of dollars)—Continued

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Current outlays—Continued				
CURRENT EXPENSES FOR AIDS AND SPECIAL SERVICES—Continued				
Welfare aids—civil—Continued				
Department of Health, Education, and Welfare—Continued				
Program administration.....	55	12	68	60
Special assistance to refugees from Cambodia, Vietnam, and Laos in the United States.....	38	18	110	10
Cuban refugee assistance.....	69	14	75	58
Other social and rehabilitation service ¹	-----	-----	*	*
Payments to social security trust funds.....	3	1	*	-----
Special benefits for disabled coal miners.....	973	237	938	958
Supplemental security income program.....	5,003	1,263	5,324	5,578
Human development.....	1,032	286	1,220	1,232
Departmental management.....	-----	-----	5	43
Department of the Interior: Operation of Indian programs.....	61	22	72	78
Department of State: Special assistance to refugees from Cambodia and Vietnam.....	205	17	20	-----
Department of the Treasury: Payment where credit exceeds liability for tax.....	808	86	856	-----
Total welfare aids.....	24,744	6,070	26,158	24,251
Other aids and special services—civil:				
Department of Commerce:				
Bureau of the Census.....	24	6	33	39
Economic Development Administration.....	78	29	117	76
Regional Action Planning Commissions ¹	95	29	87	91
Department of Health, Education, and Welfare:				
Health services.....	195	36	210	63
Alcohol, drug abuse, and mental health.....	60	15	64	5
Health resources.....	175	21	199	104
Office of Assistant Secretary for Health ¹	44	11	52	275
Social Security Administration:				
Payments to social security trust funds.....	3,818	878	6,092	7,162
Federal old-age and survivors insurance trust fund.....	932	219	942	1,009
Federal disability insurance trust fund.....	264	69	377	369
Federal hospital insurance trust fund.....	303	83	303	342
Federal supplementary medical insurance trust fund.....	524	123	500	584
Other.....	26	4	14	8
Human development.....	43	11	49	50
Departmental management.....	28	9	33	35
Department of Housing and Urban Development:				
Community planning and development:				
Comprehensive planning grants.....	92	20	98	63
Miscellaneous appropriations.....	136	9	62	-----
Urban renewal programs.....	1,166	294	1,000	700
Departmental management and other.....	182	36	227	262
Department of the Interior:				
Operation of Indian programs.....	238	53	298	301
Miscellaneous permanent appropriations and other Indian affairs ¹	247	136	250	354
Other Interior.....	8	*	7	8

See footnotes at end of table.

Table D-3. INVESTMENT, OPERATING, AND OTHER BUDGET OUTLAYS
(In millions of dollars)—Continued

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Current outlays—Continued				
CURRENT EXPENSES FOR AIDS AND SPECIAL SERVICES—Continued				
Other aids and special services—civil—Continued				
Department of Transportation:				
Federal-aid highways (trust fund) and other highway programs.....	162	55	209	213
National highway traffic safety ¹	111	28	156	187
Urban mass transportation.....	473	68	638	723
Other transportation.....	33	20	44	48
Department of the Treasury: Taxable municipal bond option and other.....	*	1	1	46
ACTION	108	25	110	97
Community Services Administration ¹	457	117	516	443
Federal Deposit Insurance Corporation.....	-478	133	-861	-379
Legal Services Corporation.....	85	52	125	90
Postal Service.....	1,720	938	2,272	1,472
Other agencies ¹	126	27	172	155
Intragovernmental transactions (-).....	-4,139	-928	-6,447	-7,543
Total other aids and special services	7,333	2,626	7,949	7,448
Total current expenses and aids and special services	71,870	18,906	77,787	76,413
RETIREMENT AND SOCIAL INSURANCE BENEFITS				
General retirement and health insurance benefits—civil:				
Department of Health, Education, and Welfare:				
Federal old-age and survivors insurance trust fund.....	62,140	16,876	70,979	77,015
Federal disability insurance trust fund.....	9,222	2,555	10,929	12,294
Federal hospital insurance trust fund.....	12,267	3,314	15,030	16,099
Federal supplementary medical insurance trust fund.....	4,671	1,275	5,926	7,256
Department of Labor: Unemployment trust fund.....	218	47	173	165
Department of the Treasury.....	17	-1	-	-
Railroad Retirement Board.....	3,448	913	3,694	3,863
Total general retirement and health insurance benefits	91,983	24,979	106,731	116,692
Unemployment benefits—civil:				
Department of Labor:				
Federal unemployment benefits and allowances....	911	52	440	560
Advances to the unemployment trust fund and other funds.....	7,883	1,111	4,509	1,800
Unemployment trust fund.....	16,414	3,106	13,691	11,524
Intragovernmental transactions (-).....	-7,878	-625	-3,851	-1,800
Total unemployment benefits	17,330	3,644	14,789	12,084
Other retirement and social insurance benefits:				
Civil:				
Department of Labor: Special benefits.....	227	66	307	292
Department of State: Foreign Service retirement and disability.....	105	20	166	189

See footnotes at end of table.

Table D-3. INVESTMENT, OPERATING, AND OTHER BUDGET OUTLAYS
(In millions of dollars)—Continued

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Current outlays—Continued				
RETIREMENT AND SOCIAL INSURANCE				
BENEFITS—Continued				
Other retirement and social insurance benefits—Continued				
Civil—Continued				
Department of Transportation: Coast Guard retired pay.....	122	33	140	155
Civil Service Commission:				
Government payment for annuitants, employees health benefits.....	346	99	452	506
Payment to Civil Service retirement and disability.....	13,035	2,265	17,058	18,099
Other agencies ¹	21	2	58	29
Intragovernmental transactions (-).....	-4,809	-4	-7,479	-7,085
National defense: Central Intelligence Agency.....			28	35
Total other retirement and social insurance benefits.....	9,046	2,481	10,731	12,222
Total retirement and social insurance benefits..	118,359	31,104	132,251	140,997
OTHER SERVICES AND CURRENT OPERATING EXPENSES				
Repair, maintenance, and operation of physical assets:				
Civil:				
Legislative branch: Architect of the Capitol.....	44	11	58	59
Funds appropriated to the President: Petroleum reserves.....			186	297
Department of Agriculture: Forest Service ¹	445	172	655	439
Department of Defense—Civil:				
Corps of Engineers.....	260	81	313	330
Miscellaneous accounts.....	1	*	1	1
Department of the Interior:				
Bureau of Land Management ¹	169	50	228	227
Bureau of Reclamation.....	138	35	171	185
U.S. Fish and Wildlife Service.....	33	10	49	53
National Park Service ¹	250	78	300	313
Bonneville Power Administration.....	-183	-62	-148	-102
Other.....	6	2	11	11
Energy Research and Development Administration ¹	191	-40	142	278
Tennessee Valley Authority.....	-170	-50	-427	-247
Other agencies ¹	117	33	157	175
National defense:				
Department of Defense—Military:				
Operation and maintenance.....	27,831	7,244	31,055	33,457
Family housing.....	827	228	1,049	1,260
Energy Research and Development Administration.....	69	21	92	112
General Services Administration.....	*		*	
Total repair, maintenance, and operation of physical assets.....	30,029	7,814	33,892	36,846

See footnotes at end of table.

Table D-3. INVESTMENT, OPERATING, AND OTHER BUDGET OUTLAYS
(In millions of dollars)—Continued

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Current outlays—Continued				
OTHER SERVICES AND CURRENT OPERATING EXPENSES—Continued				
Regulation and control—civil:				
The Judiciary ¹	325	85	398	440
Department of Agriculture: Animal and Plant Health Inspection Service and other ¹	391	100	446	454
Department of Defense—Civil: Corps of Engineers.....	35	9	47	54
Department of Health, Education, and Welfare: Food and Drug Administration and other.....	196	50	214	247
Department of Justice:				
General administration.....	21	5	23	25
Legal activities.....	245	65	284	299
Federal Bureau of Investigation.....	468	130	514	528
Immigration and Naturalization Service.....	201	59	241	252
Drug Enforcement Administration.....	144	41	171	179
Federal prison system ¹	171	45	207	220
Law Enforcement Assistance Administration.....	728	154	681	646
Department of Labor: Labor-Management Services Administration.....	37	9	46	51
Department of Transportation:				
Coast Guard.....	102	30	129	135
Federal Aviation Administration.....	94	22	102	105
Other.....	23	6	28	31
Department of the Treasury:				
Bureau of Alcohol, Tobacco and Firearms.....	103	27	122	135
Customs Service ¹	82	24	90	97
Internal Revenue Service.....	51	12	62	58
Secret Service.....	102	29	117	122
Other ¹	14	-20	12	12
Environmental Protection Agency:				
Abatement and control.....	270	77	375	370
Enforcement and other ¹	39	9	43	58
Federal Communications Commission.....	51	12	55	58
Federal Trade Commission.....	44	11	54	58
Interstate Commerce Commission.....	52	13	61	63
National Labor Relations Board.....	68	16	82	88
Nuclear Regulatory Commission.....	180	46	236	271
Securities and Exchange Commission.....	51	12	58	58
Other agencies ¹	148	49	184	172
Total regulation and control.....	4,435	1,127	5,081	5,286
Other operation and administration:				
Civil:				
International activities:				
Department of State:				
Administration of foreign affairs ¹	379	80	576	611
International organizations and conferences ¹	294	177	389	378
Educational exchange ¹	65	21	67	77
Other.....	2	-----	3	5
Board for International Broadcasting.....	59	21	55	59
United States Information Agency ¹	255	72	265	277
Other agencies ¹	10	2	12	13
Intragovernmental transactions (-).....	-18	-*	-1	-1
Total international activities.....	1,065	374	1,368	1,420

See footnotes at end of table.

Table D-3. INVESTMENT, OPERATING, AND OTHER BUDGET OUTLAYS
(In millions of dollars)—Continued

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Current outlays—Continued				
OTHER SERVICES AND CURRENT OPERATING EXPENSES—Continued				
Other operation and administration—Continued				
Civil—Continued				
Federal financial activities:				
Legislative branch: General Accounting Office and other.....	140	35	171	177
Department of Health, Education, and Welfare: Supplemental security income program.....	3	-----	7	59
Department of the Treasury:				
Bureau of Government Financial Operations.....	131	33	155	177
Customs Service.....	261	65	282	301
Bureau of the Public Debt.....	97	26	121	175
Internal Revenue Service.....	1,631	372	1,739	1,826
Other.....	71	16	77	76
Other agencies.....	8	-2	-2	1
Total Federal financial activities.....	2,342	545	2,549	2,792
Other direct Federal programs:				
Legislative branch ¹	574	173	717	777
Executive Office of the President.....	70	16	76	70
Department of Commerce: National Oceanic and Atmospheric Administration and other ¹	333	79	386	388
Department of Defense—Civil:				
Corps of Engineers.....	100	26	118	133
The Panama Canal.....	55	14	66	71
Department of Health, Education, and Welfare:				
General departmental management.....	84	22	100	78
Department of the Interior: Surveys, investigations and research and other ¹	136	40	148	150
Department of the Treasury: Bureau of Government Financial Operations and other ¹	170	52	303	228
Environmental Protection Agency.....	136	31	147	152
General Services Administration ¹	85	75	303	329
Civil Service Commission:				
Salaries and expenses and other ¹	82	16	99	87
Employees life insurance fund (trust revolving fund).....	-402	-29	-444	-425
Federal Energy Administration.....	102	19	174	131
Other agencies ¹	58	23	68	85
Intragovernmental transactions (-).....	-6	-*	-4	-5
Total other direct Federal programs.....	1,582	556	2,186	2,252
Shared revenues and grants-in-aid:				
Department of Agriculture: Forest Service.....	89	110	50	191
Department of Housing and Urban Development: Community development grants.....	983	439	2,262	3,112
Department of the Interior: Land management, territorial affairs, and other.....	289	176	349	465
Department of the Treasury:				
Office of Revenue Sharing ¹	6,243	1,588	8,026	6,814
Customs Service.....	187	39	200	204
Internal Revenue Service.....	139	29	120	122
District of Columbia.....	226	89	280	290

See footnotes at end of table.

Table D-3. INVESTMENT, OPERATING, AND OTHER BUDGET OUTLAYS
(In millions of dollars)—Continued

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Current outlays—Continued				
OTHER SERVICES AND CURRENT OPERATING EXPENSES—Continued				
Other operation and administration—Continued				
Civil—Continued				
Shared resources and grants-in-aid—Continued				
Tennessee Valley Authority.....	48	20	68	81
Other agencies.....	55	9	64	82
Total shared revenues and grants-in-aid.....	8,259	2,497	11,418	11,360
Total other operation and administration—civil.....	13,248	3,973	17,522	17,823
National defense:				
Department of Defense—Military:				
Military personnel.....	24,650	6,253	25,790	25,579
Retired military personnel.....	7,296	1,947	8,234	9,035
Operation and maintenance.....	70	17	91	82
Family housing.....	53	5	53	46
Civil defense.....	71	16	69	86
Revolving and management funds.....	-240	-306	335	6
Trust funds.....	-11	-2	-16	4
General Services Administration: Preparedness activities.....				
Other agencies ¹	15	4	17	235
Intragovernmental transactions (-).....	44	5	27	23
	-7	-3	-7	-7
Total other operation and administration, national defense.....	31,942	7,936	34,593	35,089
Total other operation and administration.....	45,190	11,909	52,115	52,913
Interest:				
On the public debt.....	37,063	8,102	42,000	44,600
Other interest:				
On refunds: Department of the Treasury.....	295	102	280	300
On uninvested funds: Department of the Treasury.....	7	2	8	8
Intragovernmental transactions (-).....	*	*		
Total other interest.....	302	104	288	308
Intragovernmental transactions [-]:				
Interest on Government capital in enterprises [-].....	-1,431	-411	-1,787	-1,912
Interest received by trust funds [-].....	-7,800	-270	-8,201	-8,659
Receipts from off-budget Federal agencies: Interest on Government capital in enterprises [-].....				
Proprietary receipts from the public [-].....	-909	-354	-2,054	-2,772
	-437	-195	-460	-489
Total net interest.....	26,789	6,975	29,785	31,076
Total other services and current operating expenses.....	106,442	27,825	120,873	126,120

See footnotes at end of table.

Table D-3. INVESTMENT, OPERATING, AND OTHER BUDGET OUTLAYS
(In millions of dollars)—Continued

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Current outlays—Continued				
OTHER SERVICES AND CURRENT OPERATING EXPENSES—Continued				
National defense allowances:				
Department of Defense—Military: Allowances:				
Civilian and military pay raises				2,257
Other legislation				58
Total national defense allowances				2,315
Total current outlays	296,671	77,836	330,911	345,845
OTHER				
Allowances for:				
Civilian agency pay raises				1,151
Contingencies				1,500
Employer share, employee retirement:				
Interfund transactions (—)	-3,233	-890	-3,407	-3,557
Receipts from off-budget Federal agencies (—)	-1,009	-95	-1,185	-1,113
Proprietary receipts from the public (—):				
Civil	-5,675	-2,367	-6,275	-7,189
National defense	-7,786	-2,709	-9,407	-9,571
Total budget outlays	366,466	94,746	411,243	439,967

* Less than \$0.5 million.

¹ Includes both Federal funds and trust funds.

SPECIAL ANALYSIS E

FEDERAL CREDIT PROGRAMS

Federal credit programs play a significant role in allocating our Nation's economic resources. These programs have one principal objective: To encourage certain types of economic activity by providing individuals, businesses and government bodies with credit at more favorable terms than would otherwise be available in the private market. Frequently, this credit assistance is designed to counteract rationing in private credit markets and to provide loans at longer maturities and higher loan-to-value ratios, but most often its purpose is to reallocate resources by offering a lending rate that is lower than the rate available on comparable private loans.

Federal credit assistance is provided to borrowers in a number of ways. Federal Government agencies make direct loans and also guarantee or insure the payment of principal and interest on loans supplied by private lenders. Direct loans are also made by Government-sponsored, privately owned credit enterprises that are regulated by the Federal Government. Because of the complex institutional arrangements that have evolved, several of these forms of credit assistance are frequently combined in a single program; and sometimes a single transaction is aided by two or more programs.

When a credit program is directly aimed at lowering interest rates to specific borrowers, the interest subsidy may be explicit, as in the case of direct loans where legislation provides for interest rates that are less than market rates; or it may be implicit, as in the case of guaranteed loans where the Government assumes the lender's risk. Moreover, the interest rate on guaranteed loans is sometimes further reduced by explicit interest rate subsidies. Also, Government assistance in the development of secondary markets can achieve lower interest rates by providing greater liquidity. For example, Government guarantees of some residential mortgages and the direct and indirect lines of credit to federally sponsored enterprises such as the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation have contributed to the creation of a well-organized secondary market for residential mortgages. Another implicit interest rate subsidy results from the tax exemption of interest on securities issued by State and local governments.¹

This analysis is intended to be a basic factual resource rather than an evaluation of programs and policies. The chapter highlights major trends in the credit activity of the Federal Government and its sponsored agencies over the last 10 years, and presents the details of direct loans and loan guarantees by major program category from 1976 to 1978. Because interest rate subsidies are an important element in Federal credit assistance, a special section is devoted to measuring

¹ The credit subsidy effects of the tax-exempt status of State and local borrowing is not considered in this analysis. However, see Special Analysis F: Tax Expenditures, p. 136.

the value of the support provided by the expected volume of direct loans and guarantees in 1978 for each major program. The chapter concludes with a summary of proposed and recently enacted legislation that will affect the future course of Federal credit activities.

Questions of great analytical difficulty remain unanswered about the impact and the distribution of the benefits and costs of credit assistance. It is not possible to determine the degree to which federally assisted credit substitutes for private credit transactions that would have taken place without Government assistance or the extent to which Government credit support for some borrowers may reduce the amount of credit available to the unassisted sectors of the economy. In addition, to the extent that credit is reallocated by these programs, it is not at all clear what effect this allocation has on important aggregate economic variables such as employment, production, and economic growth.

The limited space in this analysis requires that the information on budget accounts and programs be consolidated into agency and major functional totals. Additional detail is available elsewhere. The Treasury Bulletin provides data on outstanding direct and guaranteed loans in the most recently completed year or quarter for both accounts and programs within accounts.²

TRENDS AND DIRECTIONS

The total amount of credit provided under Federal auspices has risen rapidly during the past decade, due to both the expansion of existing programs and the initiation of new ones. Table E-1 summarizes data on Federal participation in domestic credit markets over the last decade.

The amount of credit advanced under Federal auspices (direct and guaranteed loans) has increased each year from 1967 to the present. However, with the exception of 1967, 1970, and 1976 Federal and federally assisted advances have been within the narrow range of 13 to 16% of all funds advanced in U.S. credit markets. In 1975, the Federal participation rate increased to 14.7% as a result of reduced private credit demands and expanded Federal mortgage credit programs that were intended to increase housing production. As a result of the steady decline in interest rates and increases in the flow of funds to depository institutions, the components of Federal participation caused by mortgage credit programs have decreased, and the proportion of credit advanced under Federal auspices has fallen to 11.1% of all credit.

Changes in credit activities aimed at housing have had similar impacts in the past: The relatively low proportion of funds advanced under Federal auspices in 1967 was due largely to a repayment of funds advanced by the Federal home loan banks to savings and loan associations the previous year in support of the mortgage market. Similarly, the dramatic increase in the Federal participation during 1970 reflected greater support of the mortgage market by the Federal home loan banks and the Federal National Mortgage Association. Federal support of mortgage credit also increased in 1973 and 1974

² See table GA 11-2, Treasury Bulletin.

Table E-1. FEDERAL PARTICIPATION IN DOMESTIC CREDIT MARKETS (dollars in billions)

	Actual											Estimates	
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	TQ	1977	1978
Total funds advanced in U.S. credit markets ¹ (includes equities)-----	60.8	97.0	96.7	93.6	124.4	161.5	202.1	191.4	183.3	239.4	60.7	(³)	(³)
Advanced under Federal auspices ² -----	5.8	14.9	15.0	17.4	16.5	22.8	26.7	26.6	26.9	26.6	6.5	35.6	45.5
Direct loans:													
On-budget-----	5.3	8.0	2.9	4.5	3.0	2.7	.3	2.2	4.3	4.2	1.1	2.0	2.8
Off-budget-----						.2	.7	2.2	8.5	6.7	2.6	10.1	7.2
Guaranteed loans-----	2.1	5.6	7.8	2.3	12.2	15.6	14.0	6.2	5.7	10.3	-.1	11.2	21.2
Sponsored agency loans-----	-1.9	1.3	4.3	10.6	1.3	4.3	11.6	16.3	8.5	5.4	2.9	12.3	14.3
Federal participation rate (percent)-----	9.5	15.4	15.5	18.6	13.3	14.1	13.2	13.9	14.7	11.1	10.7		
Total funds raised in U.S. credit markets ¹ -----	60.8	97.0	96.7	93.6	124.4	161.5	202.1	191.4	183.3	239.4	60.7	(³)	(³)
Raised under Federal auspices ² -----	1.1	31.3	11.3	16.4	32.3	39.7	46.4	24.1	64.7	97.5	19.1	83.8	84.6
Federal borrowing from public-----	2.8	23.1	-1.0	3.8	19.4	19.4	19.3	3.0	50.9	82.9	18.0	62.0	55.5
Guaranteed borrowing-----	2.1	5.6	7.8	2.3	12.2	15.6	14.0	6.2	5.7	10.3	-.1	11.2	21.2
Sponsored agency borrowing-----	-3.8	2.6	4.5	10.3	.6	4.7	13.2	14.8	8.2	4.3	1.2	10.6	12.9
Federal participation rate (percent)-----	1.8	32.3	11.7	17.5	26.0	24.6	23.0	12.6	35.3	40.7	31.5		

¹ Nonfinancial sectors. Source: Federal Reserve Board Flow of Funds Accounts.

² Estimates from table E-10.

³ Not estimated.

but was not readily apparent in the Federal participation rate because of the sizable increase in all lending that occurred during those 2 years.

The Federal participation rate for borrowing has been higher and more variable than that for lending, fluctuating in a range of 2 to 41% of funds raised in U.S. credit markets. The difference between the Federal proportion of borrowing and lending is primarily due to the surplus or deficit in the Federal budget. The budget deficits in 1975 and 1976 increased Federal borrowing significantly as taxes were cut and expenditures increased in order to stimulate the economy. The 1977 deficit, which is now expected to be \$57.2 billion, will result in continued high Federal credit demands.

The Federal Financing Bank (FFB), which began operating in May 1974, continues to be the most significant recent development in the organization of Federal credit. The bank, an entity within the U.S. Treasury, was created to provide more efficient financing for obligations issued, sold, or guaranteed by Federal agencies, thereby reducing costs to the Government and the assisted borrowers. The Treasury may require Federal agencies authorized to borrow from the public to borrow from the FFB instead. Similarly, agency sales of loan assets may be directed to the FFB. The FFB is also authorized to purchase the securities and loans of private borrowers and Government corporations when Federal agencies provide a guarantee. The FFB's authority to borrow from the Treasury at the Treasury's own borrowing rate enables it to charge lower interest rates than would be available to the borrowing agency if that agency were to borrow directly in private capital markets. Although this support involves no direct cost to the Government, the assisted borrowers receive substantial implicit subsidies in the form of lower interest rates. Because the FFB is outside the budget by law, loans bought by the FFB are not counted as budget outlays. Transactions of the FFB are summarized in table E-2. As the table indicates, the FFB now holds a large volume of debt incurred by private individuals, federally sponsored enterprises, and Federal agencies.

The credit component of the budget is not a useful indicator of Federal credit activities because a relatively small share of Federal credit assistance is in the form of on-budget direct loans. A large portion of Federal credit assistance is not included in the budget because of the utilization of loan guarantee programs instead of direct loan programs; sales of loan assets from Federal agency portfolios to the public or the FFB; the creation of enterprises that are Government sponsored but privately owned; and the legislated removal of some Government programs and agencies from the budget.

Recently, both the Congress and the Administration have expressed concern that Federal credit programs are not subject to the degree of control and evaluation consistent with their importance as a Federal policy tool for reallocating resources. While most direct Federal outlays are subject to periodic review in both the executive branch and the congressional budget process, several direct lending programs and all loan guarantees are not included in the budget. As a result, the budget understates the extent to which the Government is involved in redirecting the resources of the Nation.

The different treatment of budget outlays and most credit assistance creates a number of problems in developing policies of effective resource use to meet national objectives.

Table E-2a. FFB ACQUISITIONS OF AGENCY OBLIGATIONS (in millions of dollars)

Agency or program	New commitments				New acquisitions			
	1976 actual	TQ actual	1977 estimate	1978 estimate	1976 actual	TQ actual	1977 estimate	1978 estimate
Guaranteed loans:								
Purchased from direct loan portfolios:								
USDA: Farmers Home Administration—CBO's.....	3,800	850	6,234	4,599	3,800	850	6,234	4,599
USDA: REA—CBO's.....	166	187	48	500	166	187	48	500
HEW: Medical facilities and HMO loans.....	57	7	92	127	57	7	92	127
Treasury: NYC seasonal financing issues.....	1,260	1,075	2,050	955	1,260	1,075	2,050	950
SBA: Development company loans.....	173	-----	150	-----	179	-----	150	-----
Guaranteed FFB originations:								
Intn'l Security Assist. loans (via DOD).....	2,500	88	800	1,000	1,411	484	1,425	1,695
USDA: REA.....	3,698	190	750	400	693	212	1,053	576
HEW: Guarantees of SLMA obligations.....	415	175	118	145	160	5	85	110
DOT:								
Amtrak guarantees.....	1,000	100	651	249	227	36	204	301
Other rail loans.....	-----	6	50	62	-----	6	50	62
WMATA guarantees.....	-----	-----	75	200	-----	-----	75	200
EPA: Water treatment bonds.....	-----	-----	48	64	24	7	48	64
GSA: Public building CBI's.....	24	7	48	64	24	7	48	64
SBA: SBIC debentures.....	24	20	-----	-----	24	20	-----	-----
Other loans and adjustments.....	13	-70	331	-137	875	-30	-151	-920
Total, all guaranteed loans.....	13,130	2,635	11,397	8,164	8,876	2,859	11,363	8,264
Agency debt issues:								
U.S. Postal Service.....	2,000	500	1,133	895	2,000	500	1,133	895
Tennessee Valley Authority.....	3,145	1,370	5,290	5,440	3,145	1,370	5,290	5,440
Export-Import Bank.....	2,285	120	3,234	3,035	2,285	120	3,234	3,035
U.S. Railway Association.....	636	11	301	*	636	11	301	*
Total debt issues.....	8,066	2,002	9,958	9,370	8,066	2,002	9,958	9,370
Total, all FFB holdings.....	21,196	4,637	21,355	17,534	16,943	4,061	21,322	17,635

Table E-2b. FFB ACQUISITIONS OF AGENCY OBLIGATIONS (in millions of dollars)

Agency or program	Net change				Outstanding			
	1976 actual	TQ actual	1977 estimate	1978 estimate	1976 actual	TQ actual	1977 estimate	1978 estimate
Guaranteed loans:								
Purchased from direct loan portfolios:								
USDA:								
Farmers Home Administration—Certificates.....	3,800	850	6,234	4,599	8,800	9,650	15,884	20,483
REA—Certificates.....	166	187	48	500	166	354	402	902
HEW: Medical facilities and HMO loans.....	57	7	72	100	119	126	198	298
Treasury: NYC seasonal financing issues.....	-----	1,075	-125	-950	-----	1,075	950	-----
SBA: Development company loans.....	117	-4	120	-30	164	160	280	250
Guaranteed FFB originations:								
International Security Assistance loans (via DOD).....	787	208	870	850	889	1,106	1,976	2,826
USDA: REA.....	693	212	990	528	948	1,160	2,150	2,678
HEW: Guarantees of SLMA obligations.....	160	5	85	110	400	405	490	600
DOT:								
Amtrak guarantees.....	250	35	17	240	568	602	619	859
Other rail loans.....	-----	6	50	62	-----	6	56	118
WMATA guarantees.....	-----	-----	-----	-----	177	177	177	177
EPA: Water treatment bonds.....	-----	-----	75	200	-----	-----	75	275
GSA: Public building certificates.....	24	6	48	64	69	75	123	187
SBA: SBIC debentures.....	71	20	-----	-----	71	91	91	91
Other loans and adjustments ¹	6	16	255	-279	33	50	305	26
Total, all guaranteed loans.....	<u>6,131</u>	<u>2,623</u>	<u>8,739</u>	<u>5,994</u>	<u>12,414</u>	<u>15,036</u>	<u>23,776</u>	<u>29,770</u>
Agency debt issues:								
U.S. Postal Service.....	1,248	500	133	895	2,748	3,248	3,381	4,276
Tennessee Valley Authority.....	745	555	1,100	1,450	2,180	2,735	3,835	5,285
Export-Import Bank.....	936	-216	1,884	1,623	4,985	4,768	6,652	8,276
U.S. Railway Association.....	51	11	298	-----	85	97	395	395
Total debt issues.....	<u>2,980</u>	<u>853</u>	<u>3,415</u>	<u>3,968</u>	<u>9,998</u>	<u>10,848</u>	<u>14,263</u>	<u>18,231</u>
Total, all FFB holdings.....	<u>9,111</u>	<u>3,476</u>	<u>12,154</u>	<u>9,963</u>	<u>22,411</u>	<u>25,885</u>	<u>38,039</u>	<u>48,002</u>

¹ Applies to both guaranteed originations and purchases from agency portfolios; reflects adjustments for variations in accounting treatment, timing of transaction recording, and some differences between agency budget plans and those of FFB.

First, although some new lending of off-budget Federal entities, such as that of the Rural electrification and telephone revolving fund, is subject to normal Presidential review, the level of credit assistance in many programs is not subject to the usual budget process. As a result, important policy issues such as the distribution of credit between private and public sectors and the coordination of credit policy with macroeconomic policy instruments are not subject to the same intense scrutiny applied to issues arising from programs that are in the budget.

Second, because credit programs are often not included in the budget and thereby do not immediately affect the budget, there is the temptation to choose credit assistance over a budget outlay or a loan guarantee over an on-budget direct loan because they appear to be an almost costless approach in terms of budget outlays. As a result, there may be greater reliance upon credit programs than is desirable.

And third, there has not been sufficient analysis of which type of credit assistance—direct loans, guarantees, and/or interest rate subsidies—is best suited to attaining specific credit objectives. This problem is further complicated by the increased purchases by the FFB of guaranteed loans and securities, a process that converts guaranteed loans into direct loans from the Federal Government but leaves them outside the budget. These issues of credit control are now being studied by Congress and the administration, and are proving difficult to resolve.

An important first step in gaining control over federally assisted lending is embodied in the administration's proposal to include within the budget the outlays of the off-budget Federal entities, which are now excluded from budget totals by provisions of law. Several of these entities carry out direct loan programs; Rural Electrification Administration, Rural Telephone Bank, HUD housing programs for the elderly, United States Railway Association, and Federal Financing Bank. However, the problem of devising improved control mechanisms for guarantees remains unresolved and deserves further attention.】

DIRECT LOANS

Direct loans are made by both on- and off-budget Federal agencies, and are financed by Treasury or agency borrowing, loan repayments, and other fiscal resources such as taxes. The major Federal programs that provide direct loans are identified in tables E-3 and E-4.

Table E-3 reports loan commitments and gross disbursements for 1976-78. Commitments to make direct loans tend to forecast future financial flows because commitments are often made in advance of the time when funds are actually disbursed. An apparent anomaly occurs in the relationship between commitments and disbursements for a few programs such as low-rent public housing and urban renewal notes. Disbursements are higher than commitments because they include short-term interim construction financing notes which are "rolled over" several times, while commitments are counted only once.

Table E-4 shows net outlays of direct loan programs and outstanding loan levels for 1976-78. Net loan outlays of on-budget Federal agencies are counted in budget outlays, and thus are reflected in the budget surplus or deficit. However, in recent years legislation has been enacted which places a number of direct-lending agencies or programs

Table E-3. DIRECT LOAN COMMITMENTS AND GROSS DISBURSEMENTS (in millions of dollars)

Agency or program	New commitments				New loans ¹			
	1976 actual	TQ actual	1977 estimate	1978 estimate	1976 actual	TQ actual	1977 estimate	1978 estimate
Funds appropriated to the President:								
International security assistance.....	780	684	1,199	1,145	484	60	246	225
International development assistance.....	460	96	567	464	555	117	449	378
Other international.....			300	130		2	324	160
Agriculture: Farmers Home Administration.....	4,594	1,420	5,266	5,086	5,302	1,476	6,884	6,597
Commodity Credit Corporation.....	1,754	675	3,218	2,968	1,754	675	3,218	2,968
Public Law 480 long-term export credit.....	615	318	772	768	615	318	772	768
Commerce: Economic Development Administration.....	53	20	52	42	30	9	47	57
Coastal energy impact fund.....			66	86			51	82
Health, Education, and Welfare: Health programs.....	98	70	121	286	112	35	127	134
Claims on insured student loans.....	1	1	2	29	140	62	162	183
Other education programs.....	320	-10	2		290	66	266	-4
Housing and Urban Development:								
Low-rent public housing—interim financing.....	68	44	293	68	278	50	600	600
Federal Housing Administration—insurance claims.....	60	20	144	139	1,073	70	1,014	1,186
Government National Mortgage Association:								
FHA/VA tandem plan.....	3,112	176	2,422		3,556	594	600	1,760
Conventional tandem plan.....	2,000				4,040	584	500	
Other.....					*			
Community Development Loans.....	34	*	83		422	138	258	200
Other credit.....	26	6	192	18	38	26	211	185
Interior.....	21	9	54	38	24	9	56	38
Justice: LEAA loans.....	43	21	46	41	39	17	46	41
Transportation.....	1	24	75	105	113	46	132	119

Treasury:								
New York City seasonal financing.....	1,260	1,075	2,050	950	1,260	1,075	2,050	950
Liquidating programs.....	*				*			
GSA: Property disposal credit sales.....								
Veterans Administration:								
Housing loans and guarantee claims.....	393	101	414	447	399	102	418	451
Insurance policy loans.....	132	35	118	118	132	35	118	118
District of Columbia.....	266		142	176	156	95	216	176
Export-Import Bank ²	3,492	448	3,200	4,175	2,206	528	2,256	2,521
Federal Deposit Insurance Corporation ³								
Federal Home Loan Bank Board.....	338	13	28	7	328	13	28	7
Small Business Administration:								
Business and investment loans.....	234	55	370	285	474	118	552	469
Disaster loans.....	177	110	140	150	191	46	187	124
United States Railway Association ⁴	309		600	500	309		600	500
Other agencies and programs.....	11	2	22	34	12	2	23	9
Total budget agencies.....	20,654	5,413	21,957	18,254	24,335	6,366	22,412	21,000
OFF-BUDGET DIRECT LOANS								
Rural electrification and telephone revolving fund.....	1,000	250	1,000	1,000	816	208	975	1,000
Rural Telephone Bank.....	180	27	180	190	113	18	120	130
HUD: Housing for the elderly or handicapped ⁵	*		1,496	750	*		274	750
United States Railway Association.....	375	11	298		375	11	298	
Federal Financing Bank.....	13,130	2,635	11,398	8,164	8,876	2,859	11,363	8,264
Energy Independence Authority.....				3,000				650
Total off-budget agencies.....	14,685	2,923	14,372	13,104	10,181	3,097	13,030	10,794
Grand total.....	35,339	8,335	36,329	31,358	34,516	9,463	35,442	31,794

* Less than \$0.5 million.

¹ New loans in this year's analysis are defined to include actual disbursements for primary loans, disbursements for guarantee claims, and extension of sales credits. In previous analyses these were included net of writeoffs, forgiveness credits and other accounting adjustments.

² Returned to on-budget status by statute effective Oct. 1, 1976, with outstanding loans of \$11,247 million.

³ Represents a special loan to the new owners of the Franklin National Bank. Note: loan assets acquired from banks in liquidation have not been reported for the credit analysis.

⁴ Includes both debentures and repayable preferred stock of ConRail.

⁵ Transferred off-budget effective Aug. 31, 1974, with outstanding loan balance of \$519 million.

Table E-4. NET DIRECT LOAN OUTLAYS AND LOANS OUTSTANDING (in millions of dollars)

Agency or program	Net loan outlays				Outstanding			
	1976 actual	TQ actual	1977 estimate	1978 estimate	1976 actual	TQ actual	1977 estimate	1978 estimate
Funds appropriated to the President:								
International security assistance.....	276	-42	-1	-22	2,610	2,568	2,567	2,545
International Development Assistance.....	348	65	196	106	11,181	11,245	11,441	11,547
Other international.....		2	324	160		2	326	486
Agriculture: Farmers Home Administration.....	71	357	-1,231	-75	1,893	2,250	1,020	945
Commodity Credit Corporation.....	178	447	964	-13	1,440	1,887	2,851	2,838
Public Law 480 long term export credit.....	496	297	679	659	4,449	4,746	5,425	6,085
Commerce: Economic Development Administration.....	2	1	29	38	493	493	522	560
Coastal energy impact fund.....			51	81			51	132
Health, Education, and Welfare: Health programs.....	53	34	31	3	542	576	607	611
Claims on insured student loans.....	128	57	131	145	408	465	615	760
Other education programs.....	276	64	250	-12	3,378	3,442	3,693	3,681
Housing and Urban Development:								
Low-rent public housing—interim financing.....	12	16			42	58	58	58
Federal Housing Administration—insurance claims.....	920	-86	606	566	3,248	3,162	3,768	4,334
Government National Mortgage Association:								
FHA/VA tandem plan.....	-806	369	-613	-219	1,337	1,706	1,093	874
Conventional tandem plan.....	995	-818	-35	-431	1,417	599	564	133
Other.....	-233	-31	-100	-94	2,687	2,657	2,556	2,463
Community development loans.....	50	41	12	-50	351	392	404	354
Other credit.....	-48	7	115	64	3,692	3,699	3,815	4,204
Interior.....	18	7	48	30	285	292	340	370
Justice: LEAA loans.....	10	14	6	-5	150	164	171	166
Transportation.....	113	46	123	59	300	345	468	527

Treasury:								
New York City seasonal financing.....								
Liquidating programs.....	-138	-29	-117	-120	4,126	4,096	3,980	3,860
GSA. Property disposal credit sales.....	-13	-4	-12	-12	61	57	45	33
Veterans' Administration:								
Housing loans and guarantee claims ¹	-108	-50	-301	-38	1,681	1,631	1,331	1,293
Insurance policy loans.....	13	7	10	13	1,142	1,149	1,159	1,172
District of Columbia.....	104	80	141	138	1,117	1,197	1,338	1,476
Export-Import Bank ²	945	262	1,022	1,097	10,830	11,093	12,115	13,212
Federal Deposit Insurance Corporation ³					100	100	100	100
Federal Home Loan Bank Board.....	269	-66	-1,120	-26	1,638	1,572	452	426
Small Business Administration:								
Business and investment loans.....	-38	39	211	260	1,680	1,718	1,930	2,190
Disaster loans.....	34	3	-15	-21	1,392	1,395	1,380	1,359
United States Railway Association ⁴	309		600	500	309	309	909	1,409
Other agencies and programs.....	-20	-7	-5	-19	255	248	243	224
Total budget agencies.....	4,215	1,081	2,003	2,764	64,233	65,314	67,317	70,081
OFF-BUDGET DIRECT LOANS								
Rural electrification and telephone revolving fund.....	409	-38	643	184	8,256	8,218	8,861	9,045
Rural Telephone Bank.....	109	17	116	125	383	399	516	640
HUD: Housing for the elderly or handicapped ⁵	-5	-1	267	743	509	507	774	1,518
United States Railway Association.....	52	11	298		85	97	394	394
Federal Financing Bank.....	6,131	2,623	8,739	5,994	12,413	15,036	23,776	29,770
Energy Independence Authority.....				150				150
Total off-budget agencies.....	6,696	2,612	10,063	7,197	21,646	24,528	34,321	41,518
Grand total.....	10,911	3,693	12,066	9,961	85,879	89,572	101,638	111,599

¹ Claims paid under insurance and guarantee programs become classified as direct loans until acquired loans or collateral are paid off or liquidated. Proceeds of liquidations are classified as repayments and realized losses then become writeoffs.

² Returned to on-budget status by statute effective Oct. 1, 1976, with outstanding loans of \$11,247 million.

³ Represents a special loan to the new owners of the Franklin National Bank. Note: loan assets acquired from banks in liquidation have not been reported for the credit analysis.

⁴ Includes both debentures and repayable preferred stock of ConR-il.

⁵ Transferred off-budget effective Aug. 31, 1974, with outstanding loan balance of \$519 million.

outside of the budget. Because their economic effects are identical to those of direct loan programs included in the budget, they are also presented in tables E-3 and E-4 with a separate heading.

Repayments of outstanding loans are not classified as budget receipts, but are offset against new loan disbursements in the case of loan revolving accounts, and against general outlays in the case of nonrevolving accounts. For this reason, net outlays for loan programs on table E-4 are net of repayments and therefore understate the level of new lending. New loans, which are shown in table E-3, provide a more comprehensive measure of program activity.³

The high direct lending in 1976 was part of the Federal effort to promote economic recovery. A large portion of the total was focused on housing, with the Farmers Home Administration, Department of Housing and Urban Development, and Veterans Administration housing programs making up 43% of all direct lending in 1976. The continuing rapid recovery in residential construction will permit a reduction in direct lending under housing programs in 1977 and 1978.

The net loan outlays presented in table E-4 are the difference between the volume of loans outstanding at the beginning of the year and the outstanding volume at the end of the year. This year-to-year net change in loan outlays is equal to the total of gross loan disbursements during the year (new loan disbursements, disbursements for guarantee claims and purchases of existing loans) less repayments and prepayments of loans, proceeds of collateral liquidation and sales of loan assets to the public, the FFB, and federally sponsored enterprises.

Loan asset sales by agencies occur for two major reasons. First, the agency selling the loan may have been established specifically to perform a brokerage and servicing role rather than that of a financial intermediary. In such cases, the agency originates loans and temporarily holds them for later sale to permanent investors. The operations of the Farmers Home Administration are typical of this process in terms of budget definitions. However, there are strong elements of intermediation involved in that the loan assets sold are really certificates of beneficial ownership in a pool of mortgages. Second, the selling agency may have been established to perform an intermediation function for countercyclical purposes, buying and holding loans during periods of restrictive financial conditions and selling them to the public or a federally sponsored enterprise when credit conditions are more favorable. The mortgage lending of the GNMA conforms to this pattern.

Table E-5 provides the repayment totals and identifies the major loan asset sales. Note that 75% of the loan asset sales are by the FmHA and the GNMA.

³ Some guaranteed loans are ultimately supported by direct loans as a result of claims paid under guarantee programs when the Government receives either the original loan or the collateral.

Table E-5. DIRECT LOAN ASSET SALES AND REPAYMENTS

(In millions of dollars)

	1976 actual	TQ actual	1977 estimate	1978 estimate
Loan sales:				
Agriculture, Farmers Home Administration:				
Agricultural credit insurance fund.....	826	400	1,270	949
Rural housing insurance fund.....	2,829	256	4,541	3,100
Rural development insurance fund.....	592	215	807	820
Health, Education, and Welfare:				
Health maintenance organization loans.....	-----	-----	62	99
Medical facilities loans.....	55	-----	30	28
Housing and Urban Development:				
FHA fund.....	9	-----	-----	115
Treasury: New York City seasonal financing loan..	1,260	1,075	2,050	950
Veterans Administration:				
Direct loan revolving fund.....	-----	-----	181	42
Loan guaranty revolving fund.....	291	96	343	269
Small Business Administration.....	191	-----	150	-----
Subtotal, budget agency loan sales excluding tandem plans.....				
	6,053	2,042	9,434	6,372
Housing and Urban Development (GNMA):				
FHA/VA tandem plan.....	4,243	203	1,136	1,914
Conventional tandem plan.....	3,016	1,389	515	424
Subtotal, budget account loan sales.....				
	13,312	3,634	11,085	8,710
Sales from off-budget accounts:				
Agriculture, REA.....	166	187	48	500
Energy Independence Authority.....	-----	-----	-----	500
Total—All loan sales ¹.....				
	13,478	3,821	11,133	9,710
Memos:				
Sales to FFB included above ²	5,461	2,126	8,844	6,091
Sales to the public ³	8,017	1,695	2,289	3,619
Farmers Home repurchases.....	668	404	1,539	1,270
Loan repayments other than loan sales ⁴ (for budget agencies, ex-tandem plans).....	6,480	1,427	9,097	9,285
Ratio of loan sales to other repayments (percent).....	93	143	104	69

¹ All loans sold, except conventional tandem plans, are guaranteed upon sale, and are reflected in guaranteed loan totals in tables E-6 and E-7.

² See table E-2 for detail of FFB purchases.

³ "Public" includes sponsored agencies such as FNMA and FHLMC who are among principal purchasers of HUD and VA mortgages.

⁴ Excludes proceeds of collateral liquidation, and adjustments to loan balances.

GUARANTEED LOANS

Guaranteed loans⁴ are loans made to private borrowers, State and local governments, foreign governments, and Government corporations where the Federal Government assumes responsibility for payment of some portion of principal and interest in the event that the borrower defaults on his obligation. Included are transactions where the Government guarantees marketable securities when the size, maturity, or other special features make the loan unsuitable for financing by individual financial institutions. In the case of fully guaranteed loans, the Government guarantees the repayment of all principal and interest if the borrower defaults. Guaranteed loans also include loans on which the Government pays a share of the interest, even though principal repayments are not assured. In other cases, the Government may guarantee a portion of the outstanding principal. Federal long-term direct leases and guarantees of private leases are also classed as guarantees of the underlying credit that was used to finance the facilities being leased.⁵

The major agencies and programs making loan guarantees are shown in tables E-6 and E-7. The tables reflect the full principal amount of guaranteed loans, although in some cases the Government guarantees less than 100% of the principal. The presentation in tables E-6 and E-7 is comparable to tables E-3 and E-4 for direct loans. In addition, adjustments to eliminate double counting have been made in tables E-6 and E-7 to make possible the aggregation of guaranteed loans with other forms of Federal credit assistance. These adjustments are required when the same credit extension is guaranteed twice, as in the case of GNMA's guarantee of passthrough securities that are backed by FHA-insured and VA-guaranteed mortgages. Guaranteed loans that are converted to direct loans when purchased by a Federal agency must also be deducted because they have been already included in tables E-3 and E-4. Additional adjustments are made for double counting in tables E-8 and E-9 for Government-sponsored credit enterprises. These adjustments are also reflected in the aggregate totals in table E-1.

Table E-7 summarizes the net changes in guaranteed loans and the total dollar value of guaranteed loans outstanding at the end of 1976-78 by agency and program. Outstanding guaranteed loans are expected to grow at a rapid pace, up to almost \$313.4 billion in 1978. Prior to 1975, guaranteed loans and securities were typically held by private investors. However, the FFB has since become a major purchaser of guaranteed obligations, thereby converting them into direct loans. After adjustment for double counting and FFB purchases, the total of outstanding guaranteed loans falls to \$202.3 billion in 1978.

Guaranteed loans, like off-budget direct loans, are not reflected in the budget at the time credit is extended. Budget impacts from loan guarantee programs, excepting explicit subsidies and administrative

⁴ As used here, guaranteed loans include those designated as "insured."

⁵ Not included in this analysis are leases by the U.S. Postal Service and lease guarantees by the SBA. They will be included in next year's Special Analysis E.

costs, occur only when defaults require the Federal Government to pay lenders' claims. Losses for the older guaranteed loan programs have been relatively low, partly because most of the loans under these programs were protected with liens on marketable property. However, loans made under some newer housing subsidy programs have had very high default loss rates in spite of the security of real property. Other recent programs have high risks because they require little or no collateral and, as a result, these programs are experiencing much higher losses.

GOVERNMENT-SPONSORED CREDIT ENTERPRISES OUTSIDE THE BUDGET

Several major Government-sponsored credit enterprises were created to facilitate the financing of selected kinds of economic activity. Although they are privately owned and managed, all are chartered by the Government, are subject to some form of Federal supervision, and consult the Treasury Department in planning the marketing of their debt obligations. The enterprises included in this category are the Federal Home Loan Bank System, the three components of the Farm Credit System, the Federal National Mortgage Association, and the Student Loan Marketing Association.

These enterprises differ from other private institutions in that they have been given special preferences, including rights to assess their constituents, certain tax exemptions and preferences, and preferential eligibility for investment in their securities by federally regulated institutions and other fiduciaries. These advantages, together with the enterprises' Federal relationship, give their security obligations a preferred position in the securities market. This enables them to borrow at interest rates below the rates on the best grade corporate securities, and only moderately above the Government's own rates.

All Government-sponsored credit enterprises are essentially financial intermediaries, channeling funds from one sector of the capital market to another. They borrow mainly in the "agency sector" of the bond market, and disburse these funds for specifically authorized purposes, either directly to lenders or by purchasing loans originated by them.⁶ Some of the agencies also serve as reserve facilities or provide secondary marketing functions, furnishing liquidity for constituent lenders by making temporary advances or buying portfolio loans for resale.

Funds lent by Government-sponsored credit enterprises are obtained mostly from borrowings in the capital markets. Sale of capital stock and retained earnings provide a small portion of resources used for lending. The timing of borrowing and lending varies from year to year. The lending of FNMA and FHLBS largely depends on conditions in the mortgage credit market and is thus highly volatile. Tables E-8 and E-9 show both the lending and borrowing of these credit institutions. Totals have been adjusted to avoid double counting that would otherwise result from loans between agencies.

⁶ The program of the Government National Mortgage Association (a budget agency in HUD) to guarantee mortgage-backed securities achieves a very similar "intermediation" result. GNMA guarantees securities issued against privately held pools of federally guaranteed or insured mortgages. The FRB flow-of-funds data, for example, include this GNMA program within the definition of Government-sponsored credit enterprises. GNMA data appear in memorandum entries of tables E-6 and E-7.

Table E-6. LOAN GUARANTEE COMMITMENTS AND LOANS GUARANTEED (in millions of dollars)

Agency or program	Commitments				Loans guaranteed			
	1976 actual	TQ actual	1977 estimate	1978 estimate	1976 actual	TQ actual	1977 estimate	1978 estimate
Funds appropriated to the President:								
International security assistance.....	1,411	484	1,425	1,695	1,411	484	1,425	1,695
International development assistance.....	17	-----	44	70	1	6	20	41
Agriculture:								
Farmers Home Administration.....	4,913	1,116	7,827	6,383	4,391	1,151	7,416	6,263
Rural Electrification Administration.....	1,423	416	3,720	3,940	860	399	1,101	1,076
Commerce:								
Maritime Administration.....	891	83	986	1,289	1,169	184	955	950
Coastal zone guarantees.....	-----	-----	44	57	-----	-----	44	57
Economic development assistance.....	8	2	7	10	1	*	1	1
Defense: Tanker charters	-----	-----	-----	-----	-----	-----	-----	-----
Health, Education, and Welfare:								
Medical facilities guarantees.....	257	82	2	9	215	36	237	59
Health programs.....	-----	-----	6	511	-----	-----	68	610
Student loan insurance fund.....	1,268	317	1,265	1,305	1,043	274	1,041	1,074
Guarantees of SLMA obligations.....	160	5	85	110	160	5	85	110
College facilities: subsidized loans.....	-----	-----	-----	-----	194	8	36	-----
Housing and Urban Development:								
Low-rent public housing.....	610	271	2,431	889	7,660	1,839	9,000	10,500
Federal Housing Administration.....	8,316	2,739	11,594	16,095	8,316	2,739	11,594	16,095
Community development loans.....	115	17	130	15	203	19	200	70
New communities fund.....	-----	14	-----	-----	7	14	5	4
GNMA: Mortgage-backed securities.....	8,999	2,600	10,000	10,000	8,999	2,600	10,000	10,000
Other mortgage credit.....	-----	-----	-----	-----	-----	-----	-----	-----
Interior:								
Indian programs.....	29	6	90	4	29	6	90	4
Other.....	-----	-----	67	30	-----	-----	67	30
Transportation:								
Rail programs.....	281	36	604	701	264	42	364	553
WMATA bonds.....	-----	-----	-----	-----	-----	-----	-----	-----
Aircraft loans.....	82	30	10	-----	78	3	41	-----
Treasury:								
Guarantees of NYC issues sold to FFB.....	1,260	1,075	2,050	950	1,260	1,075	2,050	950

Taxable municipal bond option ¹				3,700				3,700
Energy Research and Development Administration:								
Geothermal resources development.....			200	300			200	300
Environmental Protection Agency: Water treatment bonds.....			125	250			75	200
General Service Administration.....	95				24	7	48	64
NASA: Long-term lease.....			79	167			79	167
Veterans Administration: Housing loans.....	10,868	2,930	11,412	12,828	10,250	2,718	11,018	12,436
Emergency Loan Guarantee Board.....								
Energy Independence Authority.....				6,000				1,700
Export-Import Bank.....	8,507	1,595	10,549	13,148	5,147	851	5,731	6,589
Federal Deposit Insurance Corporation ²								
Small Business Administration:								
Loan guarantees.....	2,057	481	2,450	2,206	1,768	460	2,008	1,832
Pollution control bond guarantees.....			80	200			40	100
Other agencies and programs ³	12	5	17	15	13	5	17	15
Total (gross).....	51,578	14,302	67,299	82,877	53,461	14,923	65,055	77,247
Less secondary guarantees:								
GNMA guarantees of FHA-VA pools.....	8,999	2,600	10,000	10,000	8,999	2,600	10,000	10,000
HEW guarantees of SLMA insured student loan interest.....	160	5	85	110	160	5	85	110
DOT guarantees of USRA debt.....	29	4	1	3	24	6	4	3
Total, primary guarantees.....	42,390	11,693	57,213	72,764	44,278	13,312	54,967	67,134
Less guaranteed loans acquired for direct loan portfolios: ⁴								
By budget agencies, GNMA.....	3,113	176	2,422		3,556	594	600	1,760
By off-budget Federal agencies: Federal Financing Bank.....	13,130	2,635	11,398	8,164	8,876	2,859	11,363	8,264
By federally sponsored enterprises:								
Student Loan Marketing Association.....	227	12	159	171	227	12	159	171
Federal National Mortgage Association.....	5,362	902	6,269	5,620	3,100	444	3,484	3,020
Federal Home Loan Banks.....	24	6		20	24	6		20
Federal Home Loan Mortgage Corporation.....	28	2	40	40	39	7	40	40
Total primary guaranteed loans (adjusted).....	20,505	7,959	36,925	58,749	28,455	8,390	39,321	53,859

¹ Included here is the estimated principal amount of the taxable municipal bonds for which the administration is proposing to pay a portion of the interest. In the event of default by the issuing government, the Treasury's obligation to the subsidy payment ceases. See Special Analysis F, p. 142, for further details on the proposal.

² FDIC assumed liability for the New York Federal Reserve Bank's loan to Franklin National Bank in connection with its receivership.

³ Includes less active or expiring small programs. (SBA, NCUA, TVA, D.C. stadium bonds.)

⁴ Secondary guarantees are defined in this table to cover securities representing loans assets which are also guaranteed. Secondary guarantees by Export-Import Bank of the debt of the Private Export Finance Corporation have not been estimated and are excluded from both sections of the table.

Table E-7. NET GUARANTEED AND INSURED LOANS OUTSTANDING (in millions of dollars)

Agency or program	Net loans guaranteed				Outstanding			
	1976 actual	TQ actual	1977 estimate	1978 estimate	1976 actual	TQ actual	1977 estimate	1978 estimate
Funds appropriated to the President:								
International security assistance.....	1,298	442	1,305	1,563	2,345	2,787	4,091	5,654
International development assistance.....	-12	-4	8	20	157	153	160	180
Agriculture:								
Farmers Home Administration.....	2,980	566	5,002	4,407	17,847	18,413	23,415	27,822
Rural Electrification Administration.....	860	399	1,101	1,076	1,114	1,514	2,615	3,691
Commerce: Maritime Administration.....	1,065	160	844	825	3,431	3,591	4,435	5,260
Coastal zone guarantees.....			44	57			44	101
Economic development assistance.....	24	21	25	26	160	181	206	232
Defense: Tanker charters.....					180	180	180	180
Health, Education, and Welfare:								
Medical facilities guarantees.....	210	34	230	49	1,061	1,095	1,325	1,374
Health programs.....			6	511			6	517
Student loan insurance fund.....	-230	1	47	109	5,126	5,127	5,174	5,283
Guarantees of SLMA obligations.....	160	5	85	110	400	405	490	600
College facilities: subsidized loans.....	178	4	18	-19	1,323	1,327	1,345	1,326
Housing and Urban Development:								
Low-rent public housing.....	454	120	1,265	1,369	13,607	13,727	14,992	16,361
Federal Housing Administration.....	2,338	-98	3,560	6,647	88,988	88,890	92,450	99,097
Community development loans.....	-994	-314	-800	-885	2,519	2,205	1,405	520
New communities fund.....	7	-4	-69	-46	280	276	207	161
GNMA: Mortgage-backed securities.....	7,887	1,890	8,300	8,400	25,610	27,500	35,800	44,200
Other mortgage credit.....	-30	-9		9	549	540	540	549
Interior:								
Indian programs.....	29	5	79	-11	29	34	114	102
Other.....			67	30			67	96
Transportation:								
Rail programs.....	210	41	117	471	670	711	828	1,300
WMATA bonds.....					997	997	997	997
Aircraft loans.....	74	2	28	-14	100	102	129	115

Treasury:									
Guarantees of NYC issues sold to FFB.....	1,082	-126	-956		1,082	956			
Taxable municipal bond option ¹			3,700						3,700
Energy Research and Development Administration:									
Geothermal resources development.....		197	295				197	491	
Synthetic fuels demonstration guarantees.....									
Environmental Protection Agency: Water treatment bonds.....			75	175			75	250	
General Services Administration.....	21	6	-10	51	956	962	952	1,002	
NASA: Long-term lease.....			79	167			79	247	
Veterans Administration: Housing loans.....	6,133	646	6,059	6,547	64,116	64,763	70,822	77,369	
Emergency Loan Guarantee Board.....	-35	-20	-30	-135	185	165	135		
Energy Independence Authority.....				1,700					1,700
Export-Import Bank.....	1,280	-345	739	850	5,273	4,927	5,666	6,516	
Federal Deposit Insurance Corporation ²	-320	-148	-350	-626	1,144	996	646	20	
Small Business Administration:									
Loan guarantees.....	684	117	717	362	4,979	5,096	5,812	6,174	
Pollution control bond guarantees.....			40	100			40	140	
Other agencies and programs ³	4	2	-11	23	68	70	60	83	
Total (gross).....	24,272	4,602	28,641	36,955	243,213	247,816	276,456	313,419	
Less secondary guarantees: ⁴									
GNMA guarantees of FHA/VA pools.....	7,887	1,890	8,300	8,400	25,610	27,500	35,800	44,200	
HEW guarantees of SLMA insured student loan interest.....	160	5	85	110	400	405	490	600	
DOT guarantees of USRA debt.....	24	6	2	1	33	39	41	42	
Total, primary guarantees.....	16,202	2,701	20,254	28,444	217,170	219,872	240,125	268,570	
Less guaranteed loans acquired for direct loan portfolios:									
By budget agencies, GNMA.....	-1,040	338	-714	-313	4,030	4,368	3,654	3,341	
By Off-budget Federal agencies: Federal Financing Bank.....	6,131	2,623	8,739	5,994	12,413	15,036	23,776	29,770	
By federally sponsored enterprises:									
Student Loan Marketing Association.....	183	-7	94	110	408	401	495	605	
Federal National Mortgage Association.....	790	-143	1,006	1,516	28,691	28,548	29,554	31,070	
Federal Home Loan Banks.....	-10	6	-14	20	68	74	59	79	
Federal Home Loan Mortgage Corporation.....	-201	-46	-130	-117	1,733	1,688	1,558	1,441	
Total primary guaranteed loans (adjusted).....	10,348	-70	11,273	21,233	169,828	169,757	181,872	202,264	

*Less than \$0.5 million.

¹ Included here is the estimated principal amount of the taxable municipal bonds for which the administration is proposing to pay a portion of the interest. In the event of default by the issuing government, the Treasury's obligation to the subsidy payment ceases. See Special Analysis F, p. 142, for further details on the proposal.

² FDIC assumed liability for the New York Federal Reserve Bank's loan to Franklin National Bank in connection with its receivership.

³ Includes less active or expiring small programs (SBA, NCUA, TVA, D.C. stadium bonds).

⁴ Secondary guarantees are defined in this table to cover securities representing loan assets which are also guaranteed. Secondary guarantees by Export-Import Bank of the debt of the Private Export Finance Corporation have not been estimated and are excluded from both sections of the table.

Table E-8. LOAN COMMITMENTS AND GROSS DISBURSEMENTS OF FEDERALLY SPONSORED CREDIT INTERMEDIARIES
(In millions of dollars)

	Commitments				Gross disbursements			
	1976 actual	TQ actual	1977 estimate	1978 estimate	1976 actual	TQ actual	1977 estimate	1978 estimate
Student Loan Marketing Association	227	12	159	171	227	12	159	171
Federal National Mortgage Association ¹	6,419	1,529	8,065	6,806	4,274	1,580	4,413	4,310
Farm Credit System:								
Banks for cooperatives	10,012	2,773	11,967	13,294	10,012	2,773	11,967	13,294
Federal intermediate credit banks	6,475	1,608	7,712	8,806	6,475	1,608	7,712	8,806
Federal land banks	4,439	1,024	4,968	5,578	4,438	1,024	4,968	5,578
Federal Home Loan Bank System:								
Federal home loan banks	7,547	2,656	12,498	17,810	7,091	3,033	12,600	17,900
Federal Home Loan Mortgage Corporation: ¹								
Corporation accounts	1,154	320	2,000	2,800	1,184	316	1,745	2,375
Participation certificate pool ²					(1,226)	(454)	(2,570)	(2,375)
Total	36,273	9,923	47,368	55,265	33,702	10,348	43,563	52,435
Less secondary funds advanced from Federal sources:								
SLMA from FFB	160	5	85	110	160	5	85	110
FHLMC from FHLBB					386			
Total primary lending	36,113	9,918	47,283	55,155	33,156	10,343	43,478	52,325

¹ Loans purchased at discount are recorded at acquisition cost.

² Participation certificates (pass-through type) sold against mortgage pools are counted as sales of loan assets and are therefore not reflected on the Corporation's balance sheet. Loan purchases in parentheses (—) are excluded from totals (interfund transfers).

FUNCTIONAL AREAS SUPPORTED BY FEDERAL CREDIT ASSISTANCE

Table E-10 presents a functional distribution of direct loan disbursements and new federally guaranteed loans. From this distribution it is clear that the most significant Federal credit programs are in support of housing, international affairs (primarily the Export-Import Bank) and agriculture. Although credit assistance to energy in 1976-77 is accounted for almost exclusively by the programs of the Rural Electrification Administration, both proposed and recently enacted legislation to encourage development of domestic energy sources rely heavily upon direct loans and loan guarantees to private industry. As a result of these new programs, credit assistance in the area is expected to increase rapidly in future years.

SUMMARY OF FEDERAL AND FEDERALLY ASSISTED CREDIT TRANSACTIONS

Table E-11 summarizes the major components of Federal financial activity. Components within the aggregates vary widely from year to year for many reasons. Recent Federal Financing Bank purchases of large amounts of guaranteed loans have shifted them to off-budget direct loans; and recent legislation has shifted the Export-Import Bank from off-budget to on-budget status in 1977. FFB lending has similar effects on the borrowing side, reducing the volume of guaranteed borrowing while increasing the volume of Federal borrowing from the public. In addition, Federal borrowing from the public varies from year to year to reflect the changing size of the deficit.

INTEREST SUBSIDIES

To achieve the objective of reallocating resources to specific areas of the economy, most Federal credit programs, by using guarantees or direct interest subsidies, provide credit to private borrowers and Government corporations on more favorable terms than are available in private markets. Most frequently the improved terms take the form of an interest rate that is lower than the rate charged by private lenders, although the maturity of the loan and the loan-to-value ratio may also be higher. Other credit subsidies, not treated here, may result from fees or premiums inadequate to cover costs of administration and losses on credit guarantees and insurance programs, waivers of such fees or premiums or forgiveness of part or all of the loan principal. Furthermore, the analysis does not consider the direct grants and other subsidies that may accompany Federal credit assistance.

This section estimates the value of the interest rate subsidy that accrues to federally assisted borrowers. The interest subsidy is defined as the difference between the present values of interest payments that the borrower makes under Government assistance and the payment that he would have to make for a comparable private loan. These interest differentials arise for many reasons. In some direct loan programs the interest rates established by statute may be at rates below those of the private market. In other direct loan programs the laws provide for interest rates to be set to recover the costs of borrowing by the Treasury, thereby providing loans to private borrowers at rates otherwise available only to the U.S. Government. In guaranteed loan

Table E-9. NET CREDIT ADVANCED AND NET CREDIT RAISED BY FEDERALLY SPONSORED CREDIT INTERMEDIARIES

(In millions of dollars)

	Net change				Outstanding			
	1976 actual	TQ actual	1977 estimate	1978 estimate	1976 actual	TQ actual	1977 estimate	1978 estimate
LENDING (Funds advanced)								
Student Loan Marketing Association.....	183	-7	94	110	408	401	495	605
Federal National Mortgage Association ¹	1,892	933	1,797	2,087	30,984	31,917	33,714	35,801
Farm Credit System:								
Banks for cooperatives.....	1,041	54	637	610	4,412	4,466	5,104	5,714
Federal intermediate credit banks.....	1,171	390	1,599	1,737	11,192	11,582	13,182	14,919
Federal land banks.....	2,573	598	2,944	3,092	18,010	18,607	21,550	24,642
Federal Home Loan Bank System:								
Federal home loan banks.....	-1,142	744	1,292	4,612	19,198	19,942	21,234	25,846
Federal Home Loan Mortgage Corporation: ¹								
Corporation accounts.....	-393	-266	-1,087	-253	4,421	4,155	3,068	2,815
Participation certificate pool ²	950	362	2,265	1,955	2,163	2,525	4,790	6,744
Total lending (unadjusted).....	6,275	2,810	9,540	13,950	90,788	93,598	103,138	117,088
Less loans between sponsored agencies:								
FHL banks to FHLMC.....	386	-43	-1,746	-388	3,924	3,881	2,134	1,746
Less loans from Federal agencies:								
FFB to SLMA.....	160	5	85	110	400	405	490	600
FHLBB to FHL banks.....	286	-43	-1,112	-23	1,534	1,490	378	1,200
Total primary lending.....	5,443	2,891	12,313	14,251	84,930	87,822	100,136	113,542
Memo: Federal Reserve banks ³	100	(⁴)	(⁴)	(⁴)	1,343	(⁴)	(⁴)	(⁴)

BORROWING (Funds raised)

Student Loan Marketing Association.....	160	5	85	110	400	405	490	600
Federal National Mortgage Association.....	1,626	823	1,764	1,875	29,862	30,685	32,449	34,324
Farm Credit System:								
Banks for cooperatives.....	1,007	-60	618	534	4,174	4,114	4,732	5,266
Federal intermediate credit banks.....	1,054	433	1,447	1,617	10,635	11,067	12,514	14,131
Federal land banks.....	2,121	569	2,649	2,795	16,284	16,854	19,503	22,298
Federal Home Loan Bank System:								
Federal home loan banks.....	-1,974	-101	-89	3,877	18,669	18,568	18,478	22,355
Federal Home Loan Mortgage Corporation:								
Corporation accounts.....	405	-443	-2,114	-265	5,493	5,049	2,936	2,671
Participation certificates ²	950	362	2,264	1,955	2,163	2,525	4,790	6,745
Total borrowing (unadjusted).....	5,348	1,588	6,625	12,497	87,680	89,268	95,894	108,391
Less: Borrowing from other sponsored agencies:								
FHLB loans to FHLMC.....	386	-43	-1,790	-388	3,924	3,881	2,134	1,746
Other.....	13	22	10	-----	58	80	90	90
Less: Borrowing from Federal agencies:								
FFB loans to SLMA.....	160	5	85	110	400	405	490	600
FHLBB loan to FHL banks.....	286	-43	-1,112	-23	1,534	1,491	379	356
Less: Loans to Federal agencies:								
Investments in Federal securities.....	181	524	-1,142	-63	3,142	3,666	2,524	2,461
Total borrowing (adjusted).....	4,322	1,230	10,574	12,861	78,622	79,745	90,277	103,138

*Less than \$0.5 million.

¹ Loans purchased at discount are recorded at acquisition cost.

² Participation certificates (passthrough type) sold against mortgage pools are counted as sales of loan assets and are therefore not reflected on the Corporation's balance sheet. Loan purchases in parentheses (-) are excluded from totals (interfund transfers).

³ Federal Reserve bank's loans to member banks are excluded from totals since these are not estimated for fiscal years not yet completed. Data shown exclude a loan to Franklin National Bank, which has been assumed by FDIC (shown as FDIC guaranteed loan in tables E-6 and E-7).

⁴ Not estimated.

Table E-10. DIRECT LOAN DISBURSEMENTS AND NEW LOANS GUARANTEED BY FUNCTION (in millions of dollars)

Function	Direct loan disbursements ¹				New loans guaranteed			
	1976 actual	TQ actual	1977 estimate	1978 estimate	1976 actual	TQ actual	1977 estimate	1978 estimate
National defense:								
Department of Defense—Military.....			1	1				
Military assistance.....	424	41	11	75	1,411	484	1,425	1,695
Total.....	424	41	12	76	1,411	484	1,425	1,695
International affairs:								
Foreign economic and financial assistance.....	1,232	456	1,385	1,326	1	6	20	41
International financial programs.....	2,206	528	2,556	2,651	5,147	851	5,731	6,589
Total.....	3,438	984	3,941	3,977	5,148	857	5,751	6,630
Natural resources, environment, and energy:								
Water resources and power.....	12	6	30	17				
Pollution control and abatement.....							75	200
Energy.....	816	208	975	1,650	859	299	1,296	3,076
Total.....	828	214	1,005	1,667	859	299	1,371	3,276
Agriculture: Farm income stabilization.....	3,417	1,037	3,797	4,847	929	552	1,399	1,423
Commerce and transportation:								
Mortgage credit and thrift insurance.....	11,998	2,169	6,870	7,640	11,151	2,997	16,590	19,851
Advancement of commerce.....	259	62	321	238	1,772	462	2,060	1,942
Ground transportation.....	797	57	1,030	619	667	53	622	596
Air transportation.....					78	3	41	
Water transportation.....	1	*	4	4	1,169	184	955	950
Total.....	13,055	2,288	8,225	8,501	14,837	3,699	20,268	23,339

Community and regional development:								
Community development.....	556	242	537	439	210	33	205	74
Area and regional development.....	791	235	998	1,145	663	349	1,161	1,152
Disaster relief and insurance.....	191	46	187	124	3	1		
Total.....	1,538	523	1,722	1,708	876	383	1,366	1,226
Education, training, employment, and social services: Higher education.....								
	870	305	657	326	1,222	287	1,162	1,184
Health:								
Health education.....	42	19	31	24				500
Health care services.....	9	8	60	90			68	110
Health planning and construction.....	61	9	36	20	215	36	237	59
Total.....	112	36	127	134	215	36	305	669
Income security: Public assistance (public housing project notes).....								
	278	50	607	608	7,660	1,839	9,000	10,500
Veterans benefits and services:								
Income security for veterans.....	132	35	118	118				
Veterans housing.....	399	102	418	451	10,250	2,718	11,018	12,436
Total.....	531	137	536	569	10,250	2,718	11,018	12,436
General government:								
General property management.....	*				24	7	48	64
Other general government.....	1		5				67	30
Total.....	1		5		24		115	94
Revenue sharing and general purpose assistance: General purpose fiscal assistance								
	1,300	1,090	2,090	950	1,260	1,075	2,050	950
Other programs.....								
	40	17	47	42			79	167
Grand total ².....	25,832	6,722	22,771	23,405	44,691	12,236	55,309	63,589

*Less than \$0.5 million.

¹ See footnote 1, table E-3 for definition.

² Off-budget accounts are included (except sponsored agencies); double counting is eliminated by excluding FFB from direct loans, and certain GNMA and SLMA items from guarantees.

Table E-11. SUMMARY OF CREDIT ADVANCED AND CREDIT RAISED UNDER FEDERAL AUSPICES (in billions of dollars)

	Net change				Outstanding			
	1976 actual	TQ actual	1977 estimate	1978 estimate	1976 actual	TQ actual	1977 estimate	1978 estimate
LENDING (Credit advanced)								
Direct loans (from table E-4):								
On-budget agencies.....	4.2	1.1	2.0	2.8	64.2	65.3	67.3	71.0
Off-budget agencies.....	6.7	2.6	10.1	7.2	21.6	24.5	34.3	41.5
Guaranteed loans (primary, adjusted, from table E-7).....	10.3	-.1	11.3	21.2	169.8	169.7	181.9	202.3
Loans by federally sponsored credit intermediaries (from E-9).....	5.4	2.9	12.3	14.3	84.9	87.8	100.1	113.5
Total, credit advanced to the public under Federal auspices¹.....	26.6	6.5	35.7	45.5	340.5	347.3	383.6	428.3
Outside the budget.....	22.4	5.4	33.7	42.7	276.3	282.0	316.3	357.3
BORROWING (Credit raised)								
Federal borrowing from the public (from table C-1).....	82.9	18.0	62.0	55.5	480.3	498.3	560.3	615.8
Guaranteed borrowing (same as guaranteed loans, above).....	10.3	-.1	11.3	21.2	169.8	169.7	181.9	202.3
Borrowing by federally sponsored credit intermediaries (net, from table E-9).....	4.3	1.2	10.6	12.9	78.6	79.7	90.3	103.1
Total, credit raised from the public under Federal auspices¹.....	97.5	19.1	83.9	89.6	728.7	747.7	832.5	921.2
Net credit advanced.....	-70.9	-12.6	-48.2	-44.1				

¹ Excludes Federal Reserve credit.

programs, the guarantee itself provides an implicit subsidy because, by eliminating the risk of loss through default, it allows the borrower to pay an interest rate less than he would have been required to pay on riskier unguaranteed loans for comparable purposes.

To determine the subsidies in loan programs, it is necessary to estimate the interest rate that the borrower would have had to pay in private credit markets. For some loans, particularly those for housing, private credit market rates are readily available, and could be used in measuring the subsidy. But for other programs—student loans and public housing, for example—no comparable private loans exist. Because of the difficulty of determining what private, unassisted rates would have been on a program-by-program basis, three rates have been chosen—8, 10, and 12%—to represent alternative private sector borrowing costs that might otherwise have been incurred by the assisted borrowers. The purpose of presenting alternative rates is to illustrate the importance of interest rate differences to the value of the subsidy. It should be noted that in some cases the relevant market interest rate may exceed 12%, and in other cases there may not be any market at all in the absence of Government assistance. Because interest subsidies occur throughout the life of the loan, the measurement of interest subsidies requires the conversion of a stream of payments into a single “present-value.” This capitalization is accomplished by discounting future subsidies before accumulating them into a single amount.

Using this method of measurement, table E-12 presents the estimated value of Federal subsidies provided by new direct and guaranteed loan commitments. Because of space limitations, program subsidy costs have been estimated only for commitments expected to be made in 1978.

PROPOSED LEGISLATION

The administration has proposed legislation to create new credit programs or substantially change existing ones.

Legislation has been proposed to establish an Energy Independence Authority to provide up to \$100 billion in loans and loan guarantees for selected private sector energy projects during the next decade. The administration will also be proposing specific projects for the Energy Research and Development Administration that provide incentives for the commercial demonstration of synthetic fuel production for coal, oil shale, and other domestic resources. Some of these incentives are expected to be in the form of credit assistance.

In another energy-related credit initiative, the administration has proposed creation of a multinational financing facility to assist industrialized nations in meeting financial commitments resulting from high oil prices. The U.S. contingent commitment to the fund is expected to be \$7 billion.

Table E-12. ESTIMATED INTEREST SUBSIDY VALUES FOR 1978 DIRECT AND GUARANTEED LOAN COMMITMENTS
(Dollars in millions)

Agency and program	Borrower loan terms ¹		Volume of commitments made in 1978	Annual subsidy per \$100 million by alternative interest rates			Present value of subsidy by alternative interest rates			
	Percent	Years		8 percent	10 percent	12 percent	8 percent	10 percent	12 percent	
DIRECT LOANS										
Funds appropriated to the President:										
International security assistance.....		3.4	35.2	1,140	3.6	5.4	7.3	486	600	683
International development assistance.....		2.8	35.3	464	4.1	5.8	7.7	221	262	293
Other international.....		7.5	10.0	130	.3	1.6	3.0	3	13	22
Agriculture:										
Price support and related programs.....		7.9	1.3	2,968	.2	1.3	2.5	8	47	90
CCC: Public Law 480.....		2.3	33.0	768	4.3	6.1	7.9	382	448	496
Farmers Home Administration.....		5.4	29.7	5,126	2.0	3.8	5.6	1,180	1,824	2,307
Rural Electrification Administration.....		4.6	35.0	1,130	2.8	4.6	6.5	371	503	599
Commerce: EDA.....		7.4	17.7	38	.5	1.9	3.5	2	6	10
Coastal energy impact fund.....		7.5	20.0	86	.4	1.9	3.5	3	14	23
Health, Education, and Welfare:										
Health maintenance organizations.....		8.6	20.0	60	---	1.1	2.8	---	6	12
Health research and education.....		3.0	15.0	25	3.2	4.6	6.1	7	9	11
Medical facilities.....		6.7	25.0	171	1.0	2.7	4.4	19	42	59
Student loan funds.....		4.4	13.0	40	2.3	3.7	5.1	7	11	13
Housing and Urban Development:										
Urban renewal notes.....		5.8	.7	200	2.8	5.3	7.7	4	6	9
Low-rent public housing.....		0	41.5	68	5.9	7.8	9.7	48	52	54
FHA (defaulted multifamily projects).....		9.0	38.0	130	---	.9	2.8	---	12	30
Housing for elderly.....		7.0	40.0	750	.9	2.7	4.6	80	201	288
Transportation: Rail rehabilitation.....		8.2	7.5	100	---	1.1	2.4	---	6	12
Treasury: NYC seasonal financing.....		7.0	.5	950	1.5	4.4	7.4	7	20	32

Veterans: Insurance policy loans	5.0	15.0	118	2.0	3.4	4.9	20	31	40
VA housing	8.4	29.2	448	-----	1.4	3.2	-----	57	114
DC Loans	7.0	2.6	175	.7	2.2	3.6	3	8	14
Energy Independence Authority	8.2	20.0	3,000	-----	1.4	3.0	-----	351	678
Export-Import bank	8.5	7.0	4,175	-----	.9	2.2	-----	192	430
FFB Originations of unsubsidized loans	7.5	30.0	2,173	.4	2.1	4.0	102	442	696
Small Business Administration:									
Business and investment loans	6.8	8.5	285	.8	2.0	3.3	13	33	50
Disaster loan fund	6.6	10.0	150	.9	2.2	3.5	9	20	31
United States Railway Association:									
Purchase of Conrail securities	7.5	10.0	600	.3	1.6	3.0	13	61	104
Other agencies and programs	3.0	0	41	-----	-----	-----	-----	-----	-----
Total—Major subsidized direct loans							2,988	5,277	7,203
GUARANTEED LOANS									
Health, Education, and Welfare: Student Loan insurance	4.4	13.0	1,305	2.3	3.7	5.1	240	346	438
Housing and Urban Development:									
Urban renewal	3.0	.7	70	5.9	8.3	10.7	33	3	5
Low-rent public housing	0	41.5	888	5.9	7.8	9.7	632	678	711
Mortgage Insurance, subsidized ²									
Interior: Indian Loans	8.0	8.0	4	-----	1.2	2.5	-----	*	-----
Total—Major subsidized guaranteed loans							874	1,028	1,154
FFB FINANCING OF FEDERAL NON-CREDIT ENTERPRISES									
(debt, net) ³									
Tennessee Valley Authority	5.5	30.0	1,450	2.0	3.7	5.5	328	511	649
Postal Service	7.5	25.0	895	.4	2.0	3.8	38	167	267
Total, enterprise debt subsidies							366	678	916
Grand total							4,228	6,984	9,273

* Less than \$0.5 million.

¹ If terms vary, these are estimated averages.

² Incomplete data prevented estimation.

³ Interest savings are passed through to private users.

In veterans affairs, the administration proposes to terminate the Education loan fund, effective October 1977, and to terminate non-disabled veterans' entitlements for VA housing benefits for persons entering the Armed Forces after September 1977.

Other proposals include: Removal of 5% interest rate ceilings on certain FmHA loan programs in order to bring their lending rates in line with actual Treasury borrowing costs; repeal of loan authorization in the recently enacted National Land Policy Management Act of 1976 that would provide low-interest-rate loans to communities affected by mineral development on Federal land; and lowering the down payments and increasing the mortgage limits on FHA-insured loans.

NEWLY ENACTED CREDIT LEGISLATION

This list summarizes legislation enacted during the last session of Congress that authorizes new Federal credit programs or revises existing programs in major respects. It excludes simple extensions of expiring laws and changes in funds for continuing programs.

Railroad Revitalization and Regulatory Reform Act of 1976—Public Law 94-210

Authorizes USRA to purchase \$1.0 billion in debentures and \$1.1 billion in preferred stock issued by ConRail to finance the operations of the restructured railway system in the Northwest and Midwest. It also provides \$230 million in loans from the FFB, through USRA, to ConRail and other eligible railroads to pay preconveyance obligations of the railroads in reorganization. Public Law 94-555 increases the loan authority from \$230 million to \$350 million. The act further authorizes the Department of Transportation to provide \$1.0 billion in loan guarantees to railroads and purchase \$600 million of redeemable preference shares for the purpose of rehabilitating the nationwide rail freight system.

African Development Fund Act—Public Law 94-302

Title II authorizes a \$25 million United States subscription to the African Development Fund over a 3-year period. The Fund, in turn, provides concessionary loans with a 50-year maturity to the poorest African nations.

Small Business Act Amendments—Public Law 94-305

Authorizes the Small Business Administration to guarantee the payments of rentals or other amounts due by small businesses for the purpose of financing the installation of pollution control facilities, including financing by means of State and local revenue bonds. It establishes a revolving fund for payment of program operating expenses and claims.

Coastal Zone Management Act Amendments of 1976—Public Law 94-370

Establishes an \$800 million revolving loan fund in the Treasury to finance loans and loan guarantees to coastal States and local units of Government for the purpose of providing public facilities and services required by coastal energy development.

Energy Conservation and Production Act—Public Law 94-385

Authorizes the Department of Housing and Urban Development to provide low-interest-rate loans, interest subsidies and loan guarantees to demonstrate an energy conservation program for existing dwelling units. Authorizes the Federal Energy Administration to guarantee 90% of the principal on loans and securities issued by businesses and State and local governments to finance energy conservation measures in any building or industrial plant. The total amount guaranteed under this program is limited to \$2 billion.

Financial Assistance for the Virgin Islands—Public law 94-392

Authorizes the Secretary of the Interior to guarantee up to \$61 million in bonds issued by the government of the Virgin Islands to finance capital improvements.

Financial Assistance for the Guam Power Authority—Public Law 94-395

Authorizes the Secretary of the Interior to guarantee up to \$36 million in obligations issued by the Guam Power Authority to the FFB.

Electric and Hybrid Vehicle Research, Development and Demonstration Act of 1976—Public Law 94-413

Authorizes the Energy Research and Development Administration to guarantee loans in order to encourage commercial production of electric and hybrid vehicles. Limits total amount of loan guarantees to \$60 million and any one loan to \$5 million.

Indian Health Care and Improvement Act—Public Law 94-437

Authorizes the Department of Health, Education, and Welfare, through the Indian Health Service, to sign leases for a maximum term of 20 years with federally recognized Indian tribes in order to assist in the acquisition of construction financing for Indian health care facilities.

Health Professions Educational Assistance Act of 1976—Public Law 94-484

Authorizes HEW to guarantee up to \$1.5 billion over 3 years in student loans for a new health professions student loan guarantee program. Extends through 1980 the loan guarantee and interest subsidy program for the construction of health teaching facilities as well as the existing health professions student loan program, but modifies this program to provide loans to exceptionally needy students.

Public Works and Economic Development Act Amendments of 1976—Public Law 94-487

Appropriates funds to provide explicit interest rate subsidies of up to 4 percentage points on guaranteed loans provided by some existing programs and authorizes a \$125 million direct loan fund to provide interest free loans to any of the 1,600 qualified redevelopment areas for activities related to economic development.

Rail Transportation Improvement Act—Public Law 94-555

Increases USRA's authority to make loans to ConRail and other eligible railroads to cover pre-conveyance claims from \$230 million to \$350 million. It also allows Amtrak to use its Federal capital grants to

temporarily retire its outstanding loans guaranteed by the Federal Government. The one time impact of this will increase outlays in 1977 by \$127 million.

Federal Water Pollution Control Act Amendments—Public Law 94-558

Authorizes the Environmental Protection Agency to guarantee the loans and obligations of State and local governments issued directly to the FFB for the purpose of financing the 25% non-Federal shares of the construction cost of municipal waste water treatment plants. Applies only to those that have been unable to obtain credit through the normal market mechanisms.

National Land Policy and Management Act of 1976—Public Law 94-579

Authorizes the Secretary of the Interior to make special 3% loans to States and localities in order to relieve social and economic impacts arising from the development of federally owned minerals leased in the State and locality.

SPECIAL ANALYSIS F

TAX EXPENDITURES

The Congressional Budget Act of 1974 requires a listing of tax expenditures in the budget. Tax expenditures are defined by that act 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 tax liability." Tax expenditures are one means by which the Federal Government pursues public policy objectives and, in most cases, can be viewed as alternatives to budget outlays, credit assistance, or other instruments of public policy.

Tax expenditures have varied objectives. Nearly all tax expenditures are meant either to encourage certain economic activities or to reduce income tax liabilities for taxpayers in special circumstances. Among the economic activities encouraged by tax expenditures are investment, exporting, petroleum exploration and development, spending by State and local governments, and support of charitable institutions. The deductibility of medical expenses, casualty losses, and personal exemptions for the aged and blind are examples of adjustments of tax liabilities to meet special circumstances.

The benefits of tax expenditures designed to encourage certain types of economic activity typically do not rest fully or even mostly with the corporations or individuals whose taxes are initially affected. An initial reduction in taxes tends to attract more resources to the preferred activity thereby competing away some or all of the short-run advantage conferred to particular taxpayers by the tax expenditures. Thus benefits often accrue to others in the form of lower prices for particular goods or services, or in other ways become widely diffused. For example, the deductibility of charitable contributions does not merely lower individual or corporate liabilities; the institutions that receive the contributions also benefit as do the beneficiaries of charitable institutions.

This special analysis provides measures of the quantitative importance of various tax expenditures but does not attempt to evaluate their effectiveness. It should be emphasized that the listing of specific tax expenditure items does not imply either approval or disapproval of specific sections of the Internal Revenue Code any more than the listing of outlay items in the budget implies approval or disapproval.

Major changes in tax expenditures resulting from the Tax Reform Act of 1976 are noted in the text. The analysis concludes with a discussion of changes in tax expenditures resulting from the tax proposals that are part of the 1978 budget.

DEFINING TAX EXPENDITURES

Income tax provisions resulting in tax expenditures are further defined in the legislative history of the Congressional Budget Act as

exceptions to the "normal structure" of the individual and corporation income tax. They reduce tax liabilities for particular groups of taxpayers. Excluded from further discussion in this analysis are negative tax expenditures or tax penalties; that is, exceptions to the normal structure of income taxes that result in increased tax liabilities for certain groups of taxpayers. There are only a few such exceptions; one example is the nondeductibility of gambling losses in excess of gambling gains where gambling is engaged in for profit; another is limitations on the deductibility of capital losses. Two were added by the Tax Reform Act of 1976: deductibility of the costs associated with the demolition of certain historic buildings was disallowed; and certain normal tax treatment was denied for taxpayers who cooperate with or participate in an international boycott.

The "normal structure" is not defined in the tax code. The concept has evolved in recent years from various congressional and public reviews of the U.S. tax system focusing on the definition of the income tax base and the rates applied to that base. Conceptually, it would be more appealing to begin with a theoretically pure income tax base and use for this purpose "economic income," defined as receipts available to support consumption or additions to net wealth, the imputed value of in-kind consumption, and imputed changes in net wealth. Some tax expenditures, such as those resulting from exclusions of certain types of income or special deductions, could then be identified as the result of departures from a theoretically pure tax base. However, this is not possible. The concept of the normal structure recognizes that it is impractical to make the necessary imputations. Furthermore, the normal structure includes the separate taxation of individual and corporate incomes whereas a theoretically pure tax structure would integrate these two taxes. Theoretically pure tax bases could also be specified for other types of taxes, such as a progressive tax on consumption spending rather than on economic income.

Although a theoretically pure income tax base can be specified there is no theoretical foundation upon which to support any particular degree of progressivity in the individual income tax rate structure or any particular corporate income tax rate. For purposes of identifying tax expenditures, such as those resulting from special tax rates or tax credits, the current law structure of progressive rates and provisions that exclude low-income persons from tax liability are deemed a part of the normal tax structure. If a set of tax rates could be agreed to on normative grounds, it would then be possible to identify both positive and negative tax expenditures against such a norm.

When the rate structure and threshold levels for tax liability are changed, for whatever reason, the new rates and threshold levels become part of the normal structure used in the analysis of tax expenditures. The Tax Reduction and Revenue Adjustment Acts of 1975 increased the low-income allowance (minimum standard deduction) and introduced a tax credit for each personal exemption claimed by a taxpayer (or optionally a 2% tax credit based on the first \$9,000 of taxable income), thus altering the normal tax structure. Those alterations, which were made permanent or extended by the Tax Reform Act of 1976, reduced the estimated revenue losses associated with many tax

expenditure items primarily because fewer taxpayers will itemize their deductions. The President's proposal to increase personal exemptions and the low-income allowance and to alter tax rates will have a similar impact on tax expenditures.

The existing rate structure for individuals, ranging from 14% to 70%, and the 48% corporate tax rate cannot be presumed to exist independently from current tax expenditures. If major tax expenditure items were deleted and budget outlays remained constant, tax rates would undoubtedly be set at lower levels so as to maintain an appropriate fiscal policy. Moreover, because tax expenditures tend to reduce the effective progressivity of the tax structure, it is quite likely that a less progressive set of statutory tax rates would be established if tax expenditures were eliminated.

Some of the more technical issues and ambiguities involved in distinguishing between the normal structure of the income tax system and tax expenditure provisions are discussed in the following paragraphs. In a few cases the conceptual ambiguities are quite serious and necessitate making essentially arbitrary distinctions.

- *Separate rate schedules for single and married taxpayers, married taxpayers filing separately, and heads of households.*—Existing provisions regarding the definition of taxpaying units are accepted as part of the normal tax structure.
- *Threshold levels for tax liability.*—Tax code provisions that determine threshold levels of income below which no tax liability is imposed for the different types and sizes of taxpaying units are part of the normal structure. Personal exemptions and the low-income allowance have traditionally determined these thresholds. Legislation enacted during 1975 and 1976, temporarily added a per exemption credit and a credit based upon taxable income to these provisions. However, deductions for additional personal exemptions for those over 65 and for the blind do result in tax expenditures because they depend upon more special circumstances. The percentage standard deduction, to the extent it exceeds the low income allowance, also results in a tax expenditure because it substitutes for itemized deductions that are tax expenditure items.
- *The progressive rate schedules for the individual income tax.*—No tax expenditure results because some income is taxed at lower rates than other income when progressive rate schedules are applied to all taxable income. The income averaging provision of the code is a part of the normal structure since it limits the impact of progressive rates when income increases significantly. The maximum tax of 50% on earned income could be viewed as part of the normal structure of the individual income tax, and higher marginal rates on unearned income considered as resulting in negative tax expenditures, but is treated as a tax expenditure in this analysis because it fits the definitional term "preferential rate of tax."
- *Imputed income from owner-occupied housing and other sources.*—A theoretically pure income tax would include in its base an imputation for the income received in kind from the occupancy of a

home owned by the taxpayer and imputations for in-kind income from the ownership of other durable assets. Because such imputations are difficult to make and are contrary to usual concepts of income, they are not considered in the computation of tax expenditures even though such exclusions of imputed income affect the allocation of the economy's resources, particularly by providing a stimulus to owner-occupied housing. If income on owner-occupied housing were imputed, deductions for mortgage interest and property taxes would be appropriate in order to measure the amount of net income that would be included in the tax base. Without the imputation, those two deductions result in tax expenditures.

- *The value of Government services received by individuals.*—The exclusion from gross income of direct cash payments to individuals by the Government, such as social security payments, does result in a tax expenditure. Other Government programs extend benefits in kind to individuals. Examples are medicare and public education. Since these benefits are received in kind they cannot be used, like cash, for purposes fully consistent with the recipient's preferences. The exclusion of such imputed values from income subject to tax does not result in tax expenditures. The dividing line between nontaxable Government benefits that do result in tax expenditures and those that do not is essentially arbitrary. The most ambiguous case is the bonus value of food stamps. It is so nearly the equivalent of cash that its exclusion from income subject to tax might be considered to result in a tax expenditure, but this is not done in the analysis which follows.
- *Capital gains and losses.*—Although the base of a theoretically pure income tax would include net capital gains on an accrual basis, practical problems prevent identifying and taxing unrealized capital gains for many types of assets, and hence the normal structure taxes only wealth accruals when "realized." The exclusion from taxable income of one-half of realized capital gains, and the option of having up to \$50,000 of realized capital gains taxed at a 25% rate, clearly results in a tax expenditure. At death, an individual may hold assets which have appreciated or depreciated in value. No gain or loss is realized as income because of the decedent's death. The failure to impute any such gain or loss is not considered for purposes of this analysis to result in a tax expenditure, since it is not clear how such gains would be taxed, if at all, under a normal tax structure. Prior to the enactment of the Tax Reform Act of 1976, as assets passed to the estate, an heir, or other beneficiary, that new holder would take the market value of the assets at the date the estate was valued as the basis against which to measure any realized gain or loss. Under the 1976 Act, the estate or beneficiaries are, after a transition period, to carry over the decedent's basis and thus be subject to tax on gains which accrued during the lifetime of the decedent as well as gains which accrued subsequent to inheritance.
- *Gifts and bequests.*—The tax system subjects gifts and bequests, which are usually made within a family, to taxes separate from the income tax and therefore their exclusion from taxable income

under the individual income tax does not result in a tax expenditure. Another set of tax expenditures could be defined for departures from a "normal structure" for gift and estate taxes, although to do so would be beyond the scope of this analysis.

- *Treatment of individuals and corporations as separate taxpaying entities.*—A theoretically pure income tax would integrate the taxation of individual and corporate income so as to avoid multiple taxation of any particular type of income. Only individuals would be taxed; corporate income would be taxed to shareholders, whether or not it was distributed in the form of dividends. However, for practical reasons, separate taxation is accepted as part of the normal tax structure for purposes of this analysis.
- *Forms of business organization.*—The tax law recognizes different forms of business organization including corporations, partnerships, small corporations treated in a manner similar to partnerships, cooperatives, mutual insurance companies, and individual proprietorships. The provisions of the tax law that accommodate different forms of business organization do not generally result in tax expenditures so long as income is subject to tax at either the business entity or individual level.
- *Deduction of business expenses.*—The deduction of business expenses is necessary to determine taxable income. Tax expenditures do not ordinarily result from applying the definitions of business expenses prescribed by the Internal Revenue Code and Internal Revenue Service interpretative regulations. Tax expenditures do occur when the tax code permits business or investment expenditures that are capital outlays in economic terms to be treated as current expenses. In the case of depreciation the Internal Revenue Code allows as a deduction "a reasonable allowance for the exhaustion, wear and tear (including a reasonable allowance for obsolescence)" on property used in a trade or business or for the production of income. To avoid judging every taxpayer's depreciation deductions against a standard of reasonableness, the code permits standard depreciation techniques and useful lives to be used. In some cases, tax expenditures result because the permitted technique clearly results in excess depreciation being claimed. In other cases, tax expenditures result because the useful life is artificially short. With respect to machinery and equipment, the asset depreciation range (ADR) system, which became effective in 1971, defines a band within which estimates of useful life are deemed to be "reasonable." That band is determined by reference to broad classes of property and ranges 20% up and 20% down from a published figure designated as the "asset guideline period." This analysis treats the ADR system as a mechanism to arrive at a "reasonable allowance" and hence no tax expenditure is listed in table F-1. The ADR system has been included as a tax expenditure item in lists published by congressional committees with estimates of \$1,825 million for corporations and \$195 million for individuals in 1978.
- *Foreign tax credits.*—To avoid the double taxation of income earned abroad, and thus accommodate the U.S. tax system to international norms, the normal structure of income taxes includes tax credits for foreign taxes paid.

- *Income of controlled foreign corporations.*—The income of foreign corporations controlled by U.S. corporations or citizens is generally not subject to U.S. tax until that income is repatriated. This feature of the normal tax structure allows such corporations to be taxed like other corporations doing business in the same foreign countries and is in accord with international norms of taxation. Consequently, this is not listed as a tax expenditure in table F-1. There are certain exceptions to this general feature of the tax law in order to avoid abuse in tax-haven countries, thus making the concept of normal tax treatment somewhat ambiguous. The deferral of income of controlled foreign corporations has been included as a tax expenditure item in lists published by congressional committees with an estimated \$365 million for corporations in 1978.

The above discussion does not exhaust the definitional complexities inherent in the tax expenditure concept nor does this analysis consider all special tax provisions. Some items have not been considered because the issues have not been fully studied or because there is insufficient information available on which to base a sound estimate. Some items are omitted because of their relatively small quantitative importance (less than a \$5 million revenue loss).

The distinction between the normal tax structure and those exceptions leading to tax expenditures does not imply that the features of the normal tax system should be exempt from periodic analysis and review. Like tax expenditures, many features of the normal tax structure have major effects upon the level and composition of economic activity and the distribution of income; some features affect the everyday activities of corporations, trusts, and partnerships. Budget outlays, or other policy instruments, are alternative means to achieve the objectives of some of the features of the normal tax structures just as they are often a potential substitute for tax expenditures.

MEASURING TAX EXPENDITURES

The tax expenditure estimates reported below in table F-1 have been prepared by the Treasury Department and are based upon tax law as of December 31, 1976. For fiscal years the estimates show the loss of budget receipts resulting from each of these particular features of the tax system. For those tax expenditures resulting from the exclusions from taxable income of Federal Government payments to individuals, the underlying estimates of payments upon which the tax expenditure estimates are based are those shown elsewhere in the budget; hence they reflect any proposed changes in those programs. No separate estimates can reasonably be made for the transition quarter.

Each estimate is based upon three major assumptions. The first is that only the tax provision in question is deleted and all other features of the tax system, including the structure of rates, remain unchanged. In most cases, the hypothetical deletion of the special tax provision increases the estimated taxable income for corporations or individuals; the existing marginal tax rates are then applied to the change in taxable income, thereby giving the estimated tax expenditure. For

each itemized nonbusiness deduction for individuals, the estimated revenue loss is based upon the amount by which the standard deduction is exceeded. Tax expenditures resulting from credits are simply equal to the estimated credits claimed by all taxpayers. If, however, major tax expenditures were in fact deleted, as was noted earlier, some features of the normal income tax, such as rate structures or personal exemptions, would probably be changed so that the marginal rates used in making the estimates would no longer apply.

The second major assumption used to make the estimates is that economic conditions remain unchanged in response to the hypothetical change in the tax laws. The general economic conditions assumed are those upon which the whole budget is based. (See Part 3 of the Budget.) A tax expenditure is, however, only the revenue gain directly associated with a hypothetical repeal of the provision in question and does not reflect any revenue loss due to a decline in economic activity which might arguably result from repeal of that tax provision. No "second order" effect is included in the estimate because it is assumed that some offsetting fiscal action would be taken to keep economic aggregates on the same path that underlies all budget estimates.

The third assumption is that taxpayer behavior remains unchanged in response to the hypothetical repeal of a tax expenditure provision. In many cases this assumption is unrealistic. To the extent that tax expenditures intended to encourage certain economic activities have been successful, their elimination would presumably change taxpayer behavior. This would alter the mix of economic activity within the assumed, constant economic aggregates. Any change in receipts due to a different mix of activity is not reflected in the estimates.

Whenever possible, sample data from tax returns have been used to estimate tax expenditures. These data are not, however, available for the years presented in this analysis, as these returns have not yet been filed or tabulated. Consequently, the estimates must be made by extrapolating sample tax return data from past years by means of other, more current information including the economic forecast used in estimating budget receipts and outlays. Moreover, many tax expenditures result from excluded income, not reported on tax returns. In these cases estimates must be based upon other data sources. Any changes scheduled by existing law, such as the phasing in or out of specific provisions, are accounted for in the estimates.

The estimates of tax expenditures presented in this analysis are reduced by any minimum tax liabilities associated with particular items. The minimum tax for tax preferences was introduced at a 10% rate by the Tax Reform Act of 1969 in an attempt to insure that individuals and corporations receiving tax preferences do not escape bearing a share of the tax burden. Among the tax expenditure items initially included in the base of the minimum tax were accelerated depreciation on real property, excess reserves of financial institutions for losses on bad debts, percentage depletion in excess of cost depletion, and—by far the largest item—the excluded half of net long-term capital gains. The Tax Reform Act of 1976 added to the base of the minimum tax for individuals the following items: (1) itemized deductions (other than medical and casualty loss deductions) in excess of 60% of adjusted gross income; (2) intangible drilling costs in excess of

the amount that would be deductible if they were capitalized and amortized over 10 years or if they were deducted pursuant to a cost depletion method; and (3) accelerated depreciation on all personal property subject to a lease. The act also increased the minimum tax rate to 15%. For individuals the exemption level was reduced from the greater of \$30,000 or regular taxes paid to the greater of \$10,000 or one-half regular taxes paid. For corporations the exemption level was reduced from the greater of \$30,000 or regular taxes paid to the greater of \$10,000 or regular taxes paid. No new items were added to the base of the minimum tax for corporations.

Some tax expenditure items affect the timing of deductions or the receipt of taxable income. Examples are depreciation in excess of straight line for buildings and rental housing and the deferral of income by domestic international sales corporations (DISCs). These provisions create a permanent tax expenditure even though for a particular taxpayer, transaction, or asset the special provision may defer a tax rather than eliminate it. However, for a stable or growing business with an indefinite life, the deferral of taxes continues forever under most of these provisions. Furthermore, as the economy grows, these amounts increase over time. Estimates for these items attempt to show the difference between budget receipts under current law and budget receipts if a different law had always been in effect. These figures therefore generally show more than the revenue that could be obtained in the first years of a transition from one tax law to another. They are long-run estimates at the levels of economic activity assumed for the years in question.

Tax expenditure estimates cannot be simply added together to form totals for functional areas or a grand total. In some cases the revenue gain resulting from the deletion of two tax expenditure items would be greater than the sum of the individual estimates. For example, if interest income from State and local government securities were made taxable and capital gains were taxed at ordinary rates, many more individuals would be pushed into higher tax brackets than if just one of these sources of income became fully taxable; the combined effect on revenue would be greater than the sum of the two separate estimates. In other cases, the revenue gain from the deletion of two items would be smaller than the sum of the individual estimates. For example, if the deductibility of mortgage interest payments and homeowner property taxes were both repealed, and the standard deduction unchanged, many individuals who now itemize their deductions would opt for the standard deduction, thus limiting the revenue gain. In general, elimination of multiple items that are personal deductions would increase revenue by less than the simple sum of the revenue gains from eliminating each item measured separately since many taxpayers would switch to using the standard deduction. Conversely, elimination of multiple items that are exclusions from adjusted gross income would increase revenue by more than the sum of the individual gains as taxpayers would be pushed into higher tax brackets. Moreover, if several major tax expenditure items were eliminated, the assumptions of no changes in economic behavior and conditions or in other features of the tax system would have little validity.

To illustrate the severity of the aggregation problem, a special calculation was made of the revenue gain resulting from a hypothetical

repeal of all itemized deductions resulting in tax expenditures. This hypothetical revenue gain would be \$21.2 billion in 1978, whereas the simple sum of the tax expenditures for each separate item is \$31.3 billion. The estimate for the combined effect of all such deductions was derived from a model of the tax system that accounts for the interaction between tax expenditure provisions and the provisions of the normal structure. In particular the model provides that individuals would take the standard deduction if itemized deductions were repealed. No comparable estimate can reasonably be made for the combined effect of a hypothetical repeal of all exclusion provisions.

A few aggregations of related tax expenditure items are presented and discussed in the next section. These aggregates have been specially estimated so as to account for the interactions referred to above but do not consider the effect of changes in behavior. Where tax expenditures for both individuals and corporations result from the same tax code provision, such as the investment tax credit, the two estimates may appropriately be added together.

TAX EXPENDITURES BY FUNCTION

Estimates of tax expenditures are grouped together by functional category and presented in table F-1. The estimates are shown separately for individuals and corporations. Wherever possible, particular tax expenditures have been classified according to the functional categories used for budget outlays. Many tax expenditures do not, however, fit into these categories and for this reason three special functional categories have been added: business investment; personal investment; and other tax expenditures.

A brief description of each of the special tax provisions for which a tax expenditure estimate is shown in table F-1 follows.

National defense.—The supplements to salaries of military personnel, including provision of quarters and meals on military bases and quarters allowances for military families, and virtually all salary payments and reenlistment bonuses to military personnel serving in combat zones, are excluded from tax. Disability-related military pensions received by current retirees are largely excluded from taxable income. The Tax Reform Act of 1976 terminated the exclusion of noncombat related disability pensions for those who entered the armed services after September 24, 1975.

International affairs.—Prior to 1976, a U.S. citizen was generally able to exclude up to \$20,000 a year of foreign earnings if the taxpayer were a bona fide resident of a foreign country. After 3 years of foreign residence a taxpayer could exclude up to \$25,000 a tax year of foreign earnings. The Tax Reform Act of 1976 modified these provisions, limiting the exclusion to \$20,000 only for employees of U.S. charitable organizations and reducing it to \$15,000 for all others, denying tax credits for foreign taxes paid on excluded income, and taxing income beyond the amount eligible for exclusion at the higher bracket rates which would apply if the excluded income were also subject to tax. The estimates also reflect the tax-exempt status of certain allowances received by Federal employees working abroad.

Table F-1. TAX EXPENDITURE ESTIMATES BY FUNCTION ¹

(In millions of dollars)

Description	Corporations			Individuals		
	1976	1977	1978	1976	1977	1978
National defense:						
Exclusion of benefits and allowances to Armed Forces personnel.....	-----	-----	-----	1,020	1,095	1,260
Exclusion of military disability pensions.....	-----	-----	-----	90	105	115
International affairs:						
Exclusion of gross-up on dividends of LDC corporations.....	40	-----	-----	-----	-----	-----
Exclusion of income earned abroad by U.S. citizens.....	-----	-----	-----	145	120	135
Deferral of income of domestic international sales corporations (DISC).....	1,220	1,030	1,190	-----	-----	-----
Special rate for Western Hemisphere trade corporations.....	50	35	25	-----	-----	-----
Agriculture:						
Expensing of certain capital outlays.....	85	80	70	455	370	440
Capital gain treatment of certain income.....	10	10	15	315	330	350
Natural resources, environment, and energy:						
Exclusion of interest on State and local government pollution control bonds.....	110	170	220	50	75	100
Exclusion of payments in aid of construction: Water and sewage utilities.....	-----	15	10	-----	-----	-----
Expensing of exploration and development costs.....	640	610	600	160	105	150
Excess of percentage over cost depletion.....	1,010	1,035	1,060	285	275	300
Pollution control: 5-year amortization.....	10	-80	-130	-----	-----	-----
Capital gain treatment of royalties on coal and iron ore.....	15	20	20	40	45	50
Capital gain treatment of certain timber income.....	290	300	325	95	95	100
Commerce and transportation:						
Exemption of credit unions.....	145	165	185	-----	-----	-----
Exclusion of certain income of cooperatives.....	410	455	490	-155	-165	-170
Corporate surtax exemption.....	4,170	4,650	4,250	-----	-----	-----
Deferral of tax on shipping companies.....	110	90	70	-----	-----	-----
Railroad rolling stock: 5-year amortization.....	-25	-35	-40	-----	-----	-----
Financial institutions: Excess bad debt reserves.....	485	560	645	-----	-----	-----
Deductibility of nonbusiness State gasoline taxes.....	-----	-----	-----	710	795	880
Community and regional development:						
Housing rehabilitation: 5-year amortization.....	15	10	5	25	20	10
Education, training, employment, and social services:						
Exclusion of scholarships and fellowships.....	-----	-----	-----	195	250	285
Parental personal exemptions for students, ages 19 and over.....	-----	-----	-----	720	750	770
Deductibility of contributions to educational institutions.....	190	215	240	510	540	565
Deductibility of and credit for child and dependent care expenses.....	-----	-----	-----	290	840	870
Credit for employing AFDC and public assistance recipients.....	10	15	15	-----	-----	-----
Health:						
Exclusion of employer contributions to medical insurance premiums and medical care.....	-----	-----	-----	4,490	5,195	5,840
Expensing of removal of architectural barriers to the handicapped.....	-----	5	10	-----	-----	-----
Deductibility of medical expenses.....	-----	-----	-----	2,315	2,585	2,870
Income security:						
Exclusion of social security benefits: Disability insurance benefits.....	-----	-----	-----	330	380	430
OASI benefits for aged.....	-----	-----	-----	2,725	3,125	3,460
Benefits for dependents and survivors.....	-----	-----	-----	645	730	795

See footnote at end of table.

Table F-1. TAX EXPENDITURE ESTIMATES BY FUNCTION 1—Continued
(In millions of dollars)

Description	Corporations			Individuals		
	1976	1977	1978	1976	1977	1978
Income security—Continued						
Exclusion of railroad retirement system benefits ..				190	200	205
Exclusion of sick pay				195	50	55
Exclusion of unemployment benefits				3,335	2,745	2,445
Exclusion of workmen's compensation benefits				590	705	810
Exclusion of public assistance benefits				95	100	105
Exclusion of special benefits for disabled coal miners				50	50	50
Net exclusion of pension contributions and earnings:						
Employer plans				7,290	8,715	9,940
Plans for self-employed and others				1,060	1,305	1,535
Exclusion of other employee benefits:						
Premiums on group-term life insurance				765	800	835
Premiums of accident and accidental death insurance				65	70	75
Income of trusts to finance supplementary unemployment benefits				10	10	10
Meals and lodging (other than military)				310	330	350
Employer contributions to prepaid legal expense plans					5	10
Employee stock ownership plans (ESOP) funded through investment tax credits	25	245	255			
Exclusion of capital gain on home sales if over 65				40	40	70
Excess of percentage standard deduction over low-income allowance				1,140	1,285	1,410
Additional exemption for the blind				20	20	20
Additional exemption for over 65				1,145	1,220	1,280
Retiree income credit and credit for the elderly				110	495	440
Earned income credit				220	215	205
Veterans benefits and services:						
Exclusion of veterans disability compensation				595	655	690
Exclusion of veterans pensions				30	30	35
Exclusion of GI bill benefits				305	255	200
General government: Credits and deductions for political contributions						
				35	40	35
Revenue sharing and general purpose fiscal assistance:						
Exclusion of interest on general purpose State and local debt	2,845	3,105	3,470	1,520	1,680	1,880
Credit for corporations in U.S. possessions	240	285	310			
Deductibility of nonbusiness State and local taxes (other than on owner-occupied homes and gasoline)				7,255	8,095	8,990
Interest: Deferral of interest on savings bonds				550	565	625
Business investment:						
Exclusion of interest on State and local industrial development bonds	150	195	235	75	90	110
Excess first-year depreciation	40	45	45	140	135	145
Depreciation on buildings in excess of straight line:						
Rental housing	100	100	100	405	405	425
Other	225	210	200	200	180	175
Expensing of research and development expenditures	1,325	1,395	1,450	25	30	30
Expensing of construction period interest and taxes	415	475	500	215	150	140
Capital gain: Corporate (other than farming and timber)	545	555	550			
Investment credit	7,685	8,640	9,670	1,810	1,970	2,205

See footnote at end of table.

Table F-1 TAX EXPENDITURE ESTIMATES BY FUNCTION—Continued
(In millions of dollars)

Description	Corporations			Individuals		
	1976	1977	1978	1976	1977	1978
Personal investment:						
Dividend exclusion.....				430	455	480
Capital gain: Individual (other than farming and timber).....				7,320	7,030	7,360
Exclusion of interest on life insurance savings.....				1,655	1,815	1,995
Deferral of capital gain on home sales.....				845	890	935
Deductibility of mortgage interest on owner-occupied homes.....				4,870	5,435	6,030
Deductibility of property taxes on owner-occupied homes.....				4,030	4,500	4,995
Deductibility of casualty losses.....				310	345	380
Credit for purchase of new home.....				650	100	-----
Other tax expenditures:						
Deductibility of charitable contributions (other than education).....	350	400	445	4,360	4,900	5,475
Deductibility of interest on consumer credit.....				2,105	2,310	2,565
Maximum tax on earned income.....				605	730	855

MEMORANDUM

Combined effect of provisions disaggregated above:

Capital gains.....	865	885	905	7,770	7,500	7,860
Exclusion of Interest on State and local debt.....	3,110	3,475	3,925	1,645	1,850	2,090
Deductibility of State and local nonbusiness taxes.....				10,865	12,125	13,460
Deductibility of charitable contributions.....	540	620	685	4,870	5,440	6,040

¹ All estimates are based on the tax code as of Dec. 31, 1976.

The 1976 Act repealed a special provision for U.S. firms operating in a less developed country (LDC). When a foreign subsidiary of a U.S. corporation operating in a LDC repatriated dividends to its parent corporation, that income could, under prior law, be reported net of foreign income taxes paid. U.S. tax liability was then calculated on that net amount and the foreign tax taken as a credit. For non-LDC corporations, foreign source income must now be "grossed up" by adding back in an amount equal to foreign taxes paid. Under prior law the failure to "gross up" dividends by the amount of the foreign taxes paid to LDCs resulted in a tax expenditure.

The profits of a domestic international sales corporation (DISC) are not taxed to the DISC but instead are taxed to the shareholders when distributed to them. This deferral was available for 50% of the export income of a DISC prior to 1976. The Tax Reform Act of 1976 permits DISC benefits to the extent that current export gross receipts exceed 67% of the DISC's average for a 4-year moving base period (initially 1972-75) which will move forward year-by-year after 1979. DISCs with less than \$150,000 of taxable income are exempt from the incremental rule. The Tax Reduction Act of 1975 denied DISC benefits to exporters of energy products and the 1976 Act terminated DISC benefits for 50% of military sales.

The 1976 Act phases out the 14-percentage-point tax rate reduction provided under prior law for domestic corporations qualifying as Western Hemisphere trade corporations.

Agriculture.—Prior to the Tax Reform Act of 1976, farmers, including corporations engaged in agriculture, were allowed to deduct certain costs as current expenses even though these expenditures were for inventories on hand at the end of the year or for capital improvements. The Tax Reform Act of 1976 generally denies these favorable forms of tax treatment to large corporations by requiring them to use accrual accounting. Syndicated partnerships engaged in various agricultural activities are also required to capitalize preproduction costs.

Capital gains treatment generally applies to the sale of livestock, orchards, vineyards, and comparable agricultural activities.

Natural resources, environment, and energy.—The interest income on State and local government bonds issued to finance the pollution control facilities of private firms is exempt from Federal income tax. The volume of outstanding bonds issued for this purpose has been growing rapidly in recent years.

The Tax Reform Act of 1976 provides that certain payments made by customers to water and sewage disposal utilities for the purpose of aiding the construction of new facilities be treated as contributions to capital rather than income.

Certain capital costs necessary to bring a mineral deposit into production may be deducted as current expenses rather than spread over the useful life of the property. Included in this category are the intangible drilling costs of oil such as the wages of drilling crews, and the cost of developing other mineral deposits, such as expenditures for mine shafts, tunnels, and stripping. The Tax Reform Act requires amounts deducted for intangible drilling expenses on oil and gas wells to be recaptured upon sale or other disposition of the oil or gas property by treating those amounts as ordinary income to the extent that they exceed the amounts which would be allowed if the intangible expenses were capitalized and amortized over the useful life of the the well. The Act also added to the base of the minimum tax intangible drilling costs in excess of the amount that would be deductible if capitalized and amortized over 10 years or if deducted pursuant to a cost depletion method.

Extractive industries may generally choose between cost depletion and percentage depletion. Under cost depletion, actual outlays, to the extent not immediately expensable, may be deducted over the productive life of the property, much as other businesses may take deductions for the depreciation of capital goods. Under percentage depletion, businesses in the extractive industries may deduct a prescribed percentage of gross income (at rates ranging from 22% for oil and gas to 5% for certain minerals, but not more than 50% of net income or 65% of net income in the case of oil and gas). Percentage depletion is not limited to the cost of the investment as is cost depletion. The basis for "cost depletion" is reduced to the extent certain costs are recovered through expensing of exploration and discovery costs and intangible drilling costs. There is no comparable reduction in "percentage depletion" for costs which are allowed as expenses. A tax expenditure estimated on the assumption that both percentage depletion and expensing of intangible drilling costs were eliminated would be significantly smaller than the sum of the two separate items

because percentage depletion would exceed cost depletion by a lesser amount if the basis for cost depletion were increased by depreciating exploration, discovery, and intangible drilling costs that are currently expensed. The Tax Reduction Act of 1975 limited the application of percentage depletion to independent oil and gas producers and royalty owners and to specific quantities of output. The act phased the percentage depletion rate for oil and gas down from 22% through 1980 to 15% in 1984 and thereafter.

Royalties from coal or iron ore deposits are treated as capital gains, rather than ordinary income.

The gain on the cutting of timber is taxed at rates applicable to long-term capital gains, rather than at ordinary income rates. The revisions to the minimum tax made by the Tax Reform Act of 1976 do not apply to capital gains income from timber.

From 1969 through 1975 a taxpayer could elect 5-year amortization of certified pollution control facilities installed in connection with a plant that was in operation before 1969. The taxes previously deferred under this provision are now being paid and as a result negative numbers appear in table F-1 for 1977 and 1978. In these years greater amounts of tax will be paid than if this provision had not been enacted. The Tax Reform Act of 1976 extended the 5-year amortization provision to pollution control facilities installed in connection with plants in operation before 1977. Under prior law, if taxpayers elected the 5-year amortization they could not claim the investment tax credit on the capital cost of the facility. The 1976 act provides that one-half of the investment tax credit can be claimed for such facilities. Revenue losses will result from these new provisions in years after 1978.

Commerce and transportation.—Credit unions are exempt from Federal income tax.

Cooperatives may deduct cash and noncash patronage dividends based on net income earned on business done with patrons provided that 20% of the total dividend is paid in cash and the patron has agreed to take the entire dividend into his income. Per-unit retains, that is, amounts retained from the value of products marketed for patrons, may be deducted by the cooperative if patrons agree to take the face amounts into current income. Agricultural cooperatives meeting certain requirements are permitted to deduct dividends on capital stock and payments to patrons from nonpatronage income. Rural electric and telephone cooperatives may deduct noncash patronage dividends and patrons generally need not take such dividends into income. The tax expenditures result from the deductibility of noncash patronage dividends, retains, dividends on capital stock, and payments to patrons out of nonpatronage income. If non-cash patronage dividends and retains were not deductible by cooperatives, they would no longer be taken into current income by patrons and hence individual income taxes would be lower.

Under the permanent tax code, corporations pay income tax at the rate of 22% on all taxable income plus a surtax of 26% on taxable income in excess of \$25,000. Each corporation therefore receives a surtax exemption of \$25,000. This exemption is intended to encourage small or new business. For 1975 only, the Tax Reduction Act of 1975 provided that the tax rate on the first \$25,000 of taxable income be

reduced to 20% and that the surtax exemption extend to the second \$25,000 of taxable income. This temporary provision was extended to December 31, 1977, by the Tax Reform Act of 1976.

Certain companies which operate U.S.-flag vessels on foreign trade routes receive an indefinite deferral of income taxes on that portion of their net income which is used for shipping purposes, primarily construction, modernization, and major repairs of ships. The Tax Reform Act of 1976 provides for an investment credit of one-half the regular credit on the tax-deferred amounts withdrawn from capital construction funds.

Specified classes of railroad rolling stock are eligible for amortization over a 5-year period whether owned by railroad companies or by lessors, rather than their longer, expected useful life. If 5-year amortization is elected the investment tax credit cannot be claimed. This provision applies only to rolling stock placed in service before 1976. Greater amounts of tax are currently paid than if this provision had not been enacted because in most cases the 5-year amortization period has expired; hence the negative figures in table F-1. Tax liabilities are now greater because no depreciation can be claimed.

Commercial banks, mutual savings banks, and savings and loan associations are permitted to deduct and set aside additions to bad debt reserves in excess of actual loss experience and reasonable expectations as to future losses. Commercial banks may maintain a reserve of 1.2% of uninsured loans. The ratio will phase down to 0.6% in calendar year 1981. Mutual savings banks and savings and loan associations may deduct 42% of income in calendar year 1977, provided they maintain stipulated fractions of their assets in "qualifying assets," primarily residential mortgages. Under current law their maximum deduction will phase down to 40% in 1979 and thereafter.

Individuals who itemize their deductions may deduct State and local gasoline excise taxes paid. The deduction of excise taxes on gasoline used for business purposes does not result in a tax expenditure since they would in any case be deductible as a business expense.

Community and regional development.—The Tax Reform Act of 1976 extended until January 1, 1978, provisions whereby taxpayers may, under certain conditions, elect to depreciate rehabilitation expenditures for low- and moderate-income rental housing over a 5-year period. Qualified rehabilitation expenditures may not exceed \$20,000 per dwelling unit and must exceed \$3,000.

Education, training, employment, and social service.—Recipients of scholarships and fellowships may exclude such amounts from taxable income, subject to certain limitations. The exclusion of educational benefits under the GI bill is included in the "Veterans benefits and services" function.

Taxpayers may claim personal exemptions, and the related \$35 credit, for dependent children 19 or over who receive income of \$750 or more per year only if the children are full-time students. The student may also claim an exemption on his or her own tax return, in effect providing a double exemption, one on the parents' return and one on the student's.

Contributions to nonprofit educational institutions are allowed as a deduction for individuals and corporations. (See the discussion of other charitable contributions under "Other tax expenditures.")

The Tax Reform Act of 1976 substantially modified the tax treatment of child and dependent care expenses. Under prior law such expenses, incurred to enable both spouses to work, could be taken as an itemized deduction up to a maximum of \$400 per month. The deduction was reduced by 50 cents for each dollar of adjusted gross income in excess of \$18,000 per year. The new act substitutes a tax credit of 20% of eligible expenditures up to a maximum of \$2,000 for one dependent and \$4,000 for two or more. The act extends the credit to married couples when one spouse works part-time or is a student and to a divorced or separated parent who has custody of a child. It also eliminates the income limit.

A credit is allowed against income tax liability equal to 20% of first-year wages and salaries of employees who were placed in employment under the work incentive program or were previously AFDC recipients. The credit for a taxable year cannot exceed \$50,000 plus 50% of the excess over that amount.

Health.—Payments by employers for health insurance premiums and other medical expenses are deducted as business expenses by employers and excluded from income by employees. The exclusion from employees' income gives rise to the tax expenditure.

Medical expenses in excess of 3% of adjusted gross income, including expenditures for prescribed drugs and medicines in excess of 1% of adjusted gross income, may be deducted by individuals as itemized nonbusiness deductions. Individuals may also deduct half of the premiums they pay for medical care insurance up to a maximum deduction of \$150 per year, without regard to the 3% limitation.

Income security.—Most forms of government transfer payments to individuals, such as social security and unemployment benefits, are excluded from taxable income. If the taxpayer had no other source of income, these payments, even if taxable, would not generally be sufficient to result in any tax liability, given personal exemptions and minimum standard deductions. Since some recipients have property income, receive earnings (in some instances for only part of a year), or may file jointly with working spouses, tax expenditures result from these exclusions.

Under prior law, certain payments, up to \$100 per week, financed by an employer in lieu of wages during periods of employee injury or sickness were excluded from the employee's taxable income. The Tax Reform Act of 1976 repealed the sick pay exclusion except for persons under the age of 65 who are permanently and totally disabled. For these individuals the exclusion is reduced dollar for dollar for adjusted gross income (including disability income) in excess of \$15,000.

Certain contributions to pension plans paid by employers, and amounts set aside by the self-employed and employees not covered by an employer's plan, are excluded from the individual's gross income in the year of contribution. The investment income earned by pension funds is not taxable currently. The resulting tax expenditures are composed of two elements: lower effective tax rates after retirement, due to lower incomes and special tax provisions enjoyed by the aged; and the excess of aggregate current contributions and investment earnings over aggregate amounts paid out in benefits. Self-employed persons can make deductible contributions to their own retirement

plans equal to 15% of their income, up to a maximum of \$7,500 per year. Employees not covered by an employer's plan may deduct annual contributions of 15% of compensation, up to a maximum of \$1,500, or, under the terms of the 1976 Act, \$1,750 if the retirement account is owned jointly by a husband and wife.

In addition to pension plans, many employers provide other employee benefits that are excluded from employee income. The employer's share of these benefits are deductible business expenses. Included in the meals and lodging item is the exclusion of housing allowances and the rental value of parsonages from the taxable income of ministers.

The Tax Reform Act of 1976 temporarily added two items to the list of employee fringe benefits eligible for special tax treatment: prepaid legal services plans and employee stock ownership plans (ESOP). Under prior law an employee had to include in taxable income either his share of employer contributions to a prepaid legal services plan or the value of legal services received under the plan. The act excludes from employee income both employer contributions and the value of benefits received under such a plan. The act also provides that, through 1980, a corporation may claim an additional 1% investment tax credit if an equivalent amount of its common stock is set aside in an ESOP. This provision of the 1976 act extended a provision of the Tax Reduction Act of 1975. Under the 1976 act a further one-half of 1% investment tax credit may be claimed if the resulting addition to an ESOP is matched by employee or employer contributions. Employees are generally prohibited from withdrawing their share of an ESOP for 7 years. The tax expenditures resulting from additional investment tax credits claimed under the ESOP provisions are listed in the income security function because the provisions primarily benefit employees rather than the corporations which claim the tax credit.

A taxpayer 65 or older may exclude from gross income any capital gain allocated to the first \$35,000 of the adjusted sales price on a sale of a personal residence. This once-in-a-lifetime exclusion was increased from \$20,000 by the Tax Reform Act of 1976.

The percentage standard deduction limits the tax liability for many taxpayers, predominately in the middle-income range, and for that reason is classified under income security. For calendar year 1975 only, the Tax Reduction Act of 1975 provided a percentage standard deduction of 16% of adjusted gross income up to a limit of \$2,600 for married persons filing joint returns and \$2,300 for single persons. The Tax Reform Act of 1976 made the 16% rate permanent and set limits of \$2,800 for joint returns and \$2,400 for singles. The percentage standard deduction is a substitute for itemizing personal deductions; the estimates shown are for the amount by which the percentage standard deduction exceeds the low-income allowance or the itemized deductions that would be taken in the absence of this provision, whichever is greater. This provision also encourages taxpayers to use the simplified short form 1040A.

Additional personal exemptions of \$750 may be deducted by taxpayers who are over 65 or who are blind. These additional exemptions may not be claimed for a taxpayer's dependents.

The retirement income tax credit was substantially changed by the Tax Reform Act of 1976 and renamed the "credit for the elderly."

Under prior law, individuals who were over age 65 could claim a tax credit of 15% of retirement income from all sources except social security, railroad retirement, and other tax-exempt benefits. The maximum amount of retirement income to which the 15% credit applied was \$1,524 for a single person and \$2,286 for a married couple where one spouse had worked prior to retirement and \$3,048 if both had worked. The provision was designed to provide taxpayers with taxable retirement income a tax benefit approximately comparable to that accorded recipients of social security and similar tax-exempt benefit payments. The 1976 act simplified eligibility rules and increased the maximum base for the credit to \$2,500 for a single person and to \$3,750 for a married couple. It also eliminated the parallel to social security by making the credit available for earned income as well as retirement income. Under the new act the base upon which the credit is calculated continues to be reduced by tax-exempt social security and retirement income, and the credit is phased out at levels of adjusted gross income above \$7,500 for a single person and \$10,000 for a married couple.

The aggregate effect of excluding social security and railroad retirement benefits for retirees, the additional exemption for persons over 65, and the credit for the elderly are revenue losses of \$4,585 million in 1976, \$5,545 million in 1977, and \$5,925 million in 1978. These aggregates are greater than the sum of the individual estimates because more elderly persons would be pushed to taxpaying levels of income or into higher tax brackets if all of these items were deleted from the tax code.

The Tax Reduction Act of 1975 established, on a temporary basis, an earned income credit for low-income workers with children. The maximum credit is 10% of a worker's first \$4,000 of earned income and phases out at \$8,000 of earned income or adjusted gross income, whichever is greater. To the extent that the credit reduces or eliminates tax liabilities it results in a tax expenditure. Credits in excess of tax liabilities are paid to individuals. These payments are treated as budget outlays and are estimated to be \$856 million in 1977. The Tax Reform Act of 1976 extended the earned income credit through calendar year 1977.

Veteran benefits and services.—All compensation due to death or disability and pensions paid by the Veterans Administration are excluded from taxable income. GI bill benefits are also excluded.

General government.—Political contributions up to a maximum of \$100 (\$200 in the case of joint returns) may be deducted, or tax credits may be taken up to one-half of contributions but limited to \$25 (\$50 on joint returns).

Revenue sharing and general purpose fiscal assistance.—The interest on State and local government debt is excluded from Federal taxation. Both corporations, mainly commercial banks, and individuals receive this tax-exempt income. As a result, these governments are able to sell debt obligations at a lower interest cost than would be possible if such interest were subject to tax. The exclusion of interest on State and local government industrial development bonds and securities issued to finance pollution control facilities are classified elsewhere; only the effect of excluding interest on general purpose obligations and

revenue bonds for public purposes such as toll roads is estimated for this function. The estimated revenue loss from all tax-exempt bonds is \$6.0 billion for 1978.

Under prior law, U.S. corporations receiving income from sources in a U.S. possession could, under certain conditions, exclude all foreign source income from tax. The Tax Reform Act of 1976 repealed this provision and introduced instead a special credit equal to the U.S. tax, but only on income from sources in a U.S. possession.

The deductibility of nonbusiness State and local taxes provides indirect assistance to these governments. The deductibility of property taxes on owner-occupied homes and excise taxes on gasoline are classified elsewhere. The estimates shown here are primarily for the deductibility of State and local income and sales taxes. The deductibility of all State and local taxes resulted in an estimated tax expenditure of \$13.5 billion in 1976.

Interest.—Holders of U.S. savings bonds are not required to include the interest on these securities in their taxable income until the bonds are redeemed, thereby deferring tax liabilities.

Business investment.—The interest on certain industrial development bonds issued by State and local governments is excluded from taxable income. The proceeds of these bonds are used to finance private investment in manufacturing plants and other facilities. For that reason this item is classified as business investment rather than under revenue sharing and general purpose fiscal assistance to State and local governments.

To the extent that allowable depreciation for tax purposes exceeds the rate at which assets actually depreciate, business tax liabilities are deferred. Businesses may employ a variety of depreciation schedules for tax purposes, some of which cause a much larger part of asset values to be written off in early years of the asset's useful life than do others. An extra first-year depreciation deduction of 20% may be claimed for \$10,000 of tangible personal property (\$20,000 on a joint return) having a useful life of at least 6 years. The revenue costs of allowing buildings and rental housing to be depreciated for tax purposes by methods that reduce asset value more rapidly than straight-line depreciation (the method typically used in financial statements) are shown.

Research and development expenditures typically result in new products or processes, cost reductions, or other outcomes the benefits from which will, in nearly all cases, continue into the future. For tax purposes businesses may deduct all research and development expenditures in the year during which they are incurred rather than amortizing them over a number of years. The tax expenditure is estimated as if such expenditures were amortized over a 5-year period.

Under prior law taxpayers could deduct on a current basis interest and property tax payments made during the period when a building was under construction rather than include such costs of construction, along with other costs, in the value of the completed structure, which would then be depreciated over its useful life. The Tax Reform Act of 1976 reduced this tax expenditure by providing that, for noncorporate taxpayers, construction period interest and taxes be capitalized

and amortized over a 10-year period. The new provision is to be phased in over a 7-year period with more generous transition rules for Government-subsidized housing projects.

Corporations may elect a 30% alternative tax rate on capital gains. The tax expenditure is estimated on the assumption that these gains would otherwise be taxed at 48%.

The investment tax credit was temporarily increased from 7% to 10% (from 4% to 10% in the case of public utilities) by the Tax Reduction Act of 1975. The higher rate was extended through 1980 by the Tax Reform Act of 1976. The percentage is applied to the cost of qualifying property (generally, tangible personal property used in a trade or business) having a useful life of over 7 years. The investment tax credit cannot be claimed for investments in land or buildings or for property used abroad. Lower rates apply to property with useful lives of 3 to 7 years. The investment tax credit may be claimed as progress payments are made on property that takes 2 or more years to construct. The maximum credit which may be offset directly against income tax liability in a taxable year is generally limited to \$25,000 plus one-half of the excess of tax liability over \$25,000. Excess credits may generally be carried back 3 taxable years and forward 7 taxable years, after which they expire if still unused. The 1975 Act provided a temporary increase in maximum credits that can be claimed by public utilities. The 1976 Act extended similar treatment to railroads and airlines.

Personal investment.—Grouped together in this category are a number of tax expenditure items that affect individuals as investors and holders of real and financial assets.

The first \$100 (\$100 per taxpayer on a joint return) of dividend income may be excluded from taxable income.

Half of the long-term gains from the sale of capital assets is excluded from income and up to \$25,000 of included gains may be taxed at a rate of 50%. The excluded half of net long-term capital gains is included in the base of the minimum tax. Capital losses may be deducted from gains but only a limited amount of net losses may be deducted in any 1 year from ordinary income. The Tax Reform Act of 1976 lengthened the holding period over which capital assets must be held to qualify as long-term gains and losses from 6 months to 9 months in 1977 and to 12 months in 1978 and thereafter. The act also increased the amount of ordinary income against which net capital losses may be offset in any 1 year from \$1,000 to \$2,000 in 1977 and to \$3,000 in 1978 and thereafter.

Life insurance policies, other than term policies, generally have a saving element in them. Savings in the form of policyholder reserves are accumulated from premium payments, and interest is earned on the reserves. Such interest income is taxable neither as it accrues nor when received by beneficiaries.

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 18 months before or after the sale (if a new house is constructed it must be occupied within 2 years after the sale). The "adjusted sales price" is the amount realized (gross proceeds less selling expenses) minus qualified "fixing up" expenses. A

loss on a sale of a home is not deductible. To the extent the gain on the sale of a home is not recognized, the basis of the home purchased is reduced thereby resulting in a deferral of the gain.

Owner-occupants of homes may deduct mortgage interest and property taxes (but not maintenance outlays or depreciation because the in-kind income from homeownership is not recognized) as itemized nonbusiness deductions. The tax expenditure from these two items combined is \$10.2 billion for 1978. This is less than the sum of the two separately because if both were deleted more taxpayers would save by using the standard deduction.

Taxpayers may deduct as an itemized nonbusiness deduction the amount in excess of \$100 for each loss due to fire, theft, or other casualty to the extent not compensated by insurance or other payments.

The Tax Reduction Act of 1975 provided, for part of calendar year 1975 only and subject to certain conditions, a tax credit equal to 5% of the purchase price of a new home, up to a maximum credit of \$2,000. In a few cases taxpayers will not be able to claim the credit until they file their 1976 returns during fiscal year 1977.

Other tax expenditures.—Interest paid on consumer credit for any purpose is allowed as an itemized nonbusiness deduction for individuals.

Contributions to charitable, religious, and certain other nonprofit organizations are allowed as an itemized deduction for individuals, generally up to 50% of adjusted gross income. Taxpayers whose contributions to charitable or educational organizations are in the form of capital assets, usually securities, which have appreciated in value above their cost, obtain a deduction for the contribution at the appreciated value of the asset without taxation on the appreciation in value. Contributions to educational institutions are reported under "Education, training, and employment, and social services."

Corporations may deduct charitable contributions (including those made to educational institutions, which are separately reported) up to 5% of their income. In the absence of this provision of the tax code some of these contributions might be deductible as business expenses. The estimates are based on all reported contributions. The Tax Reform Act of 1976 liberalized the provision for deductibility of contributions of inventories to charitable organizations.

The Tax Reform Act of 1969 introduced a maximum marginal tax rate of 50% on earned income. Under the act, the amount of earned income eligible for the maximum tax was reduced by tax preferences in excess of \$30,000. The 1976 act extended the maximum tax to certain pensions, annuities, and deferred compensation, but eliminated the \$30,000 exemption to the offset for tax preferences and added to that offset the new preference items which were included by the act in the base of the minimum tax.

PROPOSED CHANGES IN TAX EXPENDITURES

The tax proposals that are a part of the 1978 budget would slightly reduce almost every estimated tax expenditure for 1978 presented in table F-1. The normal structure of the individual income tax would be changed by increasing the personal exemption from \$750 to

\$1,000, increasing the low-income allowance from \$1,700 to \$1,800 for single returns and from \$2,100 to \$2,500 for joint returns, and reducing lower bracket tax rates. As a part of these changes, the temporary earned income credit would be repealed as would the temporary credit of \$35 per exemption or 2% of taxable income credit which are not tax expenditure provisions. The impact of these changes on budget receipts is discussed in Part 4 of the budget. The proposed changes would reduce the number of taxpayers who itemize their deductions and would alter marginal tax rates for almost every taxpayer. The proposed reduction in the basic corporate tax rate from 48% to 46% would reduce the tax expenditures associated with the corporate income tax. Reestimates reflecting the impact of these proposals have not been made.

Several proposals affect particular tax expenditures more directly and these will be briefly discussed. The estimates for these specific changes are shown in table F-2.

Table F-2. ESTIMATES OF PROPOSED CHANGES IN TAX EXPENDITURES

(In millions of dollars)

Description	Corporations		Individuals	
	1977	1978	1977	1978
Additional exemption for over 65.....			250	425
Additional exemption for the blind.....			5	5
Parental personal exemptions for students, ages 19 and over.....			175	255
Excess of percentage standard deduction over low-income allowance.....			-396	-605
Earned income credit.....				-205
Exclusion of employee benefits: Employee stock ownership plans (ESOP) funded through investment tax credits.....	-105	-255		
Deductibility of charitable contributions.....				55
Credit for home insulation.....				195
Corporate surtax exemption.....		1,045		
Accelerated depreciation in high unemployment areas.....	35	175		30
Expensing of geothermal research and development.....		*		
Exclusion of interest on State and local debt.....				-5

*Less than \$5 million.

Existing tax expenditures items significantly affected by proposed individual income tax cuts.—The additional personal exemption for taxpayers who are over 65 or blind would be increased from \$750 to \$1,000. Parents of students would also benefit from the increase. The excess of the percentage standard deduction over the low-income allowance would be reduced since the low-income allowance is increased. The package of individual income tax cuts includes repeal of the earned income credit. In addition to reducing tax expenditures, its repeal would also reduce budget outlays by \$835 million in 1978.

Employee stock ownership plans (ESOP). Repeal is proposed of the provisions of the Tax Reform Act of 1976 that allow ESOPs to be funded through extra investment tax credits. The tax receipts foregone as a result of these provisions are used to acquire stock in the corporations eligible for the tax credit. The stock is held in trust for

employees of those corporations at little or no cost to the employees; an employee can sell his or her portion of the employer's stock after 7 years or upon retirement or other termination of employment. Repeal is urged on equity grounds. Only employees of taxable corporations are benefited. As among such employees, those who benefit the most work for firms eligible for investment credits which are large relative to the number of their employees. Moreover, individual employees benefit in proportion to their compensation so that the highly paid are the most favored. These provisions may also lead workers to depend upon the fortunes of a single firm for their income security during retirement years rather than upon a more diversified investment portfolio.

Charitable contributions.—The Tax Reform Act of 1976 included in the base of the minimum tax itemized deductions (with the exception of medical expenses and casualty losses) in excess of 60% of adjusted gross income. The proposal is to exclude charitable contributions from the calculation of excess itemized deductions so as to remove any possible disincentive to charitable giving.

Home insulation.—A tax credit of 15% of a homeowner's expenditures for energy-saving improvements such as insulation and storm windows is proposed. The credit would be based upon expenditures of up to \$1,000 for such purposes during the calendar years 1977, 1978, and 1979. Total credits claimed by any tax-filing unit during the 3-year period could not exceed \$150.

Corporate surtax exemption.—The provisions of the Tax Reform Act of 1976 that lower the tax on the first \$50,000 of corporate income are proposed to be made permanent. These provisions would otherwise expire on December 31, 1977.

Accelerated depreciation for investment in areas of high unemployment.—A tax incentive is also proposed to encourage private-sector jobs and construction of new facilities or expansion of old facilities in labor market areas where unemployment is 7% or higher. This will be accomplished by allowing very rapid amortization for nonresidential buildings and capital equipment. Buildings will be amortized over a period equal to one-half their useful life. Capital equipment put in place in new or expanded facilities will be amortized over 5 years; the full investment tax credit can be claimed on such capital equipment. This incentive will apply to projects begun during calendar year 1977 and completed within 36 months.

Expensing of geothermal research and development.—New domestic energy supplies may be achieved through the development of geothermal resources. To encourage the discovery and development of such resources it is proposed that certain costs associated with projects approved during the next 10 years by the Energy Research and Development Administration be treated for tax purposes as research and development expenditures. These expenditures would thus be expensed rather than treated as capital outlays and depreciated over a normal useful life.

Taxable municipal bond option.—Legislation is proposed authorizing the payment of Federal interest subsidies to State and local governments which choose to issue taxable bonds rather than bonds on which interest payments are exempt from Federal income taxes. The subsidy would be 30% of the first 12% of net interest expense. Municipal bonds for industrial development purposes and those issued with a Federal guarantee or other subsidy would be denied tax-exempt status. Industrial development bonds, including pollution control bonds, currently eligible for tax exemption would be required to be issued in taxable form with a 20% interest subsidy. The proposal would improve the efficiency of the municipal bond market by reducing the gap between costs to the Federal Government and interest savings to State and local governments. The proposal would also prevent the tax-exempt market from being overloaded with industrial development bonds, which are in essence private demands for credit. Such overloading has tended to drive up the cost of borrowing for public purposes by State and local governments and has increased revenue losses to the Federal Government.

SPECIAL ANALYSIS G

PRINCIPAL FEDERAL STATISTICAL PROGRAMS

INTRODUCTION

This special analysis presents an overview of the major statistical programs of the Federal Government, as reflected in the 1978 budget. It includes the entire budgets of four bureaus (the Statistical Reporting Service, the Bureau of Economic Analysis, the Bureau of the Census, and the Bureau of Labor Statistics) and obligations for statistical programs in an additional 54 bureaus or agencies. In addition to employment and budget obligations, the tables show budget totals for all current and periodic programs and for broad subject matter areas. These tables indicate the level of resources presently available and those proposed in 1978 for statistical programs throughout the Federal Government.

Over the years this analysis has been made more comprehensive and more useful by inclusion of information on additional statistical activities and refinement of the guidelines for determining which Federal programs should be included in the analysis. Because it has become more comprehensive, it is appropriate to provide clarification concerning the character and limitations of the analysis.

Statistical activities include: Planning for statistical programs, project design, questionnaire or form design, instructional materials, training of interviewers, data collection, training of processing personnel, processing, primary analysis, dissemination, and publication; classification; preparation of estimates and projections; statistical manipulation of data collected by others; statistical methodology and research; and management and coordination of statistical operations.

The summary tables concerning Federal statistical programs do not represent a unified budget total that has been allocated among the various programs. Rather this budget is a compilation of the budgets for statistical programs and represents the amounts that were individually derived in relation to the specific needs for each program. Hence, funds removed from the budget of one statistical program during either the executive or the congressional budget review process do not necessarily become available for allocation to another statistical program, even within the same agency. They may be used to help reduce the budget total or to help finance other statistical or non-statistical activities.

Furthermore, this analysis of statistical resources by broad subject area is not intended to represent a statement of priorities among these areas. The tables do, however, reflect a process that attempts to analyze statistical needs within the subject matter areas, to provide funding for the most clearly established needs, and to eliminate or reduce resources for programs where the need is no longer evident. Also, the budget recommendations are coordinated in the sense that,

in selecting projects for inclusion in the budget of one agency, account is taken of related projects in other agencies. In addition, consideration may be given to more than one agency as the appropriate location of project funds and required personnel.

Moreover, as the title "Principal Federal Statistical Programs" suggests, the analysis does not include all Federal statistics. For example, agencies or bureaus with less than \$300 thousand of obligations for statistical programs are not included. In addition, data collection and analysis that relate to internal departmental management are not included unless they have multipurpose or national policy significance. Scientific and research data are also generally excluded except in cases where such data are basic components of the multipurpose data base for a given subject area. For example, the analysis for both energy and environmental statistics includes scientific data in these fields. However, most management, scientific, and research data are not included.

In this context, total obligations for current statistical programs will increase by \$97.9 million or 16.5% over 1977. Periodic programs will increase by \$8.1 million or 12.5% over 1977, primarily because of accelerated planning for and preparation of the 1980 decennial census. Total obligations for all principal Federal statistical programs will increase by \$106.0 million or 16.1% over 1977.

PERSONNEL REQUIREMENTS

The quality, timeliness, and integrity of Federal statistics are the product of the staff engaged in production and analysis of these series. Information on the full-time permanent positions proposed for major statistical agencies is presented in table G-1. In addition to these positions in major statistical agencies, there are many statisticians working in smaller statistical units in other agencies and departments. The figures in table G-1 do not include part-time or temporary positions because the only consistently defined figures that are currently available are those on full-time permanent positions.

Table G-1. FULL-TIME PERMANENT POSITIONS BY AGENCY

	1976 actual	1977 estimate	1978 estimate
Department of Agriculture:			
Statistical Reporting Service.....	1,238	1,289	1,303
Department of Commerce:			
Bureau of Economic Analysis.....	509	540	560
Bureau of the Census.....	4,059	4,084	4,091
Department of Health, Education, and Welfare:			
National Center for Education Statistics.....	191	1 179	1 191
National Center for Health Statistics.....	522	1 542	1 542
Department of Labor:			
Bureau of Labor Statistics.....	1,774	2 2,500	2 2,372
Total for six agencies reporting.....	8,293	9,134	9,059

¹ These estimated figures are subject to further departmental review.

² Over the last several years the Bureau of Labor Statistics has been reporting employees working on programs financed by other agencies as temporary, in the expectation that the programs would remain temporary. However, the programs have proved to be ongoing and the positions occupied fit the definition of permanent since in actuality they are occupied for more than 1 year. The reporting of these employees, therefore, is changed in 1977.

The variations in staff levels relative to the program sizes are partially explained by the different natures of the various agency programs. For example, the Bureau of the Census does a great deal of work for other agencies on a reimbursable basis for which no funds are included in the Census Bureau's budget although the work is performed by Census personnel. The National Center for Education Statistics, on the other hand, has proportionately more work done under contract using the contractor's personnel. The decrease in the personnel level for the Bureau of Labor Statistics is because of the completion of the Consumer Price Index revision program in 1977.

STATISTICAL COORDINATION

Since the budgets for statistical programs are determined by relating the needs for information to the specific program requirements of the statistics-producing agencies, it is essential to have an ongoing mechanism for coordinating the needs of the various users. For example, many Federal programs allocate funding based upon total population or some specific subgroup of the population. An analysis of Federal programs for 1975 revealed that \$33 billion of Federal grants to States and units of local government were affected by formulas that used population as one of the variables. Under the Budget and Accounting Procedures Act of 1950, the Office of Management and Budget (OMB) has broad authority for the coordination of statistical programs and, pursuant to this authority, sets forth statistical standards in OMB Circular A-46. To emphasize the need for coordination in the use of population statistics, OMB recently amended Circular A-46 to require that all agencies use the same population series in the administration of Federal programs.

The wide use of population statistics for Federal policymaking has long been recognized. In fact, the needs of Federal users of these statistics have been coordinated formally since the late 1940's, in conjunction with the 1950 decennial census. This process is continuing. An interagency group—the Federal Agency Council on the 1980 Census, comprised of representatives from more than 90 Federal agencies—was organized in 1974 to advise on the content of the 1980 decennial census. Nine subject matter committees of the Council consider policy data needs and content for the 1980 census. The Council will continue to review tabulation plans, geographic area data requirements, and reliability requirements for the various agencies.

Economic statistics, which are of central importance in Federal policymaking, are the subject of considerable attention now. An intensive review of the basic data requirements for the national income accounts was initiated in 1973, and the findings of the Advisory Committee on Gross National Product (GNP) Data Improvement influenced budget recommendations for 1977 as well as 1978. Following public review of the Committee's work in 1977, additional improvements are likely to be reflected in future budgets.

An extensive review of the entire range of Federal statistics will become the subject of public review in 1977 with the distribution of draft materials for "A Framework for Planning U.S. Federal Statistics, 1978-1989," an overall interagency planning effort, coordinated by OMB. The framework contains a discussion of the organization of

U.S. Federal statistics, including the roles and missions of the major statistical agencies, a discussion of 16 different broad subject areas, and a discussion of a variety of specific crosscutting issues affecting the Federal statistical system, such as confidentiality, professional staff training, reporting burden, interagency (reimbursable) funding, and Federal-State cooperative programs.

Table G-2. OBLIGATIONS FOR PRINCIPAL CURRENT STATISTICAL PROGRAMS, BY BROAD SUBJECT AREA¹

(In millions of dollars)

	1976 actual	1977 estimate	1978 estimate
Prices and price indexes.....	14.0	20.4	29.7
Labor statistics.....	76.8	81.7	88.5
Production and distribution statistics.....	36.6	39.4	40.1
Agriculture statistics.....	39.4	47.4	49.8
Transportation statistics.....	19.3	25.9	27.4
Housing and construction statistics.....	20.8	22.0	24.4
Economic and business financial accounts.....	38.3	41.7	43.6
Energy statistics.....	65.6	100.6	146.2
Environmental statistics.....	40.7	35.8	43.4
Health statistics.....	94.5	103.4	114.4
Education statistics.....	25.1	15.0	17.5
Income maintenance and welfare statistics.....	24.7	25.8	28.9
Population statistics.....	6.2	6.8	8.2
Criminal justice statistics.....	36.0	27.2	28.9
Total, principal current programs.....	537.9	593.1	691.0

¹ Classifications are based on primary use of statistics.

CURRENT PROGRAMS

PRICES AND PRICE INDEXES

Continuing consumer expenditure survey (\$6.6 million).—The 1978 budget for the Bureau of Labor Statistics (BLS) provides for a continuing survey of consumer expenditures. The survey will: (1) Produce selected data on an annual basis on consumer income and expenditures classified by family size and other demographic and socioeconomic characteristics, (2) permit publication of a subset of the data on a quarterly basis, (3) provide a data base that can be used for the revision of the BLS family budget program, and (4) provide current data for future revisions of the Consumer Price Index.

Industrial price program (\$0.9 million).—An increase is provided for the industrial price program (previously the wholesale price program) for the beginning of a major overhaul of the program that produces the wholesale, industry sector, and stage of processing indexes. The revised program, which will be implemented in incremental steps to cover additional groups of industries over a number of years, will, when completed, provide a complete system of price measures consisting of: (1) Input and output price indexes at the four-digit industry (Standard Industrial Classification (SIC)) level,

(2) detailed commodity and service indexes, and (3) improved stage of processing indexes. The revision program being started in 1978 will result in indexes based on improved statistical techniques and samples. The data collected will be based on specification pricing techniques.

International price program (\$0.3 million).—The expansion of the BLS international price program is being continued in 1978 by adding coverage for an additional 10% of the value of both U.S. exports and imports. This increment will, by 1979, raise the value of the categories covered by the indexes to 65% of U.S. exports and 50% of the value of products imported into the United States.

LABOR STATISTICS

Public sector bargaining agreements (\$0.3 million).—BLS will conduct a program of industrial relations research and data collection to provide for the development of data on public sector bargaining settlements. The data on the amount and nature of changes in wages and related benefits and estimates of overall costs of the settlement package are expected to permit comparison of settlements between the public and private sectors. The public sector program covered by this increment will initially provide information on approximately 300 collective bargaining units with 1,000 or more employees in State and local jurisdictions.

PRODUCTION AND DISTRIBUTION STATISTICS

Inventory statistics (\$0.5 million).—In recent years the Subcommittee on Economic Statistics of the Economic Policy Board has expressed its concern about the adequacy of Federal statistics on business inventories. Two new Census Bureau programs will make significant improvements in the measurement of change in inventories. Design of these surveys has benefited from recommendations of the National Bureau of Economic Research under contract to the Census Bureau. A survey of the largest, most complex companies in manufacturing, retail trade, and wholesale trade will produce inventory data for company divisions. These reports will be combined with data collected from the smaller companies in order to produce an overall report. For manufacturers, another Census Bureau program will: (1) Provide disaggregated inventory totals classified by type of accounting methodology, (2) study the implications of timing and accounting problems, (3) reconcile the monthly and annual figures, and (4) continue research into inventory data collection methods.

Automated minerals availability system (\$0.5 million).—The Bureau of Mines, Department of the Interior, will automate the minerals availability system. This activity will assimilate already collected data from various surveys and other sources into a computer system that will facilitate access to these data for purposes of research and analysis.

Ocean minerals (\$0.3 million).—The Bureau of Mines will conduct studies related to ocean mining of minerals. Studies will include the minerals potential from ocean mining, the capital and operating

costs of ocean mining, the influence that possible Law of the Sea provisions will have on ocean mineral development, and the possible impact ocean mining could have on land-based mining industries.

Critical minerals (\$0.3 million).—Additional funds allow expansion of the Bureau of Mines program that provides assessments of domestic and foreign resources of “critical” minerals that now are primarily imported.

AGRICULTURE STATISTICS

Agricultural statistics are shown as a separate category this year for the first time. In previous years the bulk of such activities were included in the production and distribution category (\$40.7 million in 1977). Programs dealing with agricultural prices were included under price statistics (\$4.7 million in 1977), and other programs were classified in the labor statistics, economic and business financial accounts, and population statistics categories. Almost all these statistical programs are conducted by the Department of Agriculture (USDA). The censuses of agriculture are not included in this category because they are shown separately as periodic programs. These statistical programs are now reported in one place to coincide with the subject matter contained in the agricultural statistics chapter of “A Framework for Planning U.S. Federal Statistics, 1978-1989” referred to above.

Statistics on rural credit (\$0.3 million).—One of USDA’s responsibilities involves the design and implementation of Federal credit programs affecting rural areas. Capital investment is needed in increasing amounts for sophisticated equipment, increased irrigation, better environmental protection measures, development of nonfarm activities in rural areas, and housing. The Economic Research Service in USDA will undertake a study of the adequacy of capital in rural areas, access to national and regional capital markets, and practices of lending institutions to help evaluate the adequacy and effectiveness of ongoing USDA credit activities.

Prices received by farmers (\$0.5 million).—The Statistical Reporting Service (SRS), USDA, will improve the statistics on prices received by farmers by instituting a nationwide point-of-sale survey. This survey will provide SRS with information needed to select an efficient sample of outlets from which to collect data on the prices farmers received for their agricultural products and will also permit accurate weighting of sample survey responses to estimate aggregate totals.

TRANSPORTATION STATISTICS

Transportation statistics are also shown as a separate category this year. In previous years the activities were included in the production and distribution category (\$25.9 million in 1977). These programs are largely conducted by the Department of Transportation but also include statistical activities of the Army Corps of Engineers, the Civil Aeronautics Board, and the Interstate Commerce Commission. Excluded, however, are the transportation surveys conducted by the

Bureau of the Census as a part of the economic censuses, which are included under periodic programs. Transportation statistics are being reported separately to coincide with the subject matter contained in the transportation statistics chapter of "A Framework for Planning U.S. Federal Statistics, 1978-1989."

HOUSING AND CONSTRUCTION STATISTICS

Housing market statistics (\$2.2 million).—The largest part of this increase will be used for the Annual Housing Survey to provide for increased costs of personal interviewing, to improve control over new additions to the inventory, and to test improvements to the questionnaire (\$1.3 million). The remaining increase will be allocated to the surveys of mortgage lenders, absorption of new rental units, sales and completions of new homes, and mobile home placement.

Community planning and development statistics (\$0.7 million).—The increase in this program will provide for improved monitoring and evaluation of the Department of Housing and Urban Development block grant program and testing of alternative approaches to the allocation of block grant funds.

Surveys of residential alterations and repairs (—\$0.4 million).—The Census Bureau's survey of residential alterations and repairs will be converted from a quarterly to an annual basis. This survey, which provides estimates of expenditures for alterations and additions to existing houses, is used primarily for GNP estimates, and the magnitude of change in this component is such that quarterly measurement is of marginal value.

ECONOMIC AND BUSINESS FINANCIAL ACCOUNTS

Quarterly survey of State and local government finances (\$0.2 million).—Until now the financial information collected from State and local governments, except for data on tax revenues, has been collected on an annual basis. The 1978 budget provides an increase for the Bureau of the Census to survey a sample of State and local governments concerning finance and employment on a quarterly basis. This action will improve the national economic accounts and provide more timely information on the financial conditions of individual governments. These data will be used to develop national estimates of inter-governmental transfer payments and purchases of goods and services for each of several functions of government such as education, highway construction, and welfare, and to secure data on government revenues from user charges, interest earnings, tuition fees, and similar nontax sources.

Commodity classification (\$0.3 million).—The Census Bureau will implement a commodity classification structured to improve the comparability in statistics of imports, exports, and domestic production as required by the Trade Act of 1974. This program will improve the Government's ability to evaluate both the country's international trade position and the effect of international trade on domestic product markets and on employment.

Foreign trade data (—\$0.2 million).—The Census Bureau will discontinue the bilateral reconciliation of statistics on U.S. foreign trade with Canada. This program, which has been conducted in recent years, has accomplished most of its goals.

Balance of payments statistics (\$0.1 million).—In 1978, the Bureau of Economic Analysis (BEA) will begin work required to publish an up-to-date methodology manual describing how the balance of payments accounts are constructed. This manual will be published in 1979 and an historical data supplement will be published in 1981. It has been nearly 25 years since the last manual was published describing how the balance of payments accounts are constructed and more than 13 years since a comprehensive statistical supplement containing comparable historical balance of payments statistics has been published.

ENERGY STATISTICS

The statistical programs of the Energy Research and Development Administration (ERDA) and the Geological Survey are shown for the first time this year in the special analysis. As a consequence the funding levels for energy statistics are substantially higher than those which have been shown in previous special analyses.

Energy resource assessments (\$26.2 million).—Major increases are requested for uranium, geothermal, solar and environmental resources assessments by ERDA. The increases reflect project phasing of the individual assessments.

Improvements in energy consumption data (\$0.9 million).—There is a need for improved energy consumption data. This budget includes supplementary funding (\$0.6 million) in 1977 and a further increase of \$0.3 million in 1978 that will enable the Federal Energy Administration (FEA) to improve further its efforts to measure residential, commercial, and industrial consumption of energy and to assess the impacts of various policy or legislative proposals on energy consuming sectors of the economy.

Energy modeling and forecasting (\$1.7 million).—Because of the close relationship of energy forecasting to formulation of energy policy, high priority has been attached to improving the quality of energy forecasts over various time periods extending to the year 2000. An increase of \$1.8 million over current 1977 appropriation levels is requested to enable FEA to work toward development of a single model producing domestic energy supply and demand forecasts. Funds are eliminated for Bureau of Mines energy model development (—\$0.1 million) since this duplicates work already being done by FEA.

Energy data validation (\$0.9 million).—Data validation, including review of computational procedures and checks on respondent accuracy, is an essential component of a well balanced statistical program. Supplemental funding in 1977 and an additional \$0.9 million in 1978 are provided to enable FEA to mount a program with the objective of validating major energy data systems.

Oil and gas reserves study (\$2.1 million).—FEA will conduct an overall survey of U.S. reserves of oil and natural gas. This program is being developed by an *ad hoc* interagency planning group chaired by OMB, which has received additional comments from industry and other experts. The data, which will be collected and audited on a sample basis for accuracy, will be designed to serve the analytical needs of several agencies, Congress, and the public. In the past, the Government has relied primarily on estimates published by the American Petroleum Institute and the American Gas Association.

Comprehensive review of energy data.—In October 1976 FEA initiated a joint interagency project to conduct a detailed review of all energy information-gathering activities of Federal agencies. The review will be completed by June 1978 and will have each agency report detailed information on each of its energy data systems covering purpose, operating costs, number of respondents, measurement and validation techniques, and other technical items.

ENVIRONMENTAL STATISTICS

Pollution abatement and control expenditures (\$0.3 million).—The 1978 budget for BEA's environmental studies program provides for an expansion of estimates of pollution abatement and control expenditures by: (1) Providing regional and industry detail for those expenditures, (2) developing constant-dollar estimates at the national level, and (3) estimating the physical units of pollutants emitted per dollar of output for each of the major polluting industries at the national level and relating those data to the pollution abatement expenditures by those industries. These data will improve the basis for understanding the regional and industry environmental implications of different economic growth goals.

Environmental planning (\$1.0 million).—As a complement to energy models of ERDA, an increase is requested for development of environmental data and planning methods. The increase reflects a buildup of this activity to a proposed operational level.

Health effects of air pollution (\$4.6 million).—An increase in the statistical program of the Environmental Protection Agency (EPA) is to be directed toward the conduct of studies of air carcinogens that will permit an assessment of the contribution of environmental agents to the cancer incidence and mortality of the general population. The utilization of a multisite epidemiologic program on sulfate and sulfuric acid exposure will also be initiated. Analyses of data collected through the community health air monitoring program will assist in the quantification of short-term exposure levels to various air pollutants.

Central statistical unit in EPA.—In 1978 EPA will establish a central statistical unit with responsibility for the development and coordination of the agency's statistical policies. The unit will review and insure the quality of project design and data development throughout EPA and will facilitate interagency communication about statistical activities.

HEALTH STATISTICS

The 1978 funding level of \$33.6 million for the National Center for Health Statistics (NCHS) represents a \$6.0 million increase from the 1977 level. This increase is provided for expansion of the Center's Federal-State-local cooperative health statistics system (CHSS). During 1978, CHSS will expand its activities into all 50 States, with particular emphasis on vital statistics, health manpower, and health facilities statistics. NCHS will maintain its existing program, and will continue its expanded role as the focal point for Federal health statistics, reflected by the increased number of statistical activities it performs on a reimbursable basis for other Federal agencies in 1977 and 1978.

Other changes in health statistics activities outside of NCHS are limited to areas in which Federal programs or responsibilities have been expanding:

Medical care expenditures (\$1.4 million).—The Health Resources Administration's National Center for Health Services Research will use these funds to complete the nationwide panel study of medical care expenditures begun in 1976.

Health manpower statistics (—\$0.7 million).—The funding for the Bureau of Health Manpower's statistical activities will decrease by \$1.2 million in 1977 and by \$0.7 million in 1978. In effect, all health manpower statistical activities in 1978 will be conducted by NCHS within its ongoing program.

Biomedical research statistics (\$0.8 million).—A \$0.5 million increase will be used for collection of data on the etiology of cancer in man. A \$0.3 million increase will be provided for the initiation of an epidemiology program within the National Institute of Environmental Health Sciences.

Drug abuse statistics (\$0.5 million).—The Drug Enforcement Administration (DEA) in the Department of Justice will receive an increase of \$0.3 million in 1978 for the drug abuse warning network (DAWN) project, which is cofunded by the National Institute on Drug Abuse (NIDA) in the Department of Health, Education, and Welfare. The additional funds are DEA's share of a program to make the DAWN system a better source of national indicators of drug abuse. As a followup to NIDA's ongoing drug abuse treatment data systems, NIDA will receive an increase of \$0.2 million in 1978 to continue the assessment of drug abuse treatment effectiveness started in 1977.

Occupational health surveillance (\$0.5 million).—The 1978 budget provides funds for the Department of Health, Education, and Welfare's National Institute for Occupational Safety and Health to conduct periodic medical examinations of coal miners, collect epidemiological data by location of underground mine, and carry out statistical analyses including correlation of medical findings with data from the Bureau of Mines, Department of the Interior.

Health insurance related statistics (\$2.2 million).—The Social Security Administration will continue to develop and maintain a standardized statistical reporting system for the medicare program, expand its health insurance research program, continue evaluation of the medicare program, and improve the current medicare survey.

Disability data (\$1.2 million).—This increase will allow the Social Security Administration to reinterview a large sample of the disabled population to determine the effects of the new supplemental security income program on this population.

Veterans Administration patient data (\$0.3 million).—Additional funds are provided to maintain the Veterans Administration's patient-oriented discharge data system, which includes all episodes in Veterans Administration-sponsored hospitals, nursing homes or domiciliary care facilities.

EDUCATION STATISTICS

The 1978 budget for the National Center for Education Statistics (NCES) is \$15.9 million. This represents an increase of \$3.0 million over the 1977 level for the base program and a decrease of \$0.2 million for studies mandated by law. The decrease is due to a shift from the developmental to the operational phases for three major mandated studies. NCES will concentrate on improving statistical services by stimulating increased data comparability, completing further analyses of existing data bases, and coordinating and disseminating more widely information for users.

Assistance to States (\$0.8 million).—NCES will assist States in their efforts to build compatible statistical systems and to use standard definitions for reporting by developing reporting manuals and conducting training sessions. A personnel exchange, jointly supported by NCES and the States, will allow the States to capitalize on expertise in counterpart agencies.

Analysis (\$1.0 million).—NCES will analyze existing data bases from the survey of income and education, the national longitudinal study, the current population survey, and the national assessment of educational progress to examine the interrelationships among low-income, bilingual and handicapped students; the impact of vocational training on job experiences; utilization of Federal aid in 4- and 5-year degree programs; and the relationships between background variables and individuals' achievements.

Dissemination (\$0.8 million).—The NCES dissemination system will be restructured to permit NCES to respond more directly to the need for timeliness of data. The new strategy will accelerate the availability of the data in forms requested by users by providing preliminary and updated data tapes, microfiche, and special tabulations. Concentration of staff effort will be shifted toward analytic monographs and other forms of presentation highlighting data useful to policymakers.

Collection (\$0.4 million).—The program of data collection for 1978 includes some reductions in scope of effort as well as new initiatives. There will be a shift in emphasis from data describing educational institutions to data describing student characteristics, backgrounds, and outcomes. This emphasis relates to concerns about the match between student needs and educational services, acceptable standards of student performance, and the transition of persons from programs of formal education to work.

INCOME MAINTENANCE AND WELFARE STATISTICS

Increases for income maintenance statistics reflect continuation of efforts to improve the data available for analysis of the costs of income maintenance programs and impact on beneficiaries.

Survey of income and program participation (\$2.2 million).—1978 will be the second year of a planned 4-year developmental effort coordinated by the Office of the Assistant Secretary for Planning and Evaluation in the Department of Health, Education, and Welfare. This increase will provide for: Testing of alternative approaches to obtaining through household interviews information on in-kind benefits and assets; exploring ways to approximate the eligibility requirements for Federal programs; developing jointly with BLS a short battery of consumer expenditure questions; and field testing of alternative design features for multiple frame sampling.

Welfare statistics (\$0.6 million).—General statistical support will be increased as efforts continue to improve the timeliness of reports while reducing the reporting burden on the States (\$0.4 million). A refocusing of the statistical activities of the Social and Rehabilitation Service (SRS) is anticipated in 1978, with the aid of a study to be completed in 1977 of the functions of the National Center for Social Statistics. Further strengthening of the quality control program to reduce payment errors in the program of aid to families with dependent children is planned during 1978 (\$0.3 million). Implementation on a State-by-State basis of a prototype system for the collection of data on all recipients of benefits under SRS programs will reduce the reporting burden on welfare recipients and agencies while providing rapid access to data on recipient characteristics.

Social security statistics (\$0.3 million).—Analysis of beneficiary roles will be continued and expanded through the preparation of special reports on the relationships between race, economic status and social security benefits, and analysis of private and public retirement payments in relation to social security benefits (\$0.6 million). A modest expansion in actuarial statistics will support the preparation of alternative proposals for coping with the projected depletion of the trust fund by 1979 (\$0.2 million). Increases in outlays will be partially offset by a reduction for the retirement history study during 1978, upon completion of field work for the fifth phase data collection (—\$0.5 million).

POPULATION STATISTICS

Methods test panel (\$0.5 million).—The 1978 budget provides an increase for the Census Bureau to establish a methods test panel to investigate and develop new approaches and concepts in household surveys to obtain demographic and labor force statistics. The panel will be used to test procedural changes recommended by the National Commission on Employment and Unemployment Statistics.

CRIMINAL JUSTICE STATISTICS

The criminal justice statistics program of the National Criminal Justice Information and Statistics Service in the Law Enforcement Assistance Administration, although showing a decrease in funding in 1977 and an increase in 1978, will be essentially unaffected because of multiyear funding.

PERIODIC PROGRAMS

1977 Census of Governments.—There are four major parts of the census of governments: Governmental organization, governmental finance, public employment, and taxable property values. Most data are collected by mail from more than 78,000 units of State and local government, but field enumeration is used to gather part of the data on taxable property values. Funds requested for this program in 1978 show a decrease because the data collection and processing for the survey of taxable property values will be largely completed in 1977.

1977 economic censuses.—Funds provided in 1978 for the censuses of business, manufactures, mineral industries, and transportation will permit the Census Bureau to complete the preparation and mailing of the report forms, to begin the review of collected data, to gather and process administrative records for small firms in lieu of direct data collection, and to expand the coverage of service industries. Published results from the national travel and the truck inventory and use segments of the transportation census will also be permitted with these funds.

1978 Census of Agriculture.—In 1978 the Census Bureau will continue its planning for this census, including consulting with data users on the content of the questionnaire, exploring the possible use of sampling techniques, and planning for specialized follow-on surveys (for instance, on horticulture and farm finances) that have been conducted in connection with past censuses. The largest share of 1978 funding is for the collection and processing of the basic census information. This and the next census will be taken after a shorter interval (4 years after the preceding one), so that by 1982 the census of agriculture will refer to the same year as the economic censuses. This change in reference date will facilitate closer coordination of benchmark economic data.

1980 Census of Population and Housing.—In 1978 the Bureau of the Census will continue planning for the 1980 decennial census. The year

will be a critical one in that the content of the census will be conclusively decided as will be the various procedures involved for an enumeration of the entire Nation. In April 1978 a "dress rehearsal" will provide a final test of the procedures. During the year extensive geographic work will involve the identification and coding of boundary changes. Other activity will include completion of master address registers, preparation for timely release of data for Congressional reapportionment, and continued close communication with hard-to-enumerate minority groups. Work will also proceed on the census evaluation program and the completion of quality control techniques.

In addition to preparation for the massive data collection associated with the April 1980 census enumeration, the Bureau of the Census will begin planning for follow-on and adjunct surveys which will provide detailed information for samples of the population and the housing inventory. One or more follow-on studies will use information obtained from the 1980 census questionnaires for defining particular universes for which additional, more detailed information will be collected shortly thereafter. One or more adjunct studies, on the other hand, will be conducted after 1980 to gather more detailed information on samples of the entire population. The topics to be covered in the follow-on and adjunct surveys will be determined in consultation with other Federal agencies and may include topics such as residential finance, disability, and characteristics of the occupants of mobile homes.

The planning effort for follow-on surveys will also provide an opportunity for the Bureau of the Census to begin to examine the technology and logistics of "nested" surveys in preparation for the recently authorized mid-decade census program. "Nested" surveys cover different subject matter areas of concern, in addition to a core set of questions, in different but equivalent subsamples of the same universe. The data from these various surveys can be consolidated at the processing stage to obtain a more complete set of statistical measures. Support for these activities is included in the general funding for the 1980 census.

Registration and voting surveys.—Work on the November 1976 survey will be completed in 1977. Legislation is being proposed to provide for conducting this survey on a quadrennial rather than a biennial basis. The next survey would be in 1980.

Revision of the Consumer Price Index.—The decrease in this Bureau of Labor Statistics program reflects the completion of the revision of the Consumer Price Index during 1977.

Table G-3. OBLIGATIONS FOR PRINCIPAL STATISTICAL PROGRAMS, BY AGENCY (in millions of dollars)

	1976 actual	TQ actual	1977 estimate	1978 estimate
CURRENT PROGRAMS				
Department of Agriculture:				
Agricultural Research Service	0.3	2.1	4.1	4.1
Economic Research Service	7.2	1.8	7.2	7.3
Office of the General Sales Manager	0.5	0.1	0.5	0.5
Statistical Reporting Service ¹	31.2	8.2	35.3	37.5
Department of Commerce:				
Bureau of Economic Analysis ¹	11.7	3.1	12.8	13.9
Bureau of the Census ¹	41.0	11.3	44.9	46.1
Domestic and International Business Administration	3.3	0.6	2.8	2.0
Economic Development Administration	1.0	0.1	0.3	0.4
National Bureau of Fire Prevention	0.8	0.2	1.2	1.7
National Oceanic and Atmospheric Administration	2.6	0.7	4.0	4.0
Department of Defense:				
Corps of Engineers	1.8	0.4	2.0	2.2
Department of Health, Education, and Welfare:				
Alcohol, Drug Abuse, and Mental Health Administration	6.8	1.3	7.8	8.1
Center for Disease Control	2.5	0.5	3.2	3.7
Food and Drug Administration	1.6	0.3	1.7	1.8
Health Resources Administration:				
National Center for Health Statistics	25.0	7.4	27.6	² 33.6
Other Health Resources Administration	7.0	0.3	1.0	1.7
Health Services Administration	2.4	1.7	3.3	3.3
National Center for Education Statistics	10.5	4.7	13.1	15.9
National Institutes of Health	23.4	5.3	29.4	30.3
Office of the Assistant Secretary for Human Development	4.9	1.0	4.6	3.2
Office of Assistant Secretary for Planning and Evaluation	5.9	1.1	3.7	5.6
Office of Education	14.6	7.8	1.8	1.5
Social and Rehabilitation Service	6.3	1.6	7.6	8.2
Social Security Administration	22.2	13.5	28.8	32.7
Department of Housing and Urban Development:				
Community Planning and Development	1.0	0.2	1.6	2.3
Housing	2.6	0.6	2.2	1.9
Policy Development and Research	9.7	2.6	9.3	11.5
Department of the Interior:				
Bureau of Mines	13.0	3.4	13.7	14.8
Fish and Wildlife Service	6.7	1.4	7.0	6.9
Geological Survey	3.5	1.0	4.3	4.3
Mining Enforcement and Safety Administration	1.7	0.4	1.6	1.6
Department of Justice:				
Drug Enforcement Administration	1.1	0.1	1.1	1.4
Federal Bureau of Investigation	1.7	0.4	2.1	2.2
Law Enforcement Assistance Administration	34.0	11.3	24.8	26.4
Department of Labor:				
Bureau of Labor Statistics ¹	54.2	16.2	68.0	82.9
Employment and Training Administration	26.3	5.5	23.0	24.2
Employment Standards Administration	0.5	0.1	0.5	0.5
Occupational Safety and Health Administration	5.4	1.5	6.2	6.2
Department of Transportation:				
Office of the Secretary	3.1	0.7	1.3	1.4
Federal Highway Administration	3.3	1.9	4.9	5.1
Federal Railroad Administration	1.0	0.2	1.3	0.8
National Highway Traffic Safety Administration	6.8	2.4	11.9	13.3
Urban Mass Transportation Administration	0.1	0.3	0.9	0.8

See footnotes at end of table.

Table G-3. OBLIGATIONS FOR PRINCIPAL STATISTICAL PROGRAMS, BY AGENCY (in millions of dollars)—Continued

	1976 actual	TQ actual	1977 estimate	1978 estimate
CURRENT PROGRAMS—Continued				
Department of the Treasury:				
Office of the Secretary.....	0.1	-----	0.2	0.1
Customs Service.....	3.3	0.9	3.5	3.5
Internal Revenue Service.....	12.7	3.1	13.0	13.6
Civil Aeronautics Board.....	2.2	0.6	2.4	2.5
Consumer Product Safety Commission.....	2.3	0.8	2.8	2.8
Energy Research and Development Administration.....	26.3	8.5	52.4	89.8
Environmental Protection Agency.....	33.1	12.7	26.9	32.8
Federal Energy Administration.....	22.5	6.5	28.4	38.9
Federal Home Loan Bank Board.....	2.6	0.7	3.1	3.2
Federal Power Commission.....	9.4	2.9	12.2	11.5
Federal Trade Commission.....	1.1	0.4	1.6	1.8
Interstate Commerce Commission.....	1.1	0.3	1.2	1.2
National Science Foundation.....	2.1	0.6	2.3	2.3
Securities and Exchange Commission.....	0.7	0.2	0.8	0.8
Veterans Administration.....	8.2	1.9	7.9	8.4
Total, current programs.....	537.9	165.4	593.1	691.0
PERIODIC PROGRAMS				
Department of Commerce: Bureau of the Census:				
1972 economic censuses.....	0.8	0.1	0.1	-----
1977 economic censuses.....	2.1	0.9	7.8	16.0
1977 Census of Governments.....	0.4	0.2	3.8	1.0
1974 Census of Agriculture.....	7.9	1.8	3.3	-----
1978 Census of Agriculture.....	-----	0.1	3.9	8.7
1970 Census of Population and Housing.....	0.2	-----	-----	-----
1980 Census of Population and Housing.....	4.6	2.1	17.6	30.6
Intercensal demographic estimates.....	7.0	0.4	2.0	1.9
Registration and voting surveys.....	0.1	0.4	4.3	-----
Periodic programs geographic support.....	2.3	0.5	3.2	3.0
Data processing equipment ³	2.7	0.6	7.2	7.9
General administration and other ⁴	2.9	1.2	4.2	2.2
Department of Labor: Bureau of Labor Statistics:				
Revision of Consumer Price Index.....	6.9	1.8	5.8	-----
Standard industrial classification revision program.....	0.4	1.2	1.5	1.5
Total, periodic programs.....	38.3	11.3	64.7	72.8
Total, principal statistical programs.....	576.2	176.7	657.8	763.8

¹ Includes entire budget for this agency.

² Includes both direct program funds and "Salaries and expenses," Assistant Secretary for Health.

³ Includes capital outlays for large-scale data processing equipment acquisitions.

⁴ Includes depreciation, other capital outlays, and changes in selected resources.

SPECIAL ANALYSIS H

CIVILIAN EMPLOYMENT IN THE EXECUTIVE BRANCH

As of June 30, 1976, total Federal civilian employment in the executive branch was 2,832,462. Excluding Postal Service employment, which by law is not subject to Presidential control, and excluding other employment exempted from ceilings, the total was 2,114,411. On this basis, total employment is estimated to increase by 17,100 from June 30, 1976, to September 30, 1977. A further increase of about 11,800 is estimated for September 30, 1978.

FULL-TIME PERMANENT CIVILIAN EMPLOYMENT

Full-time permanent employment as of June 30, 1976, was 2,448,348. Excluding the Postal Service, executive branch full-time permanent employment was 1,906,849, or about 10,500 below the June 30, 1975, level.

Despite necessary increases in a number of agencies, the overall planned increase for the executive branch (excluding the Postal Service) from 1977 to 1978 is a relatively modest 6,500, or about three-tenths of one percent. A decrease in the Department of Defense partially offsets increases primarily in the Departments of Housing and Urban Development, Interior, Justice, and Transportation, and the Veterans Administration.

Table H-1 displays yearend full-time permanent employment in the major executive branch agencies, as well as planned changes between September 30, 1977, and September 30, 1978.

Table H-1. SUMMARY OF FULL-TIME PERMANENT CIVILIAN EMPLOYMENT IN THE EXECUTIVE BRANCH¹

Agency	June 30 1976 actual	Sept. 30		Change 1977-78
		1977 estimate	1978 estimate	
Agriculture.....	80,413	83,500	84,200	700
Commerce.....	28,823	29,500	29,400	-100
Defense—military functions.....	922,386	928,000	921,200	-6,800
Defense—civil functions.....	28,648	29,000	28,900	-100
Health, Education, and Welfare.....	136,462	142,300	142,400	100
Housing and Urban Development.....	14,942	15,600	16,500	900
Interior.....	59,130	62,000	62,400	400
Justice.....	51,201	52,400	53,800	1,400
Labor.....	14,471	16,200	16,200	100
State.....	22,634	22,800	22,900	100
Transportation.....	71,593	72,800	74,000	1,200
Treasury.....	107,877	112,100	112,600	500
Energy Research and Development Administration.....	8,283	8,700	9,000	300
Environmental Protection Agency.....	9,481	9,700	9,700	-----
General Services Administration.....	35,679	36,000	36,200	200
National Aeronautics and Space Administration.....	24,039	23,800	23,700	-100
Veterans Administration.....	192,453	201,700	205,500	3,800
Other:				
Agency for International Development.....	5,751	6,100	6,100	-----
Civil Service Commission.....	6,740	7,000	7,100	100
Federal Energy Administration.....	3,349	3,900	3,700	-200
Nuclear Regulatory Commission.....	2,289	2,500	2,700	200
Panama Canal.....	12,978	13,500	13,500	-----
Small Business Administration.....	4,136	4,400	4,600	200
Tennessee Valley Authority.....	15,100	17,400	17,900	500
United States Information Agency.....	8,559	8,700	8,700	-----
Miscellaneous.....	39,432	41,700	41,900	200
Subtotal.....	1,906,849	1,951,300	1,954,800	3,500
Contingencies ²	-----	2,000	5,000	3,000
Subtotal.....	1,906,849	1,953,300	1,959,800	6,500
Postal Service.....	541,499	536,400	540,000	3,600
Total.....	2,448,348	2,489,700	2,499,800	10,100

¹ Excludes developmental positions under the worker trainee opportunity program (WTOP) as well as certain statutory exemptions.

² Subject to later distribution.

The projected increase in full-time permanent employment in the executive branch (excluding the Postal Service and other employment exempted from ceilings) from June 30, 1976 to September 30, 1978 is about 53,000.

Actual employment on this basis on June 30, 1976 was about 25,000 below the estimate for 1976 in the 1977 budget. This shortfall took place primarily because two agencies, the Department of Defense and the General Services Administration, were able to achieve planned reductions earlier than anticipated and because several larger agencies were unable to achieve planned increases in the time available. Furthermore, normal personnel turnover and processing procedures frequently prevent agencies from hiring up to their planned personnel totals.

Growth in population (in either the U.S. population as a whole or in the size of a specific group being served) has added workload demands requiring additional personnel—even after productivity increases have been taken into account. For example, as more citizens become eligible for social security benefits, more employees are needed to handle claims for these benefits. These population related increases alone account for more than 4,200 added positions in 1977 and 3,500 in 1978. Other increases are primarily due to programmatic considerations, but include elements related to population (e.g., increases for the National Park Service).

Some increases, particularly for 1977, are attributable to actions of the Congress. New programs were approved at levels higher than originally requested by the administration, and in some instances specific employment increases were mandated legislatively. Collectively, congressional actions last year resulted in increasing Federal employment by about 14,000 in 1977 and a further 1,000 in 1978.

The major employment changes between the end of 1976 and the end of 1978 will occur in the following agencies:

- *Department of Agriculture.*—Increases for grain inspections (2,080), for timber access roads in the Forest Service (225), in the Soil Conservation Service (425), and in the Farmers Home Administration (400) are due to congressional actions. These increases have been partially offset by decreases in other areas. Increases also occur in such areas as the Animal and Plant Health Inspection Service (200) and research (60).
- *Department of Defense.*—The increase between 1976 and 1977 is attributable to the reclassification of 4,300 Army employees in Germany from temporary to a valid identification as permanent employees. Also, some 8,000 schoolteachers in overseas dependent schools are included in the estimates for September 1977 and 1978 but were not on the rolls in June 1976. This change results from a change in the fiscal year ending on June 30 to a year ending on September 30. Thus, the apparent increase in 1977 is actually a decrease of almost 7,000 when the numbers are adjusted for comparability. For 1978, employment decreases of about 7,000 are due to productivity savings and the replacement of about 2,500 full-time commissary personnel by part-time workers.
- *Department of Health, Education, and Welfare.*—Increases in education (130), the Food and Drug Administration (300), and Indian Health Service (400) reflect funds added by Congress for these purposes. In addition, other health programs, including St. Elizabeths Hospital and the National Institutes of Health have been increased by about 800 positions. Changes due to workload increases will add some 2,300 positions in the Social Security Administration. Most of the latter increases relate to a rise in the number of eligible persons receiving benefits. This special analysis does not include proposed position decreases due to legislation recommended in the 1978 budget. For 1978, the health block grant legislative proposal would permit a decrease of employment by 2,900 while the proposal to close or transfer to community use the eight Public Health Service hospitals would permit employment reductions of another 2,900.

- *Department of Housing and Urban Development.*—Congressional actions have necessitated the addition of about 180 positions in connection with the rehabilitation loan program and the FHA's program to compensate insured mortgagors for housing defects. Workload increases in other housing programs will add nearly 1,250 positions. However, these are partially offset by workload decreases in community development programs and staff savings stemming from Federal Housing Administration reforms.
- *Department of the Interior.*—Congressional actions have added about 900 positions, primarily in the National Park Service and the Fish and Wildlife Service. In addition, Presidential initiatives and workload changes will add 1,500 positions for the Bicentennial land heritage program, 100 positions for mine health and safety, and 130 positions in the Bureau of Land Management. Other workload increases will add 600 positions throughout the Department.
- *Department of Justice.*—Congressional actions will require 420 additional positions in the Immigration and Naturalization Service to reduce workload backlogs. An increase in the U.S. Attorneys' Offices of 250 positions is related to the provisions of the Speedy Trial Act. The FBI will add 200 positions to meet requirements of the Freedom of Information Act. Workload increases in such areas as drug law enforcement (230), FBI automation development (450), INS inspection, detention, deportation and service programs (320), and litigative activities (185) are partially offset by productivity improvements in the FBI (−250) and by decreases in the FBI's investigative program (−640). Finally, the Department will add more than 600 positions in connection with the activation of prison facilities and for protection of U.S. courts and prisoners.
- *Department of Labor.*—More than 260 positions will be added because of congressional actions relating to occupational safety and health inspections, processing workers' compensation cases, monitoring prime sponsors (Comprehensive Employment and Training Act), and unemployment insurance fraud control. Almost 900 employees will be added for workload increases in the handling of terminated insured pension plans, issuance of occupational safety and health standards, minimum wage and overtime complaints, pension plan investigations, and for other areas of the Department. Finally, 620 Bureau of Labor Statistics employees, previously classified as temporary, will be reclassified as full-time permanent employees in 1977 because of the continuing nature of the work involved.
- *Department of Transportation.*—To meet the expected growth of aviation activity and the forecasted expansion of airway facilities, the Federal Aviation Administration will add 1,200 positions for air traffic control operations and 400 more technicians for system maintenance. Expansion of marine activities is reflected by an additional 254 positions for Coast Guard operations.
- *Department of the Treasury.*—The Department will increase by more than 4,200 positions, of which 1,850 relate to the recent enactment of the Tax Reform Act. Administration initiatives

will add nearly 1,200 positions in such areas as drug enforcement and firearms enforcement. Rising workload in such bureaus as the Customs Service, Secret Service, and Public Debt, require increases in personnel. These workload increases are partially offset by decreases due to productivity improvements in the Internal Revenue Service and in other bureaus.

- *Environmental Protection Agency*.—In 1977, 130 new positions have been provided to begin implementation of both the Toxic Substances Control Act and the Resource Recovery and Conservation Act. In addition, several programmatic measures are planned in 1977 and 1978 to ensure adequate staff support for EPA's most critical regulatory actions.
- *Veterans Administration*.—A net increase of about 2,600 positions relates largely to congressional action for medical program additions. The President's medical "Quality of Care" program will add another 1,800 positions. Increases for new medical facility activations, medical program expansions, new special medical programs, and general workload increases will add an additional 8,600 positions. A significant portion of the latter group relates to services to an increased number of veterans.
- *Tennessee Valley Authority*.—An overall increase of nearly 2,800 positions relates to increased construction and operation requirements of TVA's power program.

TOTAL FEDERAL GOVERNMENT EMPLOYMENT

In 1978, full-time permanent employment will comprise slightly more than 88% of all civilian employees in the executive branch (including the Postal Service). The balance, nearly 12% is made up of part-time employees, intermittent employees (those employed on an irregular basis), and full-time temporary employees (those in positions occupied for less than 1 year). Table H-2, "Total Federal Employment," includes civilian employees of the executive branch (as described above), employees of the legislative and judicial branches, and military personnel. A separate entry is also included to cover those categories of employees specifically exempted from employment controls, for example, certain employees under the worker trainee opportunity program; disadvantaged and part-time workers under such Civil Service Commission programs as summer aides, stay-in-school, and junior fellowship; and certain statutory exemptions.

The Department of Defense component of total executive branch employment (civilian and military) has declined from 74% in 1968 to 62% in 1978. The Postal Service makes up 14% of the total work force, the Veterans Administration 5% and the balance of the executive branch (all other departments and agencies) accounts for the remaining 19%.

Table H-2. TOTAL FEDERAL EMPLOYMENT

Description	June 30	September 30	
	1976 actual	1977 estimate	1978 estimate
Civilian employment in the executive branch:			
Full-time permanent.....	1,906,849	1,953,300	1,959,800
Other than full-time permanent.....	207,562	178,200	183,500
Subtotal.....	<u>2,114,411</u>	<u>2,131,500</u>	<u>2,143,300</u>
Postal Service:			
Full-time permanent.....	541,499	536,400	540,000
Other than full-time permanent.....	133,671	134,500	135,000
Subtotal.....	<u>675,170</u>	<u>670,900</u>	<u>675,000</u>
Exempt from ceilings ¹	42,881	23,000	20,000
Subtotal, executive branch civilian employment.....	<u>2,832,462</u>	<u>2,825,400</u>	<u>2,838,300</u>
Military personnel on active duty: ²			
Department of Defense.....	2,080,997	2,088,000	2,090,000
Department of Transportation (Coast Guard).....	37,812	38,500	38,800
Subtotal, military personnel.....	<u>2,118,809</u>	<u>2,126,500</u>	<u>2,128,800</u>
Total, executive branch employment.....	4,951,271	4,951,900	4,967,100
Legislative and judicial personnel: ³			
Full-time permanent.....	30,691		
Other than full-time permanent.....	19,787		
Subtotal, legislative and judicial branches.....	<u>50,478</u>		
Grand total.....	5,001,749		

¹ Developmental positions under the worker-trainee opportunity program; disadvantaged summer and part-time workers under such Civil Service Commission programs as summer aides, stay-in-school, and junior fellowship; and certain statutory exemptions. Decrease from 1976 to 1977 reflects seasonal differences.

² Excludes reserve components.

³ 1977 and 1978 estimates are not available.

PERSONNEL COMPENSATION AND BENEFITS

Direct compensation of the Federal work force includes regular pay, premium pay for overtime, Sunday and holiday pay, differentials for night work and overseas duty, and flight and other hazardous duty pay. Related compensation in the form of personnel benefits consists primarily of the Government's share (as employer) of health insurance, term life insurance, and Federal retirement and old-age survivors' disability insurance. Retirement costs include the direct Treasury transfers to the Civil Service retirement trust fund to cover the interest on the unfunded retirement liability (the excess of the present value of the anticipated benefits payable from the fund over the present value of fund assets and anticipated receipts) and payments to amortize increments of unfunded liability that result from pay or benefit increases.

Additional benefits include uniform allowances (when paid in cash), cost-of-living and overseas quarters allowances, and, in the case of uniformed military personnel, reenlistment bonuses.

Obligations for civilian personnel compensation and benefits in 1978 are projected to reach \$48.2 billion, excluding the Postal Service. The increase in obligations is due to pay adjustments, increased employment, and increased interest payments to the Civil Service retirement trust fund. The estimated costs for civilian and military pay increases for 1978 are covered by lump sum allowances in the 1978 budget.

Under the Federal Pay Comparability Act, salary rates for Federal employees under the "General Schedule" and most other statutory pay systems are adjusted periodically so as to relate to rates paid for the same work levels in the private sector. The bases for these adjustments are annual surveys conducted on a nationwide basis by the Bureau of Labor Statistics. Under the act, the President may propose an alternative pay plan if he considers the comparability pay adjustments inappropriate because of a national emergency or economic conditions affecting the general welfare. The pay raise estimates in the budget and in table H-3 project a 6.5% pay increase for October 1977.

As required by law, the Commission on Executive, Legislative, and Judicial Salaries has submitted recommendations to the President on salaries for senators, representatives, Federal judges, cabinet officers and other agency heads, and certain other officials in the executive, legislative, and judicial branches. The statute requires the President to set forth, in the budget next submitted by him after receipt of the report of the Commission, his recommendations for adjustment of these salaries. The President has included his recommendations in a separate budget document.

Table H-3. PERSONNEL COMPENSATION AND BENEFITS
(In millions of dollars)

Description	1976 actual	TQ actual	1977 estimate	1978 estimate
Civilian personnel costs:				
Executive branch: ¹				
Direct compensation.....	31,555	8,184	34,330	34,840
Personnel benefits.....	8,072	892	10,690	10,660
Retirement liability interest payment.....	(3,233)	(.....)	(4,180)	(5,180)
Subtotal.....	<u>39,627</u>	<u>9,076</u>	<u>45,020</u>	<u>45,500</u>
Legislative and judiciary: ²				
Direct compensation.....	508	133	590	630
Personnel benefits.....	49	13	60	60
Subtotal.....	<u>557</u>	<u>146</u>	<u>650</u>	<u>690</u>
Allowance for civilian pay raise.....				2,020
Total, civilian personnel costs.....	<u>40,184</u>	<u>9,222</u>	<u>45,670</u>	<u>48,210</u>
Military personnel costs: ³				
Direct compensation.....	21,622	5,557	22,570	22,600
Personnel benefits ⁴	1,825	485	1,820	1,840
Subtotal.....	<u>23,447</u>	<u>6,042</u>	<u>24,390</u>	<u>24,440</u>
Allowance for military pay raise.....				1,390
Total, military pay costs.....	<u>23,447</u>	<u>6,042</u>	<u>24,390</u>	<u>25,830</u>
Grand total, personnel costs.....	<u>63,631</u>	<u>15,264</u>	<u>70,060</u>	<u>74,040</u>

¹ Excludes the Postal Service, reflecting conversion to independent status, consistent with the Postal Service Reorganization Act of 1970.

² Excludes members and officers of Congress.

³ Excludes Reserve components

⁴ Excludes payments to current military retirees which amounted to \$7,422 million in 1976 and \$1,978 million in the transition quarter, and are estimated to be \$8,378 million in 1977 and \$9,157 million in 1978.

GOVERNMENT EMPLOYMENT AND POPULATION COMPARISONS

Federal civilian employment as a percentage of the total employed labor force is projected at 3% for 1978. Employment for all governmental units has been steadily rising due to significant increases in State and local government employment.

The proportion of Federal civilian employment relative to total employment of all governmental units (Federal, State, and local) is projected at 17.8% for 1978. As illustrated in the following chart, and in table H-4, the Federal segment of all governmental employment has declined significantly over the last three decades from 35% in 1948 to the aforementioned 17.8% in 1978.

Government Civilian Employment

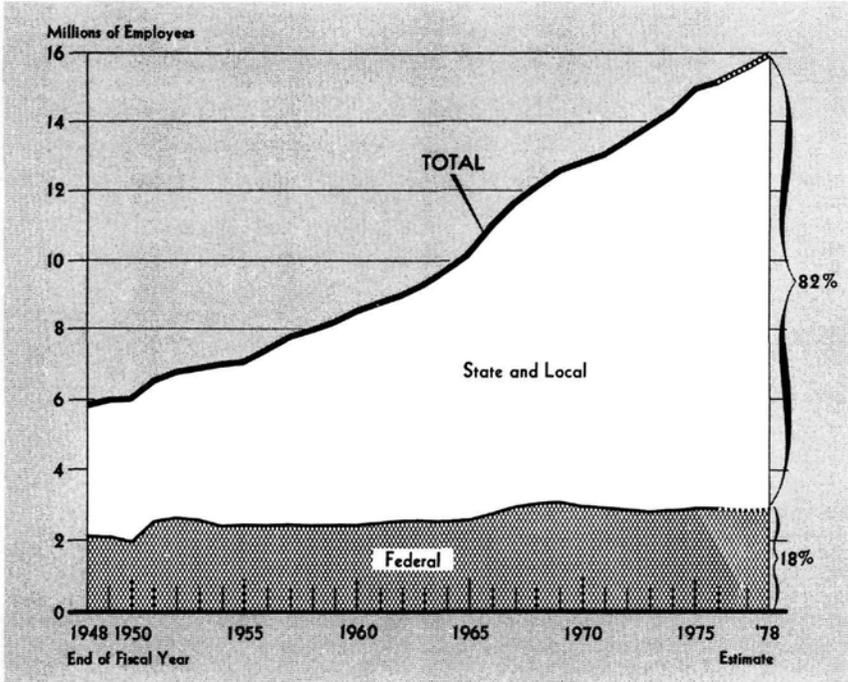


Table H-4. GOVERNMENT EMPLOYMENT AND POPULATION, 1948-78

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
1948.....	2,044	3,776	5,820	35.1	147,208	13.9
1949.....	2,075	3,906	5,981	34.7	149,767	13.9
1950.....	1,934	4,078	6,012	32.2	152,271	12.7
1951.....	2,456	4,031	6,487	37.9	154,878	15.9
1952.....	2,574	4,134	6,708	38.4	157,553	16.3
1953.....	2,532	4,282	6,814	37.2	160,184	15.8
1954.....	2,382	4,552	6,934	34.4	163,026	14.6
1955.....	2,371	4,728	7,099	33.4	165,931	14.3
1956.....	2,372	5,064	7,436	31.9	168,903	14.0
1957.....	2,391	5,380	7,771	30.8	171,984	13.9
1958.....	2,355	5,630	7,985	29.5	174,882	13.5
1959.....	2,355	5,806	8,161	28.8	177,830	13.2
1960 ²	2,371	6,073	8,444	28.1	180,671	13.1
1961 ²	2,407	6,295	8,702	27.7	183,691	13.1
1962.....	2,485	6,533	9,018	27.6	186,538	13.3
1963 ³	2,490	6,834	9,324	26.7	189,242	13.2
1964 ³	2,469	7,236	9,705	25.4	191,889	12.9
1965.....	2,496	7,683	10,179	24.5	194,303	12.8
1966.....	2,664	8,259	10,923	24.4	196,560	13.6
1967.....	2,877	8,730	11,607	24.8	198,712	14.5
1968.....	2,951	9,141	12,092	24.4	200,706	14.7
1969 ⁴	2,980	9,496	12,476	23.9	202,677	14.7
1970 ²	2,944	9,869	12,813	23.0	204,875	14.4
1971 ²	2,883	10,257	13,140	21.9	207,045	13.9
1972.....	2,823	10,640	13,463	21.0	208,842	13.5
1973.....	2,775	11,065	13,840	20.0	210,396	13.2
1974.....	2,847	11,463	14,310	19.9	211,909	13.4
1975.....	2,848	12,025	14,873	19.1	213,450	13.3
1976.....	2,832	12,410	15,242	18.6	215,074	13.2
1977 (est.)..	2,825	(⁵)	-----	18.1	216,814	13.0
1978 (est.)..	2,838	(⁵)	-----	17.8	218,678	13.0

¹ Covers total end-of-year employment in 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 after and including 1969.

⁵ An official projection of State and local government employment is not available. The percentages shown for these years are consistent with a range of reasonable estimates based on recent trends in population and State and local government activity.

When compared to total U.S. population, the ratio of Federal civilian employment is estimated to be 13.0 per thousand in 1978—a ratio that is equal to or lower than all but 4 of the 31 years displayed in table H-4.

PART 2

FEDERAL SOCIAL PROGRAMS

INTRODUCTION

Part 2 furnishes Government-wide program and financial information in six social program areas—education, training and employment, health, income security, civil rights, and crime reduction. It includes the special analyses designated I through N.

The figures used in these analyses differ from the data shown under somewhat similarly titled categories of the functional classification used in Part 5 of the Budget and elsewhere. In the functional classification, each activity is categorized according to its major purpose; thus all the military spending of the Department of Defense falls into the functional category, *National defense*. In these special analyses, however, all spending for education, health, etc., is included, even if the activity has a different primary purpose. Thus the tabulations here are more comprehensive with regard to these particular types of social programs.

Special Analysis I discusses education-related programs, including direct Federal activities, and programs that provide aid to States and localities, to institutions of higher education, and to individuals.

Special Analysis J identifies the Federal programs designed to increase the skills and employment opportunities of persons already in the work force and of persons who desire to join the work force but lack vocational preparation or face other employment barriers.

Special Analysis K summarizes Federal spending for health and health-related activities.

Special Analysis L discusses Federal benefits to maintain or supplement income of persons and families whose capacity for self-support is reduced by old age, disability, illness, unemployment, poverty, or death of the primary wage earner.

Special Analysis M summarizes Federal spending for civil rights activities, concentrating on enforcement efforts.

Special Analysis N discusses Federal crime reduction programs, including financial and technical assistance to States and localities, crime and criminal justice research and development, and operation of the Federal criminal justice system.

SPECIAL ANALYSIS I

FEDERAL EDUCATION PROGRAMS

Federal support of education related programs are estimated to be \$19.6 billion in 1978. This support includes programs that provide aid to State and local education agencies, to institutions of higher education, to individuals, and direct Federal activities.

The expenditure estimate includes those programs that support student-teacher relationships for the transmission of organized knowledge, or provide services to the community-at-large aimed at expanding individuals' opportunities for professional or career advancement. The analysis is further organized by level of education and type of support. As in previous years, all Federal programs directly supporting educational activities or involving the use of educational resources to achieve other purposes are included. Amounts for noneducational research conducted at academic institutions not falling within the above purposes are excluded. For comparability with the analyses that accompanied the 1973 and earlier budgets, these amounts are shown at the bottom of table I-1.

OVERVIEW: 1978

Total Federal education outlays are estimated at \$19.6 billion in 1978. The total is composed of three principal components:

- \$11.3 billion for programs whose primary purpose is education;
- \$8.0 billion for programs that are beneficial to the interests of education but are not primarily educational in purpose;
- \$0.3 billion for salary supplements in the form of educational allowances.

In addition, four tax expenditures ranging in size from \$200 million to \$805 million each will also support higher education in 1978.

Table I-1. FEDERAL OUTLAYS FOR EDUCATION

Purpose and program	Outlays (millions)			
	1976 actual	TQ estimate	1977 estimate	1978 estimate
Office of Education:				
Financial Assistance for Elementary and Secondary Education Act.....				
Educationally deprived children.....	1,758	548	1,845	336
Support innovation consolidation.....	192	50	178	1,998
Emergency school aid.....	213	55	271	184
Federally affected areas.....	599	75	847	273
Other ESEA.....	218	108	216	496
Salaries and expenses.....	115	25	119	251
Basic opportunity grants.....	905	219	1,522	126
Other higher education student support (OE).....	1,244	322	1,285	1,686
Other higher education (OE).....	306	53	280	439
Student loan insurance fund.....	120	89	157	240
Occupational, vocational, adult.....	748	90	726	389
Educational development.....	9	-----	3	744
Education for the handicapped.....	191	55	319	2
Library and instructional resources consolidation.....	152	18	175	380
Other Office of Education.....	44	28	100	163
National Institute of Education.....	69	14	89	124
Special institutions.....	127	31	155	94
Student grants (OASDI).....	1,352	343	1,602	170
Office of Human Development.....	495	139	512	1,570
Other HEW.....	273	70	302	518
Other.....	562	212	721	301
Subtotal, programs which are primarily educational.....	9,692	2,544	11,424	773
Federal outlays—education support for other basic purposes:				
Health professions training.....	666	189	549	372
Veterans readjustment.....	5,227	721	3,873	3,128
Defense.....	965	282	1,083	1,159
Child nutrition.....	1,890	393	3,023	2,172
Other.....	1,397	399	1,387	1,227
Subtotal, education support for other purposes.....	10,145	1,984	9,915	8,058
Federal outlays—salary supplements.....	236	90	261	318
Total, education outlays.....	20,073	4,618	21,600	19,633
Amounts previously carried for academic research not directed toward educational objectives.....	2,676	669	2,622	2,936

REFORM AND RENEWAL

The provision of educational services is primarily the responsibility of State and local educational agencies. The Federal role is one that strives to stimulate and encourage improvements in the educational process through reform, innovation, capacity building and research, and assuring equal educational opportunity for all citizens.

Federal initiatives in 1978 propose to:

- Consolidate 23 categorical programs under the Financial Assistance for Elementary and Secondary Education Act (see below).
- Provide aid to school districts facing problems in eliminating discrimination.

- Reform the impact aid program.
- Fully fund basic educational opportunity grants for all eligible undergraduate, postsecondary students up to \$1,400 per year.

Financial Assistance for Elementary and Secondary Education Act.—Legislation is proposed with an authorization level of \$3,775,528. It will include the following programs: Education of the disadvantaged; support and innovation; education for the handicapped; occupational, vocational, and adult education; and library resources.

This proposal is designed to provide States with more flexibility in determining their own educational priorities and funding needs and to eliminate any unnecessary administrative requirements.

Impact aid.—In 1978, reform of this program is proposed. Specifically, funds would be targeted toward those districts that have enrollments of children whose parents both live and work on Federal property. The revised impact aid program would also provide support for construction of school facilities in districts heavily impacted by Federal activity or Federal bases, and local educational agencies that experience sudden, unpredictable changes in Federal activities and payments to other Federal agencies for the education of Federal employees' dependents. This proposal supports the policy of providing support only for those districts that are truly adversely affected by Federal activities.

Emergency school aid.—In 1978, support for this activity will continue to be provided to those school districts that are in the process of desegregating. Support will also be provided for title IV of the Civil Rights Act of 1964, which provides advisory support and technical assistance to help educational agencies and institutions move toward achieving equality of educational opportunity.

Basic opportunity grants.—The \$1,844 million requested for basic grants is expected to provide awards averaging \$889 for 2.1 million full- and part-time undergraduate students in academic year 1978-79. Grants will range from \$200 to a maximum of \$1,400. The size of the grant is determined on the basis of the expected family and student contribution, specified by the needs analysis system approved annually by Congress, up to a maximum of one-half of the student's need. Recent legislation increased the basic grant maximum award from \$1,400 to \$1,800. The budget proposes to substitute a modified formula for the present distribution formula to alter the distribution of awards when appropriations are not sufficient to fully fund the program at the \$1,800 maximum grant level. The budget proposes sufficient funding for a maximum grant award of \$1,400. This modification, combined with the proposed funding level, will concentrate funds on low-income students.

Education and work.—Improving the connections between education and the world of work will continue to be addressed by the Office of Education, the Fund for the Improvement of Postsecondary Education, and the National Institute of Education. These agencies provide educators with information and technical assistance concerning the transition from school to work.

National Institute of Education.—The Institute (NIE) will continue as the focal point for the conduct of educational research and development. Emphasis will be placed on career education, school finance, productivity, local educational agency problem solving, the dissemination of research products, educational technology, and basic skills. The 1978 outlays for the NIE will total \$94 million.

OTHER PROGRAM DEVELOPMENTS

Health professions training support.—Legislation enacted by Congress emphasizes support to medical and dental schools that agree to address speciality distribution of health professionals. Student assistance programs will continue to emphasize scholarships that require service commitments. A new federally insured loan program with loan guarantee authority of up to \$500 million will allow institutions to set tuition at rates that cover more of the costs of education and allow health professions students with their high-income potential to borrow the necessary funds. Special project support would accordingly be reduced.

Veterans benefits.—In 1978, 1.7 million GI bill beneficiaries are expected to enroll in education courses covered by this special analysis at an average cost of \$1,898, up from \$1,877 in 1977.

Child nutrition.—The administration is proposing a single block grant to states to help feed needy children. The new program will provide greater funds to feed needy children than are now available under existing law, and will permit states to design programs that reflect local conditions and needs, and result in substantial Federal savings by the elimination of subsidies for the nonpoor.

PROGRAMS THAT ARE PRIMARILY EDUCATIONAL

Programs whose primary purpose is education are estimated to account for \$11.3 billion of educational expenditures in 1978. Elementary and secondary levels will receive \$5.8 billion of this amount. Higher education will receive an estimated \$4.3 billion and the remaining \$1.2 billion will be directed toward adult and continuing education, libraries, research, and cultural activities. Approximately 76% of Federal elementary and secondary school funds are administered by the Education Division of the Department of Health, Education, and Welfare. In 1978, the U.S. Office of Education will administer \$4.4 billion. Other HEW programs account for another \$1.2 billion.

The Office of Child Development will provide \$493 million in 1978 for elementary and secondary education, principally in the Head Start program.

Under the social security system (OASDI), survivors of insured workers between the ages of 18 and 22 who are still in school receive benefits, while those not in school do not. Legislation is proposed to phase out over a 4-year period this educational benefit for those becoming eligible in the future. In 1978, an estimated \$354 million of social security payments will be made to high school students.

Table I-2. FEDERAL OUTLAYS FOR PROGRAMS WHICH ARE PRIMARILY EDUCATIONAL BY LEVELS

Purpose and program	Outlays (millions)			
	1976 actual	TQ estimate	1977 estimate	1978 estimate
Elementary and secondary:				
Office of Education:				
Financial Assistance for Elementary and Secondary Education Act.....				336
Educationally deprived children (ESEA).....	1,758	548	1,845	1,998
Support-innovation consolidation.....	192	50	178	184
Other ESEA.....	199	101	191	217
Federally affected areas.....	599	75	847	496
Emergency school aid.....	213	55	271	273
Library resources consolidation.....	70	6	96	99
Education for the handicapped.....	191	55	318	378
Occupational and vocational education.....	423	49	409	421
Office of Child Development.....	476	134	489	493
Student grants (OASDI).....	255	64	303	354
Other HEW.....	201	58	282	307
Bureau of Indian Affairs.....	174	43	198	199
Other.....	36	11	35	40
Subtotal, elementary and secondary.....	4,787	1,249	5,462	5,795
Higher education:				
Office of Education:				
Basic opportunity grants.....	905	219	1,522	1,686
Work-study, supplementary grants and student supplementary incentive grants.....	646	158	653	345
Guaranteed student loans.....	266	64	278	-----
Direct student loans.....	301	87	320	15
Vocational education.....	163	18	153	174
Student loan insurance fund.....	52	72	85	362
Disadvantaged students and developing institutions.....	224	45	199	215
Other Office of Education.....	102	11	100	54
Special institutions.....	84	16	94	114
Student grants (OASDI).....	998	254	1,181	1,078
Other HEW.....	109	40	120	123
National Science Foundation.....	53	12	49	54
Other.....	43	20	49	53
Subtotal, higher education.....	3,946	1,016	4,803	4,273
Adult and continuing education:				
Office of Education:				
Occupational and adult education.....	142	21	137	127
Public libraries.....	57	8	63	53
Social Security Administration.....	99	25	118	138
Library of Congress.....	117	27	145	170
Other.....	40	13	49	45
Subtotal, adult and continuing education.....	455	94	512	533
Other:				
Office of Education:				
Salaries and expenses.....	115	25	119	126
Guaranteed student loans.....	31	13	35	82
Student loan insurance fund.....	68	17	72	24
National Institute of Education.....	35	8	48	47
Special institutions.....	28	9	36	30
Smithsonian Institution.....	56	15	58	60
Corporation for Public Broadcasting.....	70	26	103	107
National Foundation on the Arts and the Humanities.....	21	7	20	30
Other.....	80	65	156	150
Subtotal, other.....	504	185	647	656
Total	9,692	2,544	11,424	11,257

The Federal Government additionally aids or directly provides education for certain groups including Indians, Cuban refugees, and residents of Pacific territories. The National Science Foundation and National Foundation on the Arts and the Humanities also provide some support to elementary and secondary school levels.

An estimated \$4.3 billion will be spent in 1978 for *higher education*, a decrease of \$530 million from the 1977 level. Expenditures for higher education are 38% of total Federal outlays for education. The Office of Education will provide \$2.9 billion of the total amount for higher education.

The majority of the funds for educational purposes at the higher education level is for student support. In 1972, the year in which Congress enacted higher education amendments, \$933 million for Office of Education student support programs (work-study, supplementary grants, guaranteed student loans and direct student loans) constituted 43% of the total. In 1978, under administration proposals, Office of Education student aid expenditures will reach \$2,046 million, more than twice the 1972 level. Social security benefits to students at institutions of higher education will provide an additional \$1,078 million of student support in 1978, a decrease of \$103 million from the 1977 level as this benefit is phased out over a 4-year period. The focus of higher education aid will continue to shift from institutional support to direct student support with the full funding of basic opportunity grants.

Adult and continuing education will be provided \$533 million in 1978, a 4% increase over 1977. The Library of Congress and the Smithsonian Institution are among the activities included in this category.

EDUCATIONAL SUPPORT FOR OTHER PURPOSES

Almost half the expenditures for education is in programs directed toward multiple purposes.

The largest single program in this category is veterans readjustment benefits (the GI bill). Veterans readjustment is designed primarily to compensate veterans for opportunities lost while they were in the service. Expenditures reflect estimated use of program benefits by veterans, active duty personnel and other beneficiaries. Outlays for those education activities covered by this analysis peaked in 1976 at \$5.2 billion. The 1978 expenditures of \$3.1 billion reflect a decreasing number of persons eligible to receive benefits. School lunch, breakfast, milk, and other feeding programs provided \$3.0 billion in benefits for nutrition in 1977. The administration's child nutrition reform proposal would replace the existing fragmented, overlapping, and administratively complex programs for needy children. The administration's initiative will provide \$2.2 billion in 1978 for needy children including nearly 700,000 needy children who are not currently receiving benefits.

The GI bill and child nutrition programs will comprise 66% of the educational outlays from noneducational programs in 1978. The largest training program is for defense personnel. The Department of Defense trains inservice personnel and educates future service personnel through the service academies and Reserve Officer Training

Corps. Outlays for training will total \$376 million in 1978, a 6% increase over 1977.

Table I-3. FEDERAL OUTLAYS FOR OTHER BASIC PURPOSES BY LEVEL

Level and program	Outlays (millions)			
	1976 actual	TQ estimate	1977 estimate	1978 estimate
Elementary and secondary:				
Child nutrition.....	1,890	393	3,023	2,172
Forest Service.....	44	55	18	65
Community planning and development.....	32	7	37	35
Veterans readjustment.....	140	19	104	84
Other.....	93	17	91	90
Subtotal, elementary and secondary.....	2,199	491	3,273	2,446
Higher education:				
Veterans readjustment.....	4,301	593	3,186	2,573
Military service academies.....	249	67	274	294
Reserve Officers Training Corps.....	190	60	199	214
Other DOD.....	158	43	157	155
Health professions training.....	663	188	548	371
Research training (NIH).....	170	40	130	148
Alcohol, Drug, and Mental Health Administration.....	95	31	48	69
Other.....	129	44	135	95
Subtotal, higher education.....	5,955	1,066	4,677	3,919
Adult and continuing education:				
Agriculture Extension Service.....	219	57	241	240
Veterans readjustment.....	786	108	583	471
Other.....	90	27	118	137
Subtotal, adult and continuing education.....	1,095	192	942	848
Training of Federal military employees:				
Defense.....	283	82	330	351
Coast Guard.....	23	6	25	25
Subtotal, training of Federal military employees.....	306	88	355	376
Other:				
Department of State.....	33	8	35	37
Public service jobs.....	400	103	460	235
International development assistance.....	43	6	59	72
Other.....	114	30	114	125
Subtotal, other.....	590	147	668	469
Total.....	10,145	1,984	9,915	8,058

SALARY SUPPLEMENTS

Salary supplements in the form of educational allowances or direct provision of education for Federal employees or for their dependents will reach an estimated \$318 million in 1978, a 22% increase over 1977. These supplements consist almost entirely of Defense Department expenditures for overseas dependents education and for off-duty education of military personnel. The two programs account for \$303 million in 1978.

Table I-4. FEDERAL EDUCATION OUTLAYS FOR SALARY SUPPLEMENTS

Level and program	Outlays (millions)			
	1976 actual	TQ estimate	1977 estimate	1978 estimate
Total, salary supplements.....	236	90	261	318
Elementary and secondary.....	231	89	255	311
Higher education.....				1
Adult education.....			1	1
Other.....	5	1	5	5
Defense: Overseas dependents education.....	224	86	247	303
Other.....	12	4	14	15

EDUCATIONAL PERSONNEL TRAINING AND RESEARCH

Educational personnel training and research is funded under many programs already identified as directed toward education goals. They account for \$811 million in 1978 or 4% of total educational expenditures. Training funds (\$231 million) increase in 1978 by \$9 million over 1977 levels. Educational research, estimated at \$580 million in 1978, will be \$254 million above the 1976 and \$118 million above the 1977 levels.

The largest contributors to these categories are the Office of Education (73% of training funds) and the HEW Education Division (85% of research funds).

Table I-5. FEDERAL OUTLAYS FOR PERSONNEL TRAINING AND RESEARCH IN EDUCATION

Program	Outlays (millions)			
	1976 actual	TQ estimate	1977 estimate	1978 estimate
Education personnel training:				
Occupational, adult and vocational.....	49	9	46	35
Emergency school assistance.....	41	12	70	72
Education for the handicapped.....	39	17	37	34
Elementary and secondary education.....	18	14	16	28
National Science Foundation.....	4	1	4	8
Other.....	25	11	49	54
Subtotal, education personnel training.....	176	64	222	231
Education research:				
Elementary and secondary education.....	88	56	121	153
Education for the handicapped.....	42	12	69	70
Occupational, vocational, and adult education.....	46	6	62	109
Special projects for training.....		6	36	54
Assistant Secretary for Education.....	10		13	13
National Institute of Education.....	69	14	89	94
National Foundation on the Arts and Humanities.....	22	5	22	33
National Science Foundation.....	31	14	32	39
Other.....	18	5	18	15
Subtotal, educational research.....	326	118	462	580
Total.....	502	182	684	811

EDUCATIONAL SPENDING BY PURPOSE AND LEVEL

The table that follows (I-6) displays educational support funding by purpose and level.

Table I-6. FEDERAL OUTLAYS FOR EDUCATION BY PURPOSE AND LEVEL

	Outlays (millions)			
	1976 actual	TQ estimate	1977 estimate	1978 estimate
Elementary and secondary:				
Education.....	4,787	1,249	5,462	5,795
Other basic purposes.....	2,199	491	3,273	2,446
Salary supplements.....	231	89	255	311
Total, elementary and secondary.....	7,217	1,829	8,990	8,552
Higher education:				
Education.....	3,946	1,016	4,803	4,273
Other basic purposes.....	5,955	1,066	4,677	3,919
Salary supplements.....				1
Total, higher education.....	9,901	2,082	9,480	8,193
Adult and continuing education:				
Education.....	455	94	512	533
Other basic purposes.....	1,095	192	942	848
Salary supplements.....			1	1
Total, adult and continuing education.....	1,550	286	1,455	1,382
Other:				
Education.....	504	185	647	656
Other basic purposes.....	896	235	1,023	845
Salary supplements.....	5	1	5	5
Total, other.....	1,405	421	1,675	1,506
Total, outlays for education.....	20,073	4,618	21,600	19,633

Table I-7. FEDERAL OUTLAYS FOR ELEMENTARY AND SECONDARY EDUCATION BY SUBLEVEL AND TYPE OF SUPPORT

Sublevel and type of support	Outlays (millions)			
	1976 actual	TQ estimate	1977 estimate	1978 estimate
Total, elementary and secondary.....	7,217	1,829	8,990	8,552
Early childhood.....	713	201	768	2,772
Elementary and secondary.....	6,199	1,502	7,831	5,312
Supporting services.....	305	126	391	468
Current operations.....	6,287	1,563	7,894	7,318
Facilities and equipment.....	164	31	182	196
Student support.....	429	92	441	470
Education personnel training.....	156	58	190	199
Educational research.....	181	85	283	369

Elementary and secondary education support is provided primarily through grants to State and local educational agencies. Higher education support is not channeled generally through State and local government. Grants or loans are provided to an educational institution or to a student who then selects an institution to attend. Federal support for higher education continues to shift from institutional to student assistance. In 1978 an estimated \$6.7 billion or 82% of total higher education outlays will be direct grants or subsidies via loans to students. Another \$1.4 billion will go to institutions for current operations or facilities and equipment. This amount is essentially the same as the 1977 level.

The Federal Government also aids education through four tax expenditures whose benefits are predominantly at the higher education level. The exclusion from taxable income of veterans readjustment benefits (the GI bill) is estimated to reduce Federal revenues by \$200 million in 1978. The similar exclusion for other scholarships and fellowships results in a revenue loss of \$285 million in 1978. Parents may claim a personal exemption for full-time students over 18, even if the students have incomes of their own. This tax expenditure of \$375 million in 1978 aids families with older children in school. Finally, the deductibility of contributions by both individuals and corporations to educational institutions is estimated to reduce Federal receipts by \$805 million in 1978.

Table I-8. FEDERAL OUTLAYS FOR HIGHER EDUCATION BY TYPE OF INSTITUTION AND TYPE OF SUPPORT

	Outlays (millions)			
	1976 actual	TQ estimate	1977 estimate	1978 estimate
Total, higher education.....	9,901	2,082	9,480	8,193
2-year institutions.....	3,473	574	3,274	2,868
Other undergraduate.....	4,766	1,146	4,899	4,139
Graduate and professional.....	1,662	362	1,307	1,186
Current operations.....	1,381	335	1,308	1,201
Facilities and equipment.....	276	79	190	166
Student support.....	8,178	1,647	7,886	6,704
Education personnel training.....	18	6	34	36
Educational research.....	48	15	62	86

The reduction in student support in 1978 (approximately \$1.2 billion below the 1977 level) is attributable principally to the decline in total veterans benefits as the eligible veterans population declines. Student support continues to be the predominant higher education expenditure. Outlays for 2- and 4-year institutions in 1978 decrease by approximately 14% below the 1977 level.

STUDENT SUPPORT

An estimated \$6.7 billion will be available for student support in 1978, 87% of which is for undergraduate student assistance. The GI bill will provide 38% of the total for all student assistance. The Office of Education will spend another 36% or about \$2.4 billion to support various grant and loan programs.

The Office of Education estimates that about 2.9 million student grants and loans will be made in 1978 under its programs. Students receiving aid under more than one program account for at least one-third of this total.

Table I-9. STUDENT SUPPORT BY AGENCY: FEDERAL OUTLAYS AND NUMBER OF STUDENTS

Agency	Outlays (millions)				Student (thousands) ¹		
	1976 actual	TQ estimate	1977 estimate	1978 estimate	1976 actual	1977 estimate	1978 estimate
Undergraduate:							
Health, Education, and Welfare:							
Office of Education.....	2,030	531	2,680	2,236	2,750	3,290	2,510
Social Security Administration.....	967	246	1,144	1,035	535	637	697
Health agencies and other.....	28	19	26	21	43	39	26
Veterans Administration.....	3,806	525	2,820	2,277	1,810	1,418	1,242
Defense.....	183	56	183	192	36	34	33
Justice.....	39	21	46	41	22	93	79
Other.....	46	16	45	60	22	24	24
Subtotal, undergraduate.....	7,099	1,414	6,944	5,862	5,218	5,535	4,611
Graduate:							
Health, Education, and Welfare:							
National Institutes of Health.....	112	27	85	96	10	10	9
Office of Education.....	158	41	172	168	450	375	400
Other HEW.....	169	56	169	135	100	81	60
Veterans Administration.....	495	68	367	296	203	163	143
National Science Foundation.....	19	2	16	14	2	2	2
Defense.....	117	36	126	125	434	588	613
Other.....	9	3	7	8	9	9	8
Subtotal, graduate.....	1,079	233	942	842	1,208	1,228	1,235
Total ².....	8,178	1,647	7,886	6,704			

¹ Fiscal year student totals correspond to relevant academic years such as 1976 reflects the 1975-76 school year.

² Student totals not shown because some students receive awards under more than one program.

OUTLAYS BY EDUCATIONAL SUBLEVEL

In order to provide data in a form comparable with earlier education special analyses, the following tables are provided which display program and agency outlays by education sublevels in 1976, the transition quarter, 1977 and 1978.

Table I-10. FEDERAL OUTLAYS FOR ELEMENTARY AND SECONDARY EDUCATION BY AGENCY

Sublevel, agency and program	Outlays (millions)			
	1976 actual	TQ estimate	1977 estimate	1978 estimate
Early childhood:				
Office of Education:				
Elementary and secondary.....	143	46	151	179
Education for the handicapped.....	31	9	54	65
Appalachian regional development.....	19	1	22	22
Child development.....	476	134	489	493
Other.....	44	11	52	44
Child nutrition.....				1,969
Subtotal, early childhood.....	713	201	768	2,772
Elementary and secondary:				
Food and Nutrition Service.....	1,890	393	3,023	203
Defense.....	236	91	258	314
Office of Education:				
Financial Assistance for Elementary and Secondary Education Act.....				336
Educationally deprived children.....	1,565	486	1,641	1,755
Other ESEA.....	269	92	237	227
Federally affected areas.....	599	75	847	496
Emergency school aid.....	209	53	241	238
Education for the handicapped.....	87	18	186	246
Occupational and vocational education.....	406	46	392	413
Library resources and library consolidation.....	70	6	96	99
Other, Office of Education.....	25	14	35	38
Student grants (OASDI).....	255	64	303	354
Other HEW.....	133	29	160	159
Bureau of Indian Affairs.....	166	42	190	192
Community planning and development.....	22	3	18	13
Veterans readjustment.....	140	19	104	84
Other.....	127	71	100	145
Subtotal, elementary and secondary.....	6,199	1,502	7,831	5,312
Supporting services:				
Office of Education:				
Elementary and secondary education.....	174	76	188	239
Emergency school aid.....	4	2	30	34
Education for the handicapped.....	73	28	77	68
Innovative and experimental programs.....		4	32	53
National Institute of Education.....	30	5	36	43
National Science Foundation.....	7	5	6	8
Other.....	17	6	22	23
Subtotal supporting services.....	305	126	391	468
Total.....	7,217	1,829	8,990	8,552

Table I-11. FEDERAL OUTLAYS FOR HIGHER EDUCATION BY AGENCY

Sublevel, agency and program	Outlays (millions)			
	1976 actual	TQ estimate	1977 estimate	1978 estimate
2-year institutions:				
Office of Education:				
Basic opportunity grants.....	452	110	761	837
Other higher education.....	302	37	312	183
Occupational and vocational education.....	154	16	145	164
Student grants (OASDI).....	237	60	284	262
Health Resources Administration.....	60	27	65	44
Veterans readjustment.....	2,174	300	1,611	1,301
Other.....	94	24	96	77
Subtotal, 2-year institutions.....	3,473	574	3,274	2,868
Other undergraduate:				
Military service academies.....	249	67	274	294
Reserve Officers Training Corps.....	190	60	199	214
Health Resources Administration.....	96	31	70	62
Office of Education:				
Basic opportunity grants.....	452	110	761	849
Work-study and supplementary grants.....	460	130	445	204
Guaranteed student loans.....	84	36	95	-----
Other higher education.....	217	93	260	338
Disadvantaged students and developing institu- tions.....	177	37	154	170
Direct student loans.....	227	81	250	-----
Student grants (OASDI).....	731	186	860	773
Special institutions.....	43	16	94	62
Office of the Secretary.....	65	28	68	68
Other Office of Education and HEW.....	27	6	42	16
Bureau of Indian Affairs.....	25	11	30	30
Veterans readjustment.....	1,632	225	1,209	976
National Science Foundation.....	27	7	20	25
Other.....	64	22	68	58
Subtotal, other undergraduate.....	4,766	1,146	4,899	4,139
Graduate and professional:				
Health Services Administration.....	34	9	28	5
Research training (NIH).....	170	40	130	147
ADAMHA.....	88	29	43	64
Health Resources Administration.....	507	130	395	271
Higher education (Office of Education).....	49	9	43	54
Student grants (OASDI).....	31	8	37	43
Special institutions.....	41	-----	-----	52
Veterans readjustment.....	494	68	366	296
Department of Defense.....	137	42	147	147
National Science Foundation.....	24	5	25	26
Other.....	87	22	93	81
Subtotal, graduate and professional.....	1,662	362	1,307	1,186
Total.....	9,901	2,082	9,480	8,193

Table I-12. FEDERAL OUTLAYS FOR ADULT EDUCATION AND OTHER ACTIVITIES BY AGENCY

Sublevel, agency and program	Outlays (millions)			
	1976 actual	TQ estimate	1977 estimate	1978 estimate
Adult basic and extension:				
Agriculture extension service.....	219	57	241	240
Office of Education.....	121	24	136	130
Social Security Administration.....	99	25	118	138
Veterans readjustment.....	786	108	583	471
Department of Defense.....	59	22	97	117
Other.....	24	5	21	18
Subtotal, adult basic and extension.....	1,308	241	1,196	1,114
Public and national library services:				
Library of Congress.....	117	27	145	170
Library resources (Office of Education).....	57	8	63	53
Other.....	68	10	51	45
Subtotal, public and national library services.....	242	45	259	268
Training of Federal, State, and local civilian employees:				
Justice.....	15	4	16	15
Federal Aviation Administration.....	14	4	16	16
Commerce Department.....	10	3	14	14
Department of the Treasury.....	12	3	18	28
Other.....	20	5	22	20
Subtotal, training of public civilian employees.....	71	19	86	93
Training of Federal military employees:				
Defense.....	283	82	330	351
Coast Guard.....	23	6	25	25
Subtotal, training of Federal military employees.....	306	88	355	376
Foreign educational activities:				
State.....	32	8	34	35
International development assistance.....	42	6	57	70
Department of Defense.....	2	1	3	4
Subtotal, foreign educational activities.....	76	15	94	109
Other:				
Office of Education:				
Salaries and expenses.....	115	25	119	126
Educationally deprived children.....	139	35	156	152
National Institute of Education.....	35	8	48	47
Office of the Secretary, HEW.....	40	8	26	26
National Institutes of Health.....	26	6	25	29
Smithsonian Institution.....	56	15	58	60
Corporation for Public Broadcasting.....	70	26	103	107
National Foundation on the Arts and Humanities.....	21	7	20	30
Public service jobs.....	400	103	460	235
Housing and Urban Development.....	—31	45	40	32
Other.....	81	21	85	84
Subtotal, other.....	952	299	1,140	928
Total.....	2,955	707	3,130	2,888

Table I-13. FEDERAL AID FOR EDUCATION BY AGENCY

Agency	Outlays (millions)				Budget authority (million) 1978
	1976 actual	TQ estimate	1977 estimate	1978 estimate	
Legislative branch:					
Library of Congress.....	117	27	145	170	178
Funds appropriated to the President:					
International Development Assistance.....	43	6	59	72	102
Appalachian Regional Commission.....	66	7	58	54	29
Agriculture.....	2,159	506	3,289	2,484	2,414
Commerce.....	15	4	19	17	19
Defense—Military.....	1,190	368	1,329	1,462	1,479
Defense—Civil.....	8	2	10	11	17
Health, Education, and Welfare:					
Office of Education.....	6,814	1,735	8,044	7,830	7,573
Other HEW.....	3,369	888	3,497	3,316	2,882
Housing and Urban Development.....	13	52	84	69	32
Interior.....	228	63	257	259	266
Justice.....	63	27	71	66	55
Labor.....	400	103	460	235	400
State.....	39	11	44	46	49
Transportation.....	38	10	42	43	45
Treasury.....	13	3	18	28	9
Energy Research and Development Administration.....	6	2	9	17	17
Environmental Protection Agency.....	7	2	5	5	2
General Services Administration.....	14	5	15	15	15
National Aeronautics and Space Administration.....	5	1	5	5	5
Veterans Administration.....	5,227	721	3,873	3,128	3,055
Other independent agencies:					
ACTION.....	7	2	7	5	4
Corporation for Public Broadcasting.....	70	26	103	107	107
National Foundation on the Arts and Humanities.....	36	10	35	53	131
National Science Foundation.....	65	18	60	69	76
Smithsonian Institution.....	56	15	58	60	61
United States Information Agency.....	4	2	4	4	4
Other.....	1	2		3	1
Total.....	20,073	4,618	21,600	19,633	19,027

SPECIAL ANALYSIS J

FEDERAL TRAINING AND EMPLOYMENT PROGRAMS

SCOPE OF THIS ANALYSIS

Federal training and employment programs aim to increase the skills and employment opportunities of individuals already in the work force and of persons who desire to join the work force but lack vocational preparation or face other employment barriers. The programs provide skill training, rehabilitation, transitional employment experience, job placement assistance, and related child care and support services.

These programs are distinguished from regular educational programs by their operating characteristics. Generally, they: (1) Operate outside the normal educational process, (2) provide skill training for nonprofessional jobs, (3) provide services for less than 1 year, and (4) target on the disadvantaged or unemployed.

This analysis covers all programs classified as training and employment services in the functional classification of the budget. It also includes programs directed toward similar objectives from other functional classifications such as income security, and veterans benefits and services.

Not included in this analysis are programs of vocational and technical education and paraprofessional training such as are authorized by the Vocational Education Act, Adult Education Act, and Elementary and Secondary Education Act. Since these programs operate within the normal educational process they are covered in Special Analysis I, Federal Education Programs.

Outlays in 1978 are expected to be \$7.8 billion, about \$1.5 billion less than 1977 due almost entirely to the reduced need for subsidized public service jobs in 1978 as the economy and the employment situation improve.

TAX EXPENDITURES

Certain provisions of the personal and corporate income tax that are designed to achieve particular economic and social objectives give rise to revenue losses that are called tax expenditures. This concept is discussed more fully in Special Analysis F. Two tax expenditures are specifically related to employment and training. Since they do not result in obligation, workload, or outlay figures comparable to the other activities, amounts for each tax expenditure are noted here but not included in the tables in the body of the special analysis.

Child and dependent care expenses.—A 20% tax credit for child and dependent care expenses incurred to permit a taxpayer and spouse to work (or a single worker with dependents) may be taken up to a maximum credit of \$400 for one child and \$800 for two or more. These provisions of the Tax Reform Act of 1976 replaced a deduction for child and dependent care expenses which phased out at high income levels.

WIN/AFDC tax credit.—Employers may take an income tax credit equal to 20% of the first-year wages and salaries of employees placed in employment under the work incentive program. Beyond \$50,000

a year, the credit is allowable only at half this rate. The Department of Labor estimates that credits for some 26,100 WIN recipients were taken in 1976. The Tax Reduction Act of 1975 and Tax Reform Act of 1976 extended a similar credit for all AFDC recipients and made the credit applicable to private employers of domestics. However, in the case of domestics, the maximum amount of wages on which credit may be taken is \$5 thousand. Estimates of the tax receipts lost due to these provisions are:

(In millions of dollars)

	1976 <i>estimate</i>	1977 <i>estimate</i>	1978 <i>estimate</i>
Child and dependent care.....	290	840	870
WIN/AFDC.....	10	15	15

YOUTH EMPLOYMENT PROGRAMS

Many programs provide work experience or training to youth under 22. Because the problems of youth are complex and the approaches to them varied, the Federal effort involves many agencies and activities. In 1976, approximately 4.4 million youth were served, at a cost of \$3,146 million (see table below). Of these youth, 33% participated in programs specifically designed to assist young people. As a comparison, an average of about 1.7 million teenagers were unemployed during 1976.

Disadvantaged youth are the focus of the Federal summer employment program, and the President's stay-in-school program, both administered by the U.S. Civil Service Commission. (An additional 31,100 summer jobs are filled by young people without regard to income via competitive staffing procedures.) The Job Corps (CETA, Title IV), administered by the Department of Labor, and the high school work study program, administered under the direction of the Department of Health, Education, and Welfare, provide skill training and work experience to youth with limited financial resources. Summer work experience for low-income youth is furnished by the CETA summer program, which is funded through grants to State and local prime sponsors by the Department of Labor. The Youth Conservation Corps, run under the auspices of the Departments of Agriculture and Interior, employs youth for the summer on public lands.

Another sixteen programs in six agencies (see chart) serve youth participants. These programs provide assistance to young persons in the areas of skill training, job referral and placement, work experience, public service employment, and vocational rehabilitation.

In addition, youth receive direct placement assistance from the U.S. Employment Service under its regular programs and the food stamp program. During 1976, the Employment Service, through its regular activities, placed in jobs 1,281,600 individuals age 21 and under, and an additional 67,300 referred to it through the food stamp mandatory registration program.

Improving the understanding of youth labor force problems is the principal focus of a range of research and demonstration efforts in several agencies. For example, one demonstration project will study the cost and effectiveness of providing a transitional supported work environment for traditionally hard to employ persons, including unemployed youth, ex-offenders, and female welfare heads of households.

In another study, the nature of the dropouts' employment experience is being researched with the goal of improving the transition between school and work.

Development of Federal youth employment strategies has been undertaken by a secretarial level coordinating group that includes DOL, HEW, and Commerce.

EMPLOYMENT AND TRAINING PROGRAMS SERVING YOUTH IN FISCAL YEAR 1976

[Individuals in thousands, outlays in millions]

Program	New ¹ enrollees	Total ¹ partici- pants	Outlays (est.)
Only for youth:			
CETA summer.....	888.1	1,131.6	459.4
Youth Conservation Corps.....	23.0	23.0	17.4
Job Corps—CETA title IV.....	44.0	64.7	180.6
High school work study.....	15.0	42.0	10.8
Federal summer aid.....	30.0	30.0	42.0
Stay-in school.....	4.1	18.3	57.5
Subtotal.....	<u>1,004.2</u>	<u>1,309.6</u>	<u>767.7</u>
Serving youth and others:²			
CETA—Title I, II, III (except summer), and VI.....	1,184.1	1,596.4	1,746.9
WIN.....	15.2	19.8	35.6
HUD—community development.....	7.9	10.1	18.9
Veterans Administration programs.....	3.2	10.6	17.5
Bureau of Indian Affairs programs.....	6.0	8.7	19.0
HEW—vocational rehabilitation.....	88.3	283.0	173.3
HEW—social services.....	718.5	1,137.3	355.4
Community Services Administration.....	3.7	11.0	12.1
Subtotal.....	<u>2,026.9</u>	<u>3,076.9</u>	<u>2,378.7</u>
Total.....	<u>3,031.1</u>	<u>4,386.5</u>	<u>3,146.4</u>

¹ Youth only.

² Outlays for these programs are prorated based on the percentage of youth participants.

COUNTERCYCLICAL PROGRAMS

Several programs intended to address cyclically high unemployment were enacted in the recent downturn. These measures were undertaken in addition to the fiscal policies which are the principal strategies for restoring the health of the economy. The impact of the countercyclical employment measures on the unemployment rate is limited. Not only are the Federal funds used for activities which States and localities might otherwise have funded themselves, but the existence of the programs attracts people into the labor force who might not otherwise seek employment. These programs have made funds available to States and localities for use in providing services and facilities, and some of those employed would otherwise have had difficulty in finding jobs.

Unemployment compensation.—Unemployment compensation is the most important means of aiding the unemployed. It provides substantial income replacement for unemployed workers while they search for jobs. Unemployment compensation was extended to up to 65 weeks for workers covered by the regular State programs, and provided for up to 39 weeks for other workers under the special unemploy-

ment assistance (SUA) program. The 1976 amendments to the unemployment insurance laws have brought the coverage in the regular unemployment insurance program to 97% of wage and salaried employment, effective in 1978. (See Special Analysis L.)

Subsidized employment programs.—The following three programs were intended to increase employment during the economic downturn. As the economy recovers, the temporary programs will phase out.

Temporary employment assistance.—Under Title VI of the Comprehensive Employment and Training Act, grants were provided to States, localities and Indian tribes to support about 260,000 temporary public service jobs. This program is being maintained at this level in 1977 and then phased out in 1978.

Public works employment.—Under the Public Works Employment Act of 1976, \$3.7 billion was provided, as follows:

- \$2.0 billion to the Department of Commerce for various State and local public works projects;
- \$1.25 billion to the Department of Treasury for “countercyclical” revenue sharing assistance to State and local governments.
- \$480 million to the Environmental Protection Agency for additional grants for construction of waste treatment works.

These funds are expected to create 160,000 years of employment over 5 or more years.

Job opportunities program.—This program was enacted as part of the Emergency Jobs and Unemployment Assistance Act of 1974 (Public Law 93-567). In 1975 and 1976, funds were made available to the Department of Commerce, which reviewed and provided financial assistance for project proposals from other Federal agencies. Although a broad range of services, construction and other activity was financed, the principal purpose of all projects was to create employment. For the purposes of this special analysis, therefore, the entire activity is classified under “public service employment.” Approximately 99,400 individuals are expected to have been employed in this program over a 3-year period ending in 1977.

YOUTH CONSERVATION CORPS

The Youth Conservation Corps is included for the first time in this year’s special analysis. It is authorized under the Youth Conservation Corps Act of 1970 as amended, Public Law 91-378. The purpose of the Youth Conservation Corps is to further the development and maintenance of the Nation’s national resources by providing gainful employment of youth aged 15 through 18 on Federal lands and improving the environmental understanding of youth. It serves some low-income youth, but by law it cannot be targeted to those in need. Thirty percent of appropriations are provided to States to operate similar programs on non-Federal public lands.

FOOD STAMP PROGRAM

The Food Stamp Act of 1964 was amended in January 1971 to include a work requirement. Regulations effective in September 1976 provide that any employment offered shall be accepted unless

the registrant is physically or mentally unfit, the job involves unreasonable risk to health and safety, or the distance to the job is excessive. The State Employment Service refers food stamp registrants to job openings and assists them in job search activities.

HIGH SCHOOL WORK STUDY

States and localities can fund high school work study programs in 1977 and 1978 but the extent to which they do fund them is discretionary. For the purposes of this special analysis, it is assumed that the 1976 level will be maintained by the States in 1977 and 1978.

HEW—SOCIAL SERVICES

Under amendments to Title XX of the Social Security Act, a new reporting system was instituted in 1975 to develop information on State plans for services. Prior to this system (before fiscal year 1976), HEW estimated services provided on the basis of partial surveys. The difference between the levels of service projected from the survey estimates and the levels projected from the new reporting system is substantial. Data before 1976 are not comparable to the current data and therefore this program has been excluded from calculations in Tables J-9 and J-10. The sharp break from prior year reporting is, however, reflected in the institutional training portions of the charts below.

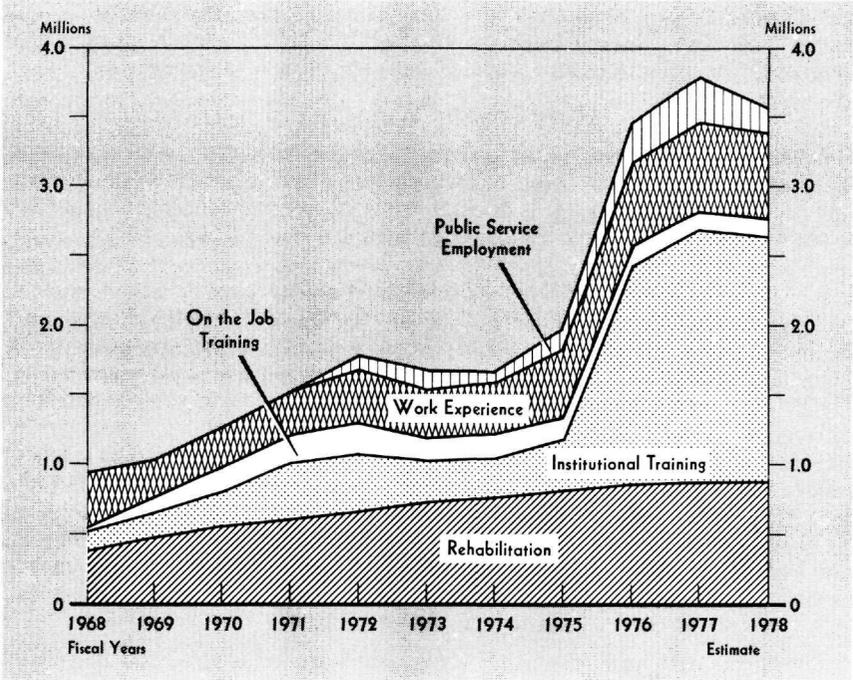
PROGRAM APPROACHES

Employment and training programs are classified into major approaches as follows:

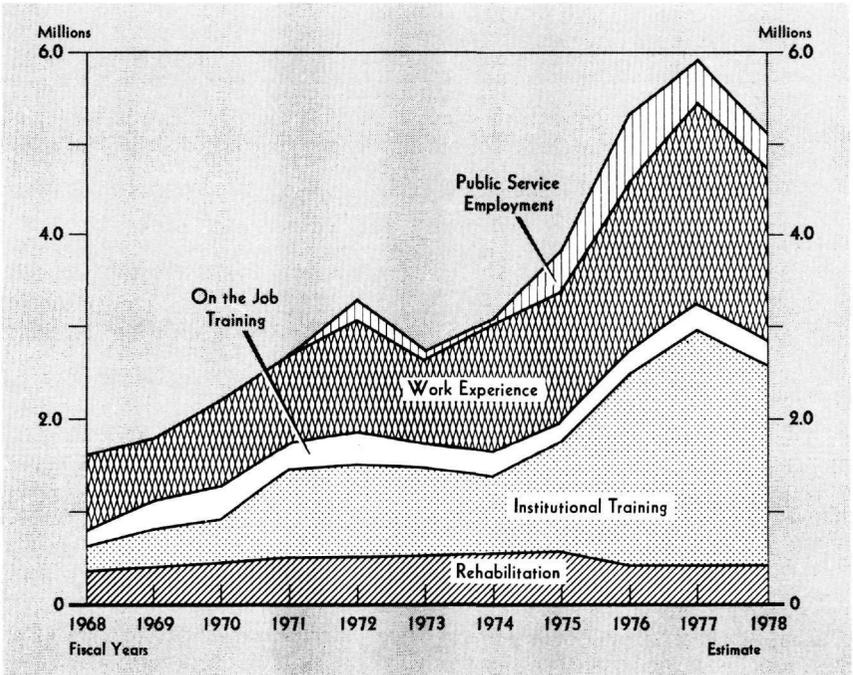
- On-the-job training—provides training for regular job vacancies generally by reimbursing employers for the added costs of hiring disadvantaged individuals. Employers are expected to retain the individual once reimbursement ends.
- Institutional training—provides instruction in vocational skills and job related remedial education in a classroom setting.
- Vocational rehabilitation—helps individuals overcome physical and mental handicaps to employment, through skill training, counseling, allowances and supportive services.
- Work experience—provides temporary employment experience, generally part time, primarily for youth and older workers.
- Public service employment—provides employment, generally intended to be transitional, in public sector jobs for individuals who need to acquire work discipline and skills to compete for nonsubsidized jobs, or who have difficulty obtaining regular employment.
- Labor market services—encompasses services to assist individuals in obtaining employment, including (a) job placement assistance, (b) collection and analysis of labor market information, (c) equal employment opportunity activities (excluding individual agency civil rights activities other than contract compliance—see Special Analysis M), and (d) other miscellaneous activities.
- Federal program support—includes research, development and evaluation activities as well as planning, technical assistance and program direction.

Some programs can be classified entirely under one approach. Others, such as the work incentive program (WIN) and Comprehensive Em-

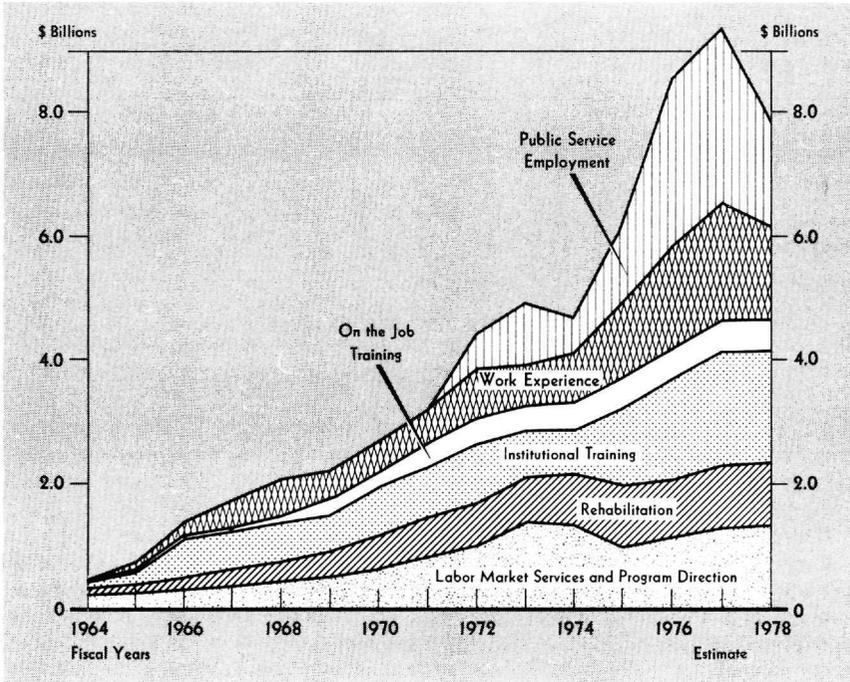
Years of Service



New Enrollees



Outlays



ployment and Training Act programs (employment and training assistance—ETA) offer a range of work and training services, and thus are divided among several approaches.

Estimates by approach for State and local programs under ETA, are based on projections from 1976 program operating plans of prime sponsors. Approaches actually funded are those which local sponsors determine are most appropriate to the individuals they choose to serve and to the characteristics of the local labor market. The actual 1977 and 1978 uses may therefore vary considerably from these projections. The comparable situation exists for the HUD community development activity.

PROGRAM MEASURES

The three principal measures used to summarize the level of program services are:

- Years of service*, which measures the average year round enrollment;
- New enrollees*, which counts the number of individuals entering the activity during the year; and
- Outlays*, which measures the level of spending during the year.

Table J-1. PERCENT DISTRIBUTION BY APPROACH

	Outlays			Years of service			New enrollees		
	1976 actual	1977 est.	1978 est.	1976 actual	1977 est.	1978 est.	1976 actual	1977 est.	1978 est.
Public service employment.....	32	30	21	8	9	5	14	8	7
Work experience.....	19	21	20	17	17	17	35	37	37
On-the-job training.....	6	5	6	4	3	3	5	5	5
Institutional training.....	19	20	23	45	48	50	39	44	42
Rehabilitation.....	11	11	13	25	23	24	8	7	8
Labor market services.....	13	14	17	-----	-----	-----	-----	-----	-----

PROGRAMS BY APPROACH

The following tables show activity of major programs by approach. Narratives with each table reference only significant changes and include brief program descriptions if necessary. More complete program descriptions may be found under the appropriate account title in the Budget Appendix.

On-the-job-training (OJT).— The decline in outlays for veterans is a result of a large group of veterans reaching the end of their GI bill eligibility. The increase in new enrollment in 1978 for veterans reflects the Veterans Administration's intention to increase veteran participation in on-the-job training programs.

Table J-2. ON-THE-JOB TRAINING (outlays in millions, individuals in thousands)

	Outlays			Individuals served					
				Years of service			New enrollees		
	1976 act.	1977 est.	1978 est.	1976 act.	1977 est.	1978 est.	1976 act.	1977 est.	1978 est.
Employment and training assistance.....	177	186	185	43	48	45	164	196	182
WIN.....	91	98	91	10	10	10	27	26	26
On-the-job training for veterans.....	198	145	135	85	56	51	35	29	31
Other.....	22	36	41	5	9	9	14	20	14
Total.....	487	465	452	143	123	116	240	271	253

Institutional training.—Included in this approach under ETA is the Job Corps, a specialized program conducted in a residential setting for youth aged 14 to 21, for which an outlay of \$212.9 million is expected in 1978.

The entry for social services includes programs operated by State agencies for public assistance recipients but is exclusive of service to WIN participants. The social services program increased in 1977 as a result of a nonrecurring increase in amounts available for supportive day care services.

Other institutional training includes programs for Indians, prisoners preparing for employment after release, and others.

Table J-3. INSTITUTIONAL TRAINING (outlays in millions, individuals in thousands)

	Outlays			Individuals served					
				Years of service			New enrollees		
	1976 act.	1977 est.	1978 est.	1976 act.	1977 est.	1978 est.	1976 act.	1977 est.	1978 est.
Employment and training assistance.....	822	876	875	189	199	189	583	706	659
WIN.....	42	45	42	13	10	10	34	23	23
Social services training.....	712	860	800	1,342	1,596	1,566	1,437	1,816	1,458
Other.....	44	61	66	17	21	21	28	26	26
Total.....	1,619	1,842	1,783	1,561	1,826	1,786	2,082	2,571	2,167

Table J-4. VOCATIONAL REHABILITATION

(Outlays in millions, individuals in thousands)

	Outlays			Individuals served					
				Years of service			New enrollees		
	1976 act.	1977 est.	1978 est.	1976 act.	1977 est.	1978 est.	1976 act.	1977 est.	1978 est.
HEW vocational rehabilitation.....	847	897	920	838	844	844	395	397	399
Veterans vocational rehabilitation.....	92	110	113	15	14	15	18	19	19
Total.....	939	1,007	1,034	852	857	858	412	416	417

Work experience.—Estimates for ETA include in-school, out-of-school, and summer youth activity, as well as non-youth activity.

The decline in 1978 new enrollees in ETA is due principally to the decline in the preliminary estimate of need for subsidized summer jobs for youth, in line with the anticipated improvement in the employment situation generally. Final budget estimates for this summer youth program are made in March of each year.

Table J-5. WORK EXPERIENCE (outlays in millions, individuals in thousands)

	Outlays			Individuals served					
				Years of service			New enrollees		
	1976 act.	1977 est.	1978 est.	1976 act.	1977 est.	1978 est.	1976 act.	1977 est.	1978 est.
Employment and training assistance.....	1,214	1,381	1,306	458	504	462	1,674	1,956	1,769
Temporary employment assistance.....	237	309	30	27	20	10	76	126	21
Federal agency youth programs.....	100	105	107	44	59	61	34	46	48
WIN.....	12	12	11	4	3	3	17	14	14
Other.....	86	130	143	61	68	74	49	58	50
Total.....	1,648	1,937	1,597	595	655	610	1,849	2,201	1,901

Public service employment.—ETA includes authority for public employment under regular prime sponsor grants (title I), special grants in areas with an unemployment rate of 6.5% or more for 3 consecutive months (title II) and national programs (title III). The reduction in 1978 levels is due to the phase out of the temporary employment assistance program consistent with the expected overall improvement in the economy.

Table J-6. PUBLIC SERVICE EMPLOYMENT

(Outlays in millions, individuals in thousands)

	Outlays			Individuals served					
				Years of service			New enrollees		
	1976 act.	1977 est.	1978 est.	1976 act.	1977 est.	1978 est.	1976 act.	1977 est.	1978 est.
Employment and training assistance.....	752	590	589	96	71	69	298	164	158
Temporary employment assistance.....	1,645	2,042	970	198	260	120	419	270	215
WIN.....	58	67	62	4	5	5	9	11	11
Job opportunities program..	269	129	0	INA	INA	INA	INA	INA	INA
Total.....	2,725	2,828	1,621	299	336	194	727	444	384

Labor market services.—*Job placement assistance.*—The State Employment Service (ES), is the major federally financed deliverer of job placement assistance for the general labor force, and for the disadvantaged. In cooperation with welfare agencies, ES also provides placement services to WIN and food stamp recipients. Other specialized placement assistance is provided by the Veterans Administration and the Bureau of Indian Affairs.

Labor market information.—Activities are those of the Department of Labor's Employment and Training Administration and Bureau of Labor Statistics.

Table J-7. JOB PLACEMENT ASSISTANCE, LABOR MARKET INFORMATION AND EQUAL EMPLOYMENT OPPORTUNITY (in millions of dollars)

	Outlays		
	1976 actual	1977 estimate	1978 estimate
Job placement assistance:			
Employment service.....	513	599	655
Work incentive program.....	43	76	71
Food stamp recipient services.....	26	29	31
Other placement assistance.....	52	55	54
Labor market information.....	45	55	58
Equal employment opportunity.....	105	118	122
Total.....	785	933	991

Equal employment opportunity.—Includes the Equal Employment Opportunity Commission, the Employment Standards Administration of the Department of Labor (including the Office of Federal Contract Compliance Programs (OFCCP), and the equal pay and age discrimination programs), and contract compliance activities within other agencies conducted under OFCCP aegis.

Table J-8. PERCENT OF PROGRAM COSTS USED FOR SUPPORTIVE SERVICES FOR SELECTED PROGRAMS

	1975 actual	1976 actual
CETA title I.....	12	12
CETA title II.....	1	1
Work incentive program.....	33	35
HEW Vocational rehabilitation.....	59	50
Veterans program (VA).....	5	5
Indian programs (Interior).....	16	13

Unit costs by approach.—Costs include the various labor market and supportive services usually provided to supplement the indicated training or work program, as well as administrative costs. Cost changes frequently reflect minimum wage increases and other general economic factors rather than substantive program change.

Table J-9. UNITS COSTS BY APPROACH, 1975 AND 1976

	Average duration of enrollment (years)		Year of service unit cost (dollars)		Participant unit cost (dollars)	
	1975	1976	1975	1976	1975	1976
On-the-job training.....	0.77	0.60	3,102	3,492	2,376	2,115
Institutional training.....	.30	.35	3,934	4,210	1,161	1,466
Vocational rehabilitation.....	1.32	1.48	1,337	1,296	1,759	1,921
Work experience.....	.32	.33	2,451	2,926	786	961
Public service employment.....	.70	.53	8,220	8,335	5,793	4,431

People served.—Most Federal employment and training programs focus on low-income individuals and others with severe barriers to employment as they are least likely to be able to improve their employment opportunities without assistance. Changes over time in characteristics of participants frequently result from programmatic or statutory changes rather than shifts within the general population served. For example, change in the proportion of those with less than a high school education is largely due to the fact that public service jobs programs, which by law have not been targeted to the disadvantaged, increased substantially in 1976 as a proportion of total program resources.

Other employment and training programs generally target by statute on the poor, the unemployed, the less educated, members of minorities, youth, and welfare recipients.

Table J-10. CHARACTERISTICS OF UNEMPLOYED WORKERS, ADULT POVERTY POPULATION AND PROGRAM PARTICIPANTS (in percent)

	Unemployed workers (age 16 and above) civilian noninstitutional			Poverty population (age 14 and above) civilian noninstitutional ²			Employment and training program participants (age 14 and above) ³		
	1972	1974	1976 ¹	1972	1974	1976 ⁴	1972	1974	1976
Average number (in millions).....	4.8	5.1	7.3	17.2	15.4	17.3	2.3	2.1	2.3
Percent:									
Age 21 or less.....	38	39	34	23	25	27	31	31	42
Male.....	54	53	54	38	37	38	48	44	57
Less than high school education..	48	47	42	70	67	68	47	43	47
Poor.....	21	20	17	100	100	100	75	67	68
Welfare recipient.....	NA	NA	NA	NA	NA	NA	43	42	25
Minority ⁵	20	20	20	27	30	28	40	35	46

¹ Represents 11-month average.

² Data collected in March of year shown represents income of the prior year.

³ Excludes in-school programs.

⁴ Census Population Survey revised methodology.

⁵ Data for poverty population does not include Spanish speaking.

NA—Data not available.

Table J-11. CHARACTERISTICS OF ENROLLEES IN SELECTED PROGRAMS, 1974, 1975, 1976 (in percent)

	Poor			21 or younger			Less than high school education		
	1974	1975	1976	1974	1975	1976	1974	1975	1976
CETA title I.....	NA	77	76	NA	62	57	NA	61	54
CETA title II.....	NA	48	75	NA	24	56	NA	28	54
TEA.....	NA	44	44	NA	21	22	NA	27	26
Job Corps.....	100	100	100	100	100	100	90	89	92
WIN.....	90	100	100	16	19	18	60	59	60
HEW vocational rehabilitation...	62	67	60	25	27	22	43	43	38
Indian OJT.....	100	100	65	10	20	47	65	65	41
Veterans OJT.....	15	15	15	6	6	6	15	15	15
	Male			Minority race			Welfare recipients		
	1974	1975	1976	1974	1975	1976	1974	1975	1976
CETA title I.....	NA	54	54	NA	56	57	NA	27	26
CETA title II.....	NA	66	54	NA	43	56	NA	16	26
TEA.....	NA	70	65	NA	39	31	NA	14	13
Job Corps.....	74	75	72	63	71	73	37	35	41
WIN.....	28	25	27	44	46	45	100	100	100
HEW vocational rehabilitation...	54	57	49	22	24	21	17	19	17
Indian OJT.....	49	45	47	100	100	100	25	25	18
Veterans OJT.....	99	99	99	8	8	8	NA	NA	NA

IMPACT OF EMPLOYMENT AND TRAINING PROGRAMS

There are significant limitations to the ability to discern the impact that employment and training programs exert on national economic conditions. This constrains assumptions of the value of program change as a means of altering basic economic conditions. For example, the potential impact for one of the largest approaches, public service employment, is diluted by substitution effects. Analysis indicates that a substantial portion of funds for programs financing transitional public service employment do not create new jobs. Instead, sponsors tend to substitute Federal funding for jobs that would otherwise be funded by States and localities. The degree of substitution tends to increase substantially the longer a public jobs program is in place. A major evaluation study now underway may, for the first time, begin to provide sound information on the impact of the CETA programs. Initial findings should be available in 1977.

In addition, experience has shown that it is extremely difficult from the national level to target program effects properly on the particular problems of workers in each labor market. The goal of decentralized block grant programs is to enable more direct response to local needs in accord with broad national direction.

SELECTED PROGRAM ACCOMPLISHMENTS IN 1976

- 380,400 individuals placed in jobs through ETA training programs
- 186,100 WIN participants found full-time jobs; an additional 17,300 found part-time employment.
- Assistance provided to programs serving 390,000 apprentices.
- 2.8 million individuals placed in 4-day or longer jobs by the employment service.
- 321,300 persons rehabilitated by HEW vocational rehabilitation programs, including 144,300 who were severely disabled.

FUNDS BY AGENCY

The following table shows obligations and outlays by administering agency and major program or account. Two agencies—the Departments of Labor, and Health, Education, and Welfare will account for about 91% of all employment and training outlays in 1977.

Table J-12. FEDERAL FUNDS FOR TRAINING AND EMPLOYMENT PROGRAMS BY ADMINISTERING AGENCY

(In millions of dollars)

Agency and program	Obligations				Outlays			
	1976 actual	TQ actual	1977 estimate	1978 estimate	1976 actual	TQ actual	1977 estimate	1978 estimate
Department of Agriculture: Youth conservation corps.....	24	12	33	16	17	18	34	18
Department of Commerce: Job opportunities program.....	455	-----	-----	-----	269	79	129	-----
Community Services Administration.....	41	26	43	20	41	23	46	22
Department of Health, Education, and Welfare:								
Social Services.....	712	175	860	800	712	175	860	800
Vocational rehabilitation.....	913	232	925	928	847	271	897	920
High school work study.....	10	3	10	10	11	2	10	10
CETA support.....	2	-----	2	2	2	-----	2	2
Subtotal, HEW.....	<u>1,636</u>	<u>410</u>	<u>1,796</u>	<u>1,740</u>	<u>1,571</u>	<u>448</u>	<u>1,769</u>	<u>1,732</u>
Department of Housing and Urban Development.....	82	22	118	115	46	16	87	104
Department of Justice: Prisoner training.....	5	1	6	6	5	1	6	6
Department of the Interior: Indian programs.....	47	16	51	45	43	19	49	47

Department of Labor:								
Employment and training assistance.....	2,946	628	3,412	3,142	3,158	1,058	3,212	3,141
Temporary employment assistance.....	1,810	997	1,404	1,000	1,887	519	2,358	1,000
Work incentive program.....	356	111	370	365	307	87	365	344
Food stamp recipient services.....	26	9	29	31	26	9	29	31
Older Americans community service employment.....	85	1	91	23	47	11	65	91
Employment service.....	532	164	614	670	526	144	614	670
Labor market information.....	22	6	31	32	21	6	31	32
Equal employment opportunity.....	12	3	14	14	12	3	14	14
Program administration.....	88	22	91	93	85	20	96	98
Subtotal, Labor.....	<u>5,876</u>	<u>1,941</u>	<u>6,056</u>	<u>5,370</u>	<u>6,069</u>	<u>1,856</u>	<u>6,782</u>	<u>5,420</u>
Veterans Administration:								
On-the-job training for veterans.....	203	41	144	134	198	40	145	135
Veterans vocational rehabilitation.....	95	23	109	113	92	22	110	113
Veterans assistance centers.....	8	2	8	8	7	2	8	8
Subtotal, VA.....	<u>306</u>	<u>66</u>	<u>262</u>	<u>255</u>	<u>297</u>	<u>63</u>	<u>262</u>	<u>256</u>
Equal Employment Opportunity Commission: Equal employment opportunity..								
Other Federal agencies:	64	19	71	75	59	16	68	72
Disadvantaged youth programs.....	100	52	105	107	100	52	105	107
Federal contract compliance.....	35	8	36	36	35	8	36	36
Total.....	<u>8,670</u>	<u>2,573</u>	<u>8,577</u>	<u>7,785</u>	<u>8,553</u>	<u>2,600</u>	<u>9,374</u>	<u>7,822</u>

SPECIAL ANALYSIS K
HEALTH SPECIAL ANALYSIS
FEDERAL HEALTH PROGRAMS

Overview.—Federal spending for health programs will total \$56 billion in 1978, an increase of \$4.6 billion or 9% over 1977. The share of the Federal budget spent on health will rise to 12.7% in 1978, as shown on Table K-1.

Table K-1. FEDERAL HEALTH SPENDING COMPARED TO THE TOTAL FEDERAL BUDGET (outlays in billions)

	Actual				Estimated	
	1970	1972	1974	1976	1977	1978
Total Federal outlays.....	\$196.6	\$231.9	\$268.4	\$366.5	\$411.2	\$440.0
Federal health outlays.....	\$18.1	\$24.5	\$29.2	\$43.6	\$51.4	\$56.0
Health as percent of total outlays.....	9.2	10.6	10.9	11.9	12.5	12.7

Table K-2 summarizes Federal health spending by major category for 1976, 1977, and 1978. The largest category of expenditures is for health services, which will amount to \$47.6 billion in 1978 and will be provided mainly through medicare and the proposed "Financial Assistance for Health Care" block grant to the States.

Table K-2. FEDERAL HEALTH SPENDING BY CATEGORY OF ACTIVITY (In millions of dollars)

	Outlays		
	1976 actual	1977 estimate	1978 estimate
Development of health resources, total.....	6,069	6,621	6,609
Health research.....	3,095	3,301	3,592
Training and education.....	1,476	1,353	1,387
Construction.....	1,243	1,613	1,321
Health planning and statistics.....	256	354	308
Provision of health services, total.....	36,039	43,129	47,604
Direct Federal services.....	5,884	6,686	6,902
Indirect services.....	30,155	36,443	40,703
Prevention and control of health problems, total.....	1,505	1,682	1,789
Total, health programs.....	43,613	51,432	56,001

NATIONAL HEALTH CARE TRENDS

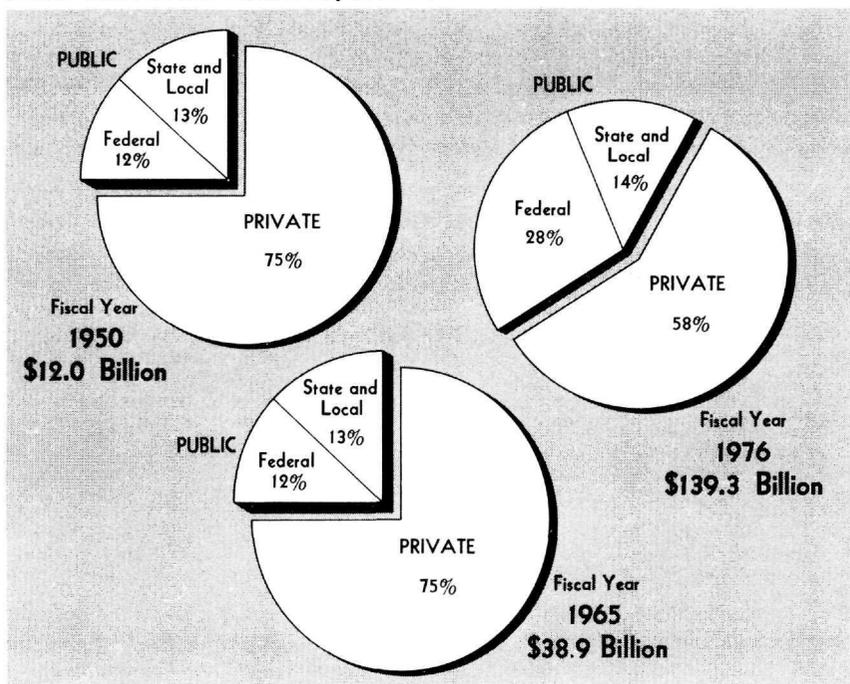
There have been four major trends in health care in the United States in the last quarter century: a dramatic increase in overall spending for health, particularly Federal health spending; a sharp rise in the supply of health resources; a gradual increase in the rate of utilization of health services by individuals; and a gradual rise in average life expectancy.

Increased national spending.—Total national expenditures for health rose from \$12 billion in 1950 to \$139 billion in 1976—more than an elevenfold increase. Per capita expenditures grew from \$78 to \$638 over the same period. The percentage of the U.S. gross national product (GNP) spent on health has almost doubled in the last quarter century, from 4.6% in 1950 to 8.6% in 1976. If the rate of increase in recent years continues, the proportion of GNP spent on health will double again to 17% by the year 2000.

Increased Federal spending.—The amount spent on health by the private sector and Federal, State, and local governments has risen substantially since 1950. As Chart K-3 indicates, however, the Federal Government's share of total health spending has more than doubled since 1965. The share of State and local government expenditures has remained about the same, while the share of private health spending has declined by 17%.

Public and Private Health Expenditures

K-3



The Federal Government now pays almost one-third of all health expenditures in the country. That includes more than 60% of the costs for medical research, 45% for health facilities, 40% for medical education, and 30% for health services.

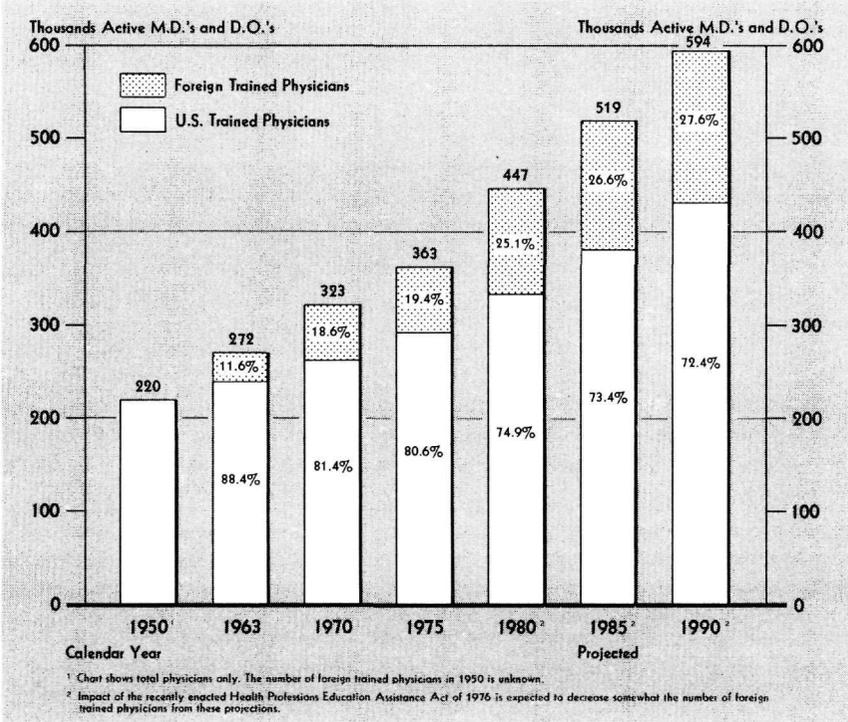
Increased health resources.—Factors that have contributed to the enormous growth in national health spending include increased public demand for health services, payment mechanisms that reduce out-of-pocket expenditures by individuals, development of improved and more expensive medical technology, and expansion of health resources.

The supply of health resources—which includes physicians and other health professionals, health researchers, hospitals, nursing homes, and other health facilities—has increased substantially in the last 25 years. The number of hospital beds in the country, for example, has grown from a half million in 1950 to more than 1 million in 1975, or from about three to five beds per 1,000 population. The number of active physicians has increased from 220,000 in 1950 to 363,000 in 1975, and the number of active registered nurses has grown from 401,000 in 1953 to 961,000 in 1976. Presently, more than 4.5 million persons are employed in health-related careers—a little over 6% of the civilian labor force. Health workers are the third largest occupational group in the United States.

Chart K-4 illustrates the overall increase in the supply of physicians since 1950 and projections for that supply through 1990. The chart also illustrates the increased proportion of physicians who are trained abroad.

Active Physicians, Domestic and Foreign Trained

K-4



Increased utilization.—During 1974 and 1975, there were over 1 billion visits to physicians, 34 million hospital admissions, and 1.2 billion prescription drugs acquired each year in the United States. The average number of days Americans are hospitalized per year grew 6% between 1965 and 1975, or from 1,180 to 1,255 days per 1,000 population. The average number of doctor visits per person each year rose almost 9% from 1964 to 1974, as shown in Table K-5.

Table K-5. ANNUAL DOCTOR VISITS PER PERSON IN U.S., 1964 AND 1974

	1964			1974		
	Poor	Non-poor	All persons	Poor	Non-poor	All persons
All ages.....	4.3	4.6	4.5	5.4	4.9	4.9
Under 17 years.....	2.3	4.0	3.7	3.6	4.3	4.1
17 to 44 years.....	4.1	4.7	4.6	5.5	4.7	4.8
45 to 64 years.....	5.1	5.1	5.0	6.3	5.4	5.5
65 years and over.....	6.0	7.3	6.7	6.4	7.3	6.7

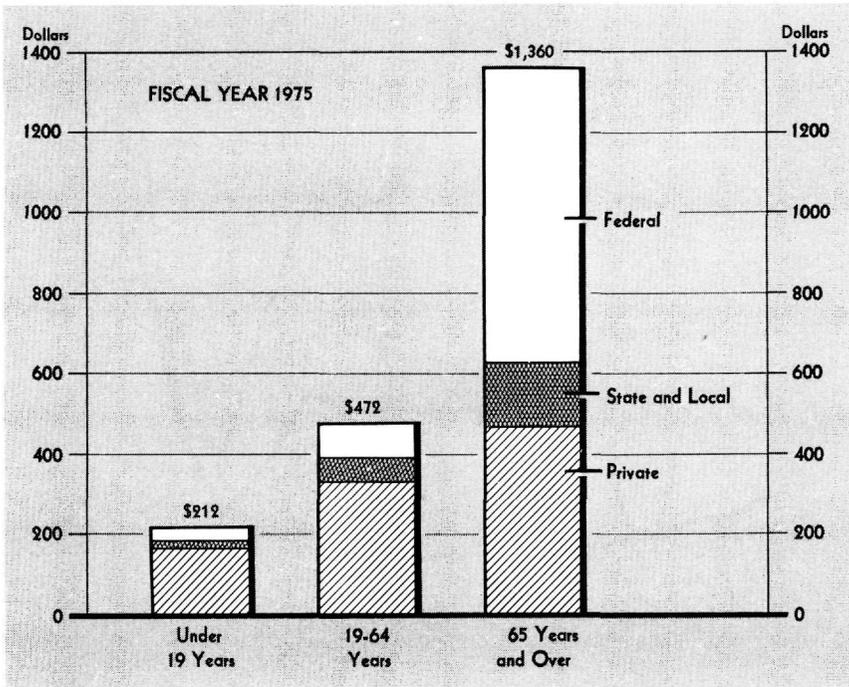
Utilization rates for health services reflect Federal health spending patterns—in particular, Federal expenditures for low-income persons and the aged. Prior to the enactment of medicaid in 1965, the poor utilized health services at a lower rate than the nonpoor. That trend has now been reversed and, on the average, the poor use more health services than the nonpoor, as indicated in Table K-5.

Utilization of health services by the aged has also increased substantially since medicare was enacted. The average number of days hospitalized per year for those over 65 rose more than 20% between 1965 and 1975, and the number of nursing home beds in the country increased over 100% from 568,560 in 1963 to 1,327,704 in 1973.

Federal medicare spending accounts somewhat for the fact that older Americans use far more health services than other age groups. Chart K-6 shows that the Federal Government pays a much larger share of the health expenses of those 65 and over than of other age groups. The chart also shows that annual health expenses for the aged are almost 3 times as high as for other adults and 6 times as high as for children. Another important reason the aged and poor utilize more health services is that they generally have more illnesses and poorer health than other population groups, as indicated by HEW surveys.

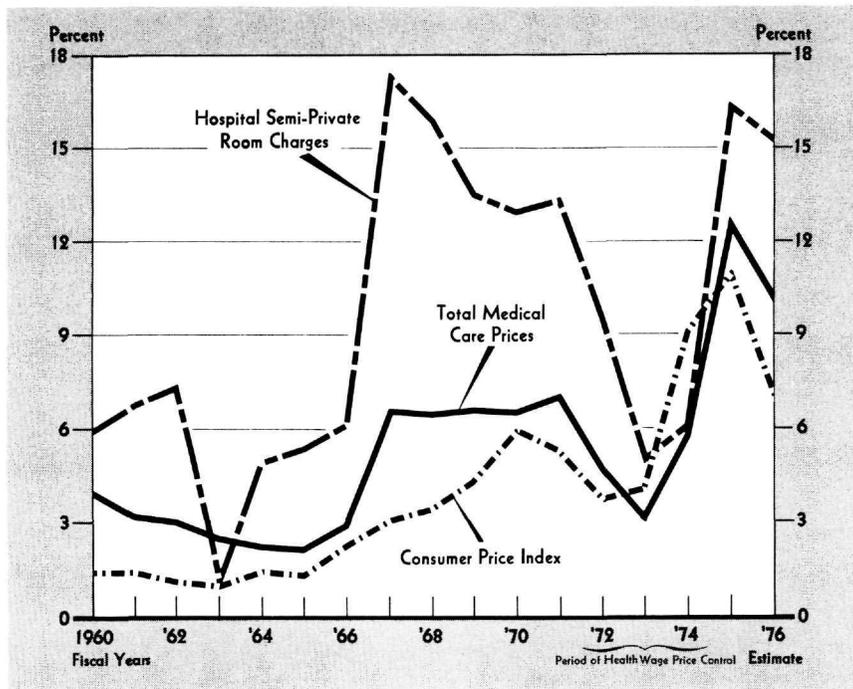
Personal Health Care Expenditures Per Capita

K-6



Health cost inflation.—More than half the increase in health spending since 1965 resulted from health cost inflation. The rise of medical prices has far outstripped that of all other prices in the economy—except energy prices—in the past decade.

As Chart K-7 illustrates, health costs have risen an average of 6.9% per year since 1967, as compared to 5.6% for the entire Consumer Price Index. Hospital costs have been the fastest growing segment of health costs, as is also shown on the chart.

Increases in the Consumer Price Index and Health Care Prices, 1960-1976^{K-7}

Health costs began to escalate sharply after 1966, the year in which medicare and medicaid were implemented. The infusion of Federal dollars since 1966 has undoubtedly helped to stimulate the increase in medical prices.

Improvements in health status.—The average life expectancy of Americans has increased significantly since the beginning of the 20th century—from 47 years in 1900 to 72 years in 1974. This increase has taken place during a period of major economic and social change, as well as advances in health research and medical practice. Many infectious diseases have been virtually eliminated as a result of increased knowledge about their causes, prevention, and treatment. Advances in medical technology have lengthened life for many persons. On the other hand, the larger number of people living to old age has resulted in an increased prevalence of chronic diseases—such as cancer—caused partly by the degenerative processes of aging. Chronic diseases are generally more difficult and costly to treat than acute infectious diseases. Moreover, the increased life expectancy that would result from eliminating many of these diseases is limited. According to National Cancer Institute data, for example, the complete cure of cancer would increase average life expectancy by only about 2 years.

Table K-8. SELECTED HEALTH STATUS INDICATORS (annual rates)

	1900	1950	1960	1970	1974
Death rate (per 1,000 population).....	17.2	9.6	9.5	9.5	9.2
Average life expectancy at birth in years.....	47.3	68.2	69.7	70.9	71.9
Infant mortality rate (deaths under 1 year of age per 1,000 live births).....	99.9	29.2	26.0	20.0	16.7
Leading causes of death (per 100,000 population):					
Tuberculosis.....	194.4	22.5	6.1	2.6	1.7
Diphtheria.....	40.3	.3	-----	-----	-----
Typhoid.....	31.3	.1	-----	-----	-----
Measles.....	13.3	.3	.2	-----	-----
Whooping cough.....	12.2	.7	.1	-----	-----
Streptococcal sore throat and scarlet fever.....	9.6	.2	.1	-----	-----
Cancer.....	64.0	139.8	149.2	162.8	170.5
Diseases of the heart.....	137.4	355.5	369.0	362.0	349.2
Cerebrovascular disease.....	106.9	104.0	108.0	101.9	98.1
Accidents.....	72.3	60.6	52.3	56.4	49.5
Kidney disease.....	92.1	20.8	11.9	8.4	6.4
Diabetes.....	11.0	16.2	16.7	18.9	17.7
Cirrhosis of liver.....	12.5	9.2	11.3	15.5	15.8

RELATIONSHIP BETWEEN HEALTH SPENDING AND HEALTH STATUS

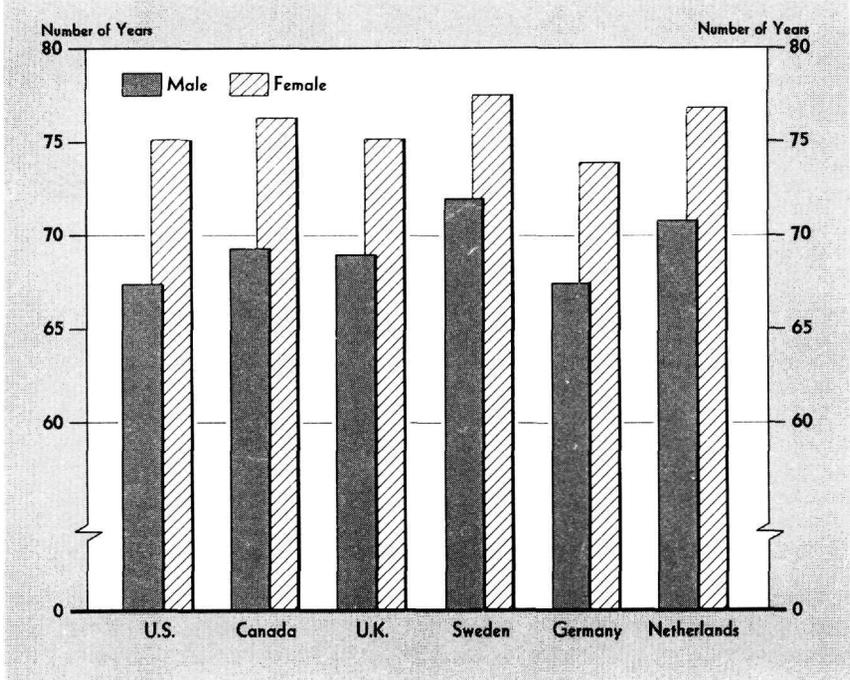
Comparisons both with other countries and among the various regions of the United States show that more health spending and health resources do not necessarily mean better health. Certain U.S. health status indicators have improved somewhat in recent years. This limited degree of improvement, however, has occurred during a period of substantial increases in health spending.

Comparison with other countries.—Although good data are not available for most countries, U.S. health spending over the last decade seems to have been as high as in any country in the world, and is significantly higher than in most countries. Health status in the United States is not significantly higher than in other industrialized countries, however, despite differences in the amount of health spending, measured as a percentage of GNP.

The following chart shows life expectancy in the countries for which sufficient recent data to make meaningful comparisons on health spending are available. Life expectancy for both males and females is higher than in the United States in all countries but Germany. Germany and Sweden are the only countries with health spending that may match that of the United States, while in England the share of GNP spent on health is only about half that of the United States.

Life Expectancy in Selected Countries, 1972

K-9

**Comparisons among different parts of the United States.—**

The amount of health resources—physicians, hospitals, etc.—in different parts of the United States varies widely, as does per capita health spending. Health status as measured by average life expectancy also varies by geographical area. There is no direct correlation, however, between the amount of health resources or health spending in each area and health status in that area. Table K-10 implies that people in States with high levels of health resources and spending have generally the same life expectancy as those in States with lower levels of health resources and spending.

Table K-10. PHYSICIANS, HOSPITAL BEDS, HEALTH SPENDING, AND LIFE EXPECTANCY IN SELECTED STATES

State	Physicians per 1,000 population, 1975	Hospital beds per 1,000 population, 1975	Per capita health spending		Average life expectancy, 1969-71	
			Private health insurance benefits paid, 1972-73	State and local government, 1972	Male	Female
New York.....	2.57	5.03	\$125	\$137	66.95	74.15
California.....	2.18	4.46	111	70	68.19	75.37
Arizona.....	1.81	4.43	60	51	66.05	74.03
West Virginia.....	1.22	6.50	92	51	65.56	73.74
South Carolina.....	1.13	4.46	63	67	63.85	72.29
Iowa.....	1.12	6.19	90	50	68.83	76.50
Mississippi.....	.93	5.52	57	72	64.06	74.40
South Dakota.....	.89	6.66	51	31	68.49	76.19
United States.....	1.75	4.97	101	66	67.04	74.64

The number of physicians and amount of health spending per person in South Dakota, for example, are lower than in other States, and yet life expectancy in South Dakota is higher than in almost any other State. The number of physicians and amount of health spending per person in New York, on the other hand, are higher than in any other State, and yet life expectancy is only in the midrange as compared to other States.

Other factors influencing health.—An inescapable conclusion from the above data is that factors other than the availability and use of health services affect health status. Other important determinants of health are the quality of the natural environment, working conditions, economic and social well-being, housing, sanitation, heredity, and personal lifestyle—such as smoking, drinking, exercise, eating habits, and the ability to deal adequately with the stresses of life.

THE FEDERAL ROLE IN THE HEALTH SECTOR

Federal health programs attempt to improve the health status of Americans by adding to the knowledge of human disease, translating research findings into accepted health habits and medical practice, regulating known health hazards, improving financial and physical access to health services, and reforming the existing health care service system.

Health resources.—Federal programs for the development of health resources encompass support for health research, health professions training and education, construction of health care facilities, health planning, and statistics. The combined outlays for these programs, as shown in Table K-11, will be \$6.6 billion in 1978.

Table K-11. FEDERAL OUTLAYS FOR THE DEVELOPMENT OF HEALTH RESOURCES (in millions of dollars)

	Outlays		
	1976 actual	1977 estimate	1978 estimate
Health research (excluding research facilities).....	3,095	3,301	3,592
Training and education.....	1,476	1,353	1,387
Construction.....	1,243	1,613	1,321
Health planning.....	256	354	308
Total	6,069	6,621	6,609

Health research.—Federal support of biomedical and behavioral research programs attempts to provide new knowledge for the prevention, diagnosis, and treatment of disease. Paralleling the increasing incidence of chronic diseases in the United States, Federal research support places emphasis upon degenerative illnesses, such as cancer and cardiovascular disease, and upon environmentally induced health problems. Table K-12 indicates the allocation of Federal funds among research fields and includes funding for construction of research facilities. The amount of basic research being performed in key areas such as genetics and immunology will be increased in 1978.

Table K-12. FEDERAL OUTLAYS FOR HEALTH RESEARCH AND RESEARCH FACILITIES

(in millions of dollars)

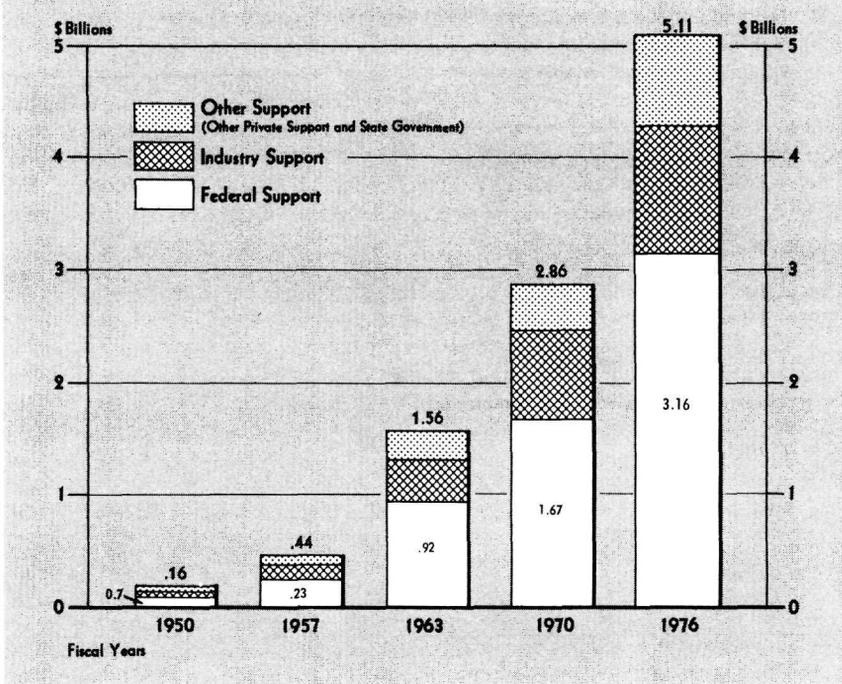
	Outlays		
	1976 actual	1977 estimate	1978 estimate
Cancer.....	657	664	757
Cardiovascular.....	327	298	339
Mental health.....	125	120	126
Neurological and visual.....	205	174	211
Population and family planning.....	65	61	71
Environmental health.....	465	536	664
Aging.....	61	69	78
Metabolic diseases.....	194	179	203
Child health.....	104	93	102
Infectious diseases.....	170	204	201
Pulmonary.....	58	58	61
Dental.....	56	51	61
Health services research and development.....	52	84	85
Other research and development.....	556	710	631
Research facilities.....	44	28	20
Total.....	3,138	3,329	3,612

Federal outlays for health research have risen over the past quarter century from \$70 million in 1950 to \$3,592 million in 1978. The Federal Government currently funds more than 60% of all biomedical research in this country.

The National Institutes of Health (NIH), within the Department of Health, Education, and Welfare (HEW), is the largest Federal health research agency and will administer 63% of the total Federal health research funds in 1978. NIH conducts an extensive research program through grants and contracts as well as in its own laboratories and clinical facilities. The Department of Health, Education, and Welfare also supports research on mental health, drug and alcohol abuse, and the organization, delivery, quality, and financing of health care.

Funds for Medical Research and Development

K-13



Other Federal agencies support and conduct health research in support of their program missions. The three largest are the Energy Research and Development Administration, the Department of Defense, and the Veterans Administration. These three agencies together account for 16% of all Federal health research expenditures.

Training and education.—More than 40% of the revenues of the Nation's 114 medical schools are derived from Federal grants or contracts. Table K-14 shows the Federal funds provided to medical schools from selected agencies. These outlays do not include medicare and medicaid payments for the treatment of patients in hospitals affiliated with medical schools.

Table K-14. FEDERAL FUNDS TO MEDICAL SCHOOLS
(In millions of dollars)

Agency	Outlays		
	1976 actual	1977 estimate	1978 estimate
Department of Health, Education, and Welfare	1,352	1,108	1,114
Research and development	914	850	933
Education and training	247	144	115
Construction	188	109	60
Department of Defense	70	96	50
Education and training	13	14	16
Construction	56	81	33
Veterans Administration:			
Education and training	17	31	46
National Aeronautics and Space Administration:			
Research and development	4	4	4
Energy Research and Development Administration	13	15	13
Research and development	13	14	13
Other agencies:			
Research and development	13	15	17
Total	1,468	1,268	1,244
Research and development	945	884	968
Education and training	277	189	177
Construction	244	191	93
Other	3	5	5

As Table K-15 indicates, the Federal Government will spend a total of \$1.9 billion in 1978 for health training and education. The principal programs of direct support for health professions schools, which are administered by HEW, include:

- institutional support grants of \$1,500 per student tied to conditions designed to improve specialty distribution of physicians and dentists; and
- student assistance programs which enable students to finance their educations through guaranteed loans or scholarships that require payback through service in an area with few health professionals.

Table K-15. FEDERAL FUNDS FOR HEALTH TRAINING AND
EDUCATION
(In millions of dollars)

	Outlays		
	1976 actual	1977 estimate	1978 estimate
Degree or certificate training	1,246	1,140	1,149
Research personnel	137	99	111
Physicians	532	562	516
Dentists	88	64	73
Nurses	151	127	156
Mental health professionals	38	23	26
Other health professionals	144	98	83
Paramedical personnel	157	166	184
All other training	680	693	768
Total	1,926	1,833	1,917

The national health service scholarship program will be funded at a level of \$35 million in 1978 and will support approximately 3,500 medical, osteopathic, and dental students in return for commitments to periods of service to meet public needs. This program helps to meet student financial needs as well as Federal requirements for health professionals to staff programs, such as the Indian Health Service. It also addresses the problem of geographic maldistribution of health personnel by placing physicians and dentists in areas with shortages of health professionals, either as members of the National Health Service Corps or as private practitioners.

The National Health Service Corps seeks to demonstrate the ability of areas with shortages of health care providers to attract and retain health personnel. The program will place 975 health professionals in 453 underserved areas in 1978.

Construction of health facilities.—The United States is well supplied in the aggregate with hospitals as a result of over 30 years of Federal hospital construction assistance through the Hill-Burton program. The program provided more than \$4.5 billion in grants and \$1.5 billion in direct and guaranteed loans, and assisted in the construction of more than 4,200 hospitals—3 out of every 5 hospitals in the country.

The basic goal of the Hill-Burton program—to provide needed new facilities—has been largely accomplished. Some areas of the country are now oversupplied with hospital beds, however, which results in empty beds and excessive hospital costs. The great majority of new construction and modernization of hospitals and other health facilities is now supported through non-Federal bonds, private long-term loans, and depreciation funds set up by the health facilities. Medicare, medicaid, and private insurance reimbursements to hospitals and other facilities for patient care include amounts for depreciation and interest on loans. Medicare, for example, will pay about \$1 billion in 1977 for depreciation and interest.

In 1978, direct Federal outlays for the construction of health care facilities, including environmental health facilities, are estimated at \$1.3 billion. This figure does not include medicare and medicaid depreciation and interest payments.

Table K-16. HOSPITAL AND HEALTH FACILITY CONSTRUCTION
(In millions of dollars)

	Outlays		
	1976 actual	1977 estimate	1978 estimate
Federally supported construction:			
Hospitals, new	47	22	10
Hospitals, modernized and replaced	146	97	74
Long-term care facilities	27	24	24
Research facilities	44	28	20
Environmental health facilities	159	367	346
Ambulatory care facilities	80	201	71
Health professions educational facilities	209	80	74
Other facilities	17	13	3
Total, federally supported	728	832	622
Federal hospitals and health facilities:			
Hospitals, new	73	78	47
Hospitals, modernized and replaced	310	519	450
Long-term care facilities	8	10	22
Research facilities	19	81	64
Environmental health facilities	46	49	57
Ambulatory care facilities	18	18	35
Other facilities	41	27	24
Total, Federal facilities	515	782	699
Total, Federal funds for hospital and health facility construction	1,243	1,613	1,321

States will be able to use a portion of the proposed health block grant funds for the construction of health care facilities. Federal assistance for the construction of health facilities will also continue to be provided through the Department of Housing and Urban Development, which funds mortgage insurance for the construction of hospitals, nursing homes, and group practice facilities.

Health planning.—Funds for health planning will be incorporated into the proposed health block grant program in 1978. Inclusion of health planning reflects the traditional State and local responsibility for resource planning. Other agencies besides HEW will spend a total of \$72 million in 1978 on health planning activities, including statistical programs.

Table K-17. FEDERAL OUTLAYS FOR HEALTH PLANNING
AND STATISTICS (in millions of dollars)

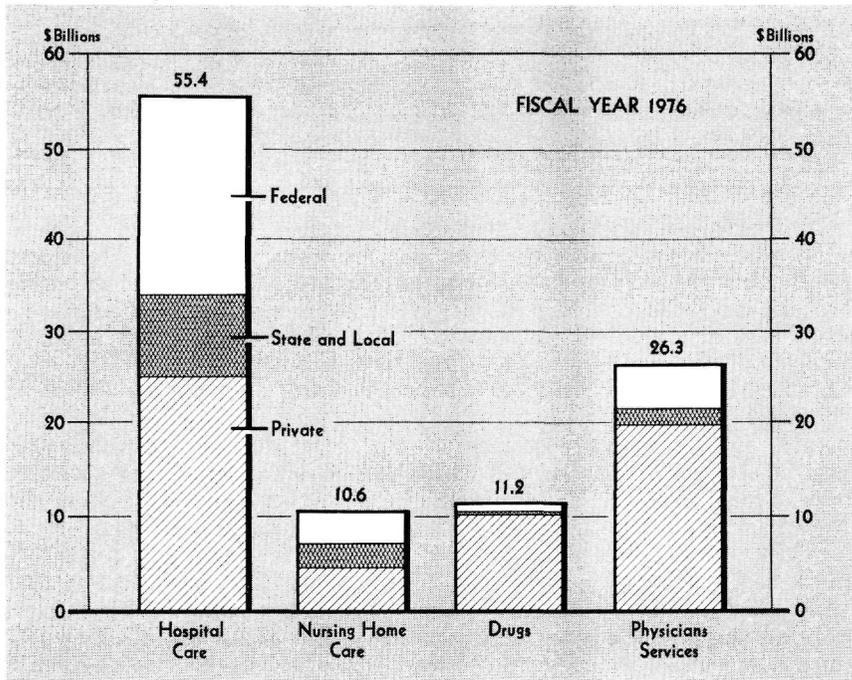
	Outlays		
	1976 actual	1977 estimate	1978 estimate
Financing of health planning, total.....	180	237	184
State-wide health planning.....	60	63	22
Substate health planning.....	92	141	136
Other health planning.....	28	33	25
Direct planning of Federal health activities.....	36	76	76
Health statistical activities, total.....	39	41	49
General purpose statistics.....	32	34	42
Federal program management statistics.....	7	8	7
Total, health planning activities.....	256	354	308

FINANCING AND PROVIDING HEALTH SERVICES

Since enactment of medicare and medicaid, the Federal Government has become a major source of financing for health services, particularly hospital and nursing home care. As Chart K-18 indicates, the Federal Government provides almost 30% of the funds for health services in the country, including 39% of total hospital expenses and 32% of nursing home expenses.

Sources of Expenditures for Health Services

K-18



Federal programs to finance or provide health services include medicare and the proposed Financial Assistance for Health Care block grant to the States. These are the Federal Government's two largest health activities and will account for 77% of Federal health services outlays in 1978. Other health services programs are administered by the Department of Defense, the Veterans Administration, and HEW. Table K-19 shows Federal expenditures for financing and providing health services.

Table K-19. FEDERAL FINANCING AND PROVISION OF HEALTH SERVICES (in millions of dollars)

	Outlays		
	1976 actual	1977 estimate	1978 estimate
Financing of indirect hospital and medical services:			
General hospital inpatients.....	18,914	22,821	25,074
Psychiatric hospital inpatients.....	467	559	202
Long-term care inpatients.....	3,682	4,518	5,215
Outpatient services.....	3,344	4,028	4,711
Outpatient mental health services.....	485	441	450
Other services.....	3,262	4,077	5,050
Total, financing of indirect services.....	30,155	36,443	40,703
Provision of direct hospital and medical services:			
General hospital inpatients.....	3,149	3,561	3,680
Psychiatric hospital inpatients.....	619	695	718
Long-term care inpatients.....	192	228	252
Outpatient services.....	1,655	1,900	1,991
Outpatient mental health services.....	37	45	44
Other services.....	231	257	216
Total, provision of direct services.....	5,884	6,686	6,902
Total, financing and provision of services.....	36,039	43,129	47,604

Medicare.—Medicare finances health services for the aged, the disabled, and persons suffering from chronic kidney disease. Medicare hospital insurance (HI) pays for inpatient care, skilled nursing home care and home health benefits after a person has been hospitalized. Supplementary medical insurance (SMI) affords protection against the costs of physician and other outpatient services.

Medicare currently provides uneven benefits over the course of a prolonged illness. After payment of a deductible for the first day of a hospital stay, a beneficiary receives up to 60 days of hospital care without cost for those services which are covered. Individuals whose stays in hospitals and skilled nursing homes extend over 60 days must pay an increasing proportion of their costs until medicare coverage ends after 90 hospital days (with a one-time reserve of 60 days) or 100 skilled nursing home days per benefit period. Proposed legislation would more equitably distribute the cost of such catastrophic illness by removing the limits on length of stay, but requiring all patients who use services covered by HI to pay 10% of the costs after payment

of the deductible. An individual's payments for the 10% coinsurance plus the HI deductible would not exceed a maximum of \$500 in 1978. The proposed legislation would also limit beneficiary cost-sharing for covered services under SMI to \$250 in 1978.

The costs of medicare have escalated from \$3.4 billion in 1967 to \$17.8 billion in 1976. Under current law, medicare costs are estimated to climb to \$26 billion in 1978. Average benefits per person will reach \$693 for HI and \$288 for SMI. Financing of HI benefits and administration is largely through social security taxes on earnings. Premiums from enrollees—current \$7.20 per month—and general tax revenues pay for supplementary medical insurance.

In order to slow the rate of increase in medicare costs and to prevent further underfinancing of the HI trust fund, proposed legislation would limit increases in reimbursements to institutions and individual providers of care. The legislation would set an upper limit of 7% on annual increases in hospital per diem payments. Further increases in physician charges in 1978 and 1979 would be limited to 7% for reasonable charges, not to exceed charges prevailing in localities in 1977. Proposed legislation would also hold hospital depreciation payments, not required for loan repayments, in escrow accounts until States approved replacement or expansion of hospital facilities and major equipment. Thus, medicare would finance only State-endorsed capital expansion.

The following table shows the budgetary effects in 1978 and 1979 of all proposed medicare legislation.

Table K-20. PROPOSED MEDICARE IMPROVEMENTS
(In millions of dollars)

	Outlays		
	1977 esti- mate	1978 esti- mate	1979 esti- mate
Catastrophic insurance:			
Hospital insurance:			
Unlimited days of care.....		+180	+990
\$500 liability limit.....		+70	+760
Supplementary medical insurance (\$250 limit).....		+344	+679
Subtotal.....		+594	+2,429
Cost-sharing provisions:			
Hospital insurance (10% coinsurance).....		-450	-2,350
Supplementary medical insurance:			
Dynamic deductible (\$80 on Jan. 1, 1978).....		-127	-270
10% coinsurance on hospital-based services.....		-26	-54
Subtotal.....		-603	-2,674
Reimbursement limits:			
Hospital insurance:			
7% per diem cap.....	-95	-1,075	-2,435
Depreciation escrow accounts.....	-50	-440	-520
Supplementary medical insurance.....	-73	-260	-493
Subtotal.....	-218	-1,775	-3,448
Total.....	-218	-1,784	-3,693

Table K-21 displays basic data concerning the medicare program coverage, benefits, and administration.

Table K-21. **MEDICARE COVERAGE, BENEFITS, AND ADMINISTRATION**
(In millions of dollars)

	1976 actual	1977 estimate	1978 estimate
Hospital insurance (HI):			
Persons with protection (millions).....	24.5	25.2	25.7
Beneficiaries receiving services (millions).....	5.7	5.9	6.0
Benefit payments.....	\$12,267	\$15,715	\$17,814
Administrative expenses.....	\$317	\$315	\$344
Claims received (millions).....	11.8	12.7	13.2
Supplementary medical insurance (SMI):			
Persons with protection (millions).....	24.0	24.8	25.4
Beneficiaries receiving services (millions).....	14.0	14.9	15.6
Benefit payments.....	\$4,671	\$5,999	\$7,325
Administrative expenses.....	\$528	\$502	\$587
Claims received (millions).....	112.1	129.1	141.6

Financial Assistance for Health Care.—The proposed Financial Assistance for Health Care block grant will consolidate 20 categorical health programs, including medicaid, into a new grant to the States. The \$12.3 billion in outlays in 1978 will be used primarily to help provide health services to the low-income population. Up to 10% of the funds will be available for other health-related purposes.

Other support for health services.—The Federal Government assists in the provision of health services through a variety of activities in addition to medicare and the proposed health block grant.

Limited support is provided to health maintenance organizations (HMOs) in order to help demonstrate the HMO concept in the delivery and organization of health services. Health maintenance organizations deliver comprehensive medical care and disease prevention services on a prepaid basis.

A total of \$456 million will be provided for drug abuse research, prevention, treatment, and rehabilitation activities in 1978, as shown on Table K-22. Most federally supported activities to overcome drug abuse will be funded by HEW through the National Institute on Drug Abuse (NIDA) within the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA), and the health block grant to the States. NIDA funding for drug abuse treatment in 1978 will be \$179 million, which will maintain the capacity to treat more than 100,000 persons at any one time in facilities funded by NIDA. Health block grant funds can be used by States to make additional drug abuse treatment services available when and where they are needed. ADAMHA will continue to assist States in developing statewide drug abuse treatment programs. Defense and VA will continue efforts to remedy drug problems among military personnel and veterans. Within the Department of Justice, the Bureau of Prisons administers drug abuse treatment and rehabilitation services for Federal prisoners, the Drug Enforcement Administration conducts education and research programs, and the Law Enforcement Assistance Administration supports a broad range of community efforts to prevent the

abuse of drugs. Drug law enforcement activities are discussed in Special Analysis N. Increased efforts are being made to see that the services provided by the Social and Rehabilitation Service in HEW and the Department of Labor are available to drug abusers and former drug users.

Table K-22. **FEDERAL FUNDS FOR DRUG ABUSE PREVENTION AND TREATMENT**

(In millions of dollars)

	Outlays		
	1976 actual	1977 estimate	1978 estimate
Department of Health, Education, and Welfare.....	314	311	345
Alcohol, Drug Abuse, and Mental Health Administration.....	(211)	(199)	(233)
Social and Rehabilitation Service ¹	(90)	(100)	(100)
Office of Human Development.....	(9)	(10)	(10)
Office of Education.....	(3)	(2)	(2)
Department of Defense.....	54	47	37
Veterans Administration.....	37	39	40
Department of Housing and Urban Development.....	1	4	4
Department of Justice.....	24	26	23
Other ²	11	8	7
Total	441	435	456

¹ Outlays for drug abuse treatment activities supported by the medicaid program in the Social and Rehabilitation Service are estimates. In 1978, these activities would be included in the proposed health block grant.

² Includes drug abuse treatment activities within the Departments of Labor, Transportation, and Agriculture; the terminated Special Action Office for Drug Abuse Prevention; and other agencies.

The Federal Government also finances or provides medical services for certain special categories of beneficiaries, specifically Armed Forces personnel, dependents, retirees, and veterans; American Indians and Alaska Natives; and Federal Government employees.

Medical care to active and retired military personnel and their dependents.—In 1978, DOD will operate 170 hospitals directly and will finance additional care from community facilities for its 9 million beneficiaries. Outlays for DOD health activities will be \$3.9 billion in 1978.

Medical care to veterans.—The Veterans Administration (VA) will operate 172 hospitals, 106 long-term care facilities, and 228 outpatient clinics. VA will provide inpatient care for 1.4 million veterans and will fund over 18.2 million outpatient medical and dental visits to VA and community facilities. Total VA outlays for health activities, including construction of health care facilities, will be \$5.1 billion in 1978—an increase of \$276 million over 1977.

Indian health services.—A total of \$472 million will be spent on Indian health services and facilities in 1978. These funds are used primarily to provide comprehensive health care, with an emphasis on ambulatory care, as well as to construct hospitals, clinics, Indian Health Service employee quarters, and sanitation and potable water facilities.

The health status of Indians and Alaska Natives has greatly improved over the last quarter century. Since 1950, for example, there has been an increase in Indian average life expectancy of 5.1 years, a 78% decline in infant mortality, and a 72% decline in deaths due to

influenza and pneumonia. In recent years, the overall health status of Indians and Alaska Natives has come closer to that of the general U.S. population, as indicated in Table K-23. Differences in health status remain, however, especially in connection with causes of death associated with social and environmental conditions on reservations.

Table K-23. **SELECTED INDICATORS OF HEALTH STATUS OF AMERICAN INDIANS AND THE GENERAL U.S. POPULATION** (annual rates)

	Indians and Alaska Natives				General population	
	1950	1960	1970	1974	1970	1974
Birth rate (per 1,000 population).....	36.2	42.7	32.6	30.8	18.4	15.0
Death rate (per 1,000 population).....	12.9	9.1	7.7	7.2	9.5	9.1
Average life expectancy at birth (years).....	60.0	61.7	64.0	65.1	70.9	72.0
Infant mortality rate (deaths under 1 year of age per 1,000 live births).....	85.8	50.3	23.8	18.7	20.0	16.5
Leading causes of death (per 100,000 population):						
Heart disease.....	148.8	135.5	142.0	169.5	362.0	349.2
Accidents.....	125.9	155.2	157.1	163.2	56.4	49.5
Influenza and pneumonia.....	108.0	95.0	38.6	30.7	30.9	25.9
Certain diseases of early infancy.....	77.3	66.7	29.6	13.0	21.3	13.6
Cancer.....	60.3	65.2	62.6	88.4	162.8	170.5
Cerebrovascular diseases.....	43.6	49.8	42.8	41.0	101.9	98.1
Homicide.....	16.8	19.5	20.6	25.7	8.3	10.2
Diabetes.....	12.4	16.0	23.0	17.6	18.9	17.7
Suicide.....	8.5	16.8	18.7	18.7	11.6	12.1
Cirrhosis of liver.....	7.7	20.7	45.2	66.7	15.5	15.8

Based on an eligible federally recognized Indian population of 564,000, health spending by Federal agencies in 1978 will result in over \$800 per beneficiary, or over \$3,300 per Indian family of four. The following table displays Federal funding for health activities specifically benefiting American Indians and Alaska Natives.

Table K-24. **FEDERAL FUNDS TO IMPROVE THE HEALTH OF AMERICAN INDIANS AND ALASKA NATIVES** (in millions of dollars)

	Outlays		
	1976 actual	1977 estimate	1978 estimate
Hospitals and medical services.....	200	217	227
Prevention and control of health problems.....	93	137	144
Construction.....	59	65	80
(Hospitals and clinics).....	(11)	(18)	(29)
(Sanitation projects).....	(44)	(46)	(50)
Training and education.....	12	11	12
Health planning activities.....	4	6	5
Medical and health-related research.....	3	4	4
Total.....	372	440	472

Health insurance for Federal employees.—Health benefits for 3.6 million Federal civilian employees and annuitants and their 6.9 million dependents are financed under the Federal employees health benefits programs managed by the Civil Service Commission. In 1978, Federal payments to finance these programs will increase by \$206 million to a total of \$1,963 million.

Tax expenditures.—Federal tax expenditures of \$8.7 billion for health result from special provisions of the tax laws and are larger than those for any other programs except medicare and the proposed health block grant. The exclusion of employer health insurance contributions from the taxable income of employees is estimated to result in a \$5.8 billion tax subsidy for employees in 1978. An additional \$2.9 billion in revenue loss will result from itemized deductions that individuals take in their income tax computations for certain health expenditures and insurance premiums.

Distribution of health care outlays by age group and economic status.—Table K-25 distributes Federal outlays for health services among three major age groups and between poor and nonpoor persons. Federal funds for the development of health resources and for the prevention and control of health problems are excluded from the table because they are not normally distributed by population group or income. Unlike other tables in this special analysis, Table K-25 does not include funds for health care provided to foreign nationals, because poverty levels in other countries differ from the U.S. poverty level.

The table shows that most Federal health care funds go toward helping nonpoor persons. Even when the figures are adjusted to exclude all expenditures for Federal employees, only about 37% of Federal health care funds are spent on the poor. The proposed health block grant will require that 90% of the funds under the program be used by States to provide personal health services, with priority on services for the low income. Table K-25 and other tables in this special analysis assume that health block grant funds will initially be spent along the same general lines as the program funds they replace.

Table K-25. ESTIMATED FEDERAL HEALTH CARE OUTLAYS BY POPULATION AND INCOME GROUPS (in millions of dollars)

	Outlays		
	1976 actual	1977 estimate	1978 estimate
Total, all recipients	35,935	43,010	47,471
Aged (65 and over).....	19,899	24,060	26,504
Other adults (19 to 64).....	12,356	14,736	16,433
Children and youth (0 to 18).....	3,680	4,214	4,535
Poor persons, total	11,920	14,244	15,626
Aged (65 and over).....	4,070	4,914	5,168
Other adults (19 to 64).....	5,949	7,108	8,018
Children and youth (0 to 18).....	1,901	2,223	2,441
Nonpoor persons, total	24,015	28,766	31,845
Aged (65 and over).....	15,828	19,147	21,336
Other adults (19 to 64).....	6,407	7,628	8,414
Children and youth (0 to 18).....	1,780	1,991	2,095

PREVENTION AND CONTROL OF HEALTH PROBLEMS

The Federal Government's main efforts to prevent and control health problems are in the areas of communicable disease control, mental illness prevention, occupational safety and health, and consumer safety. A total of \$1.8 billion will be spent on the prevention and control of health problems in 1978, as shown on Table K-26.

Table K-26. **FEDERAL OUTLAYS FOR THE PREVENTION AND CONTROL OF HEALTH PROBLEMS** (in millions of dollars)

	Outlays		
	1976 actual	1977 estimate	1978 estimate
Disease prevention and control.....	589	650	656
Mental illness prevention and control.....	123	129	149
Occupational safety and health.....	273	307	302
Consumer safety.....	520	597	682
Total, prevention and control.....	1,505	1,682	1,789

The Federal Government sponsors a wide variety of programs to prevent illness and injury through research, regulatory activities, provision of preventive services, and public education. Categorical Federal grants for State and local activities in disease prevention and control will be consolidated into the new health block grant to the States in 1978. ADAMHA will continue to support publications and other activities to help reduce mental illness and drug and alcohol abuse in 1978. ADAMHA will also assist States and localities in developing mental health and substance abuse treatment programs.

Consumer safety.—Federal outlays for consumer safety activities will increase \$85 million to \$682 million in 1978. The Food and Drug Administration in HEW will expand its efforts to assure the safety and efficacy of medical devices in 1978. The Consumer Product Safety Commission will continue research, information dissemination, and regulatory measures to protect consumers from unreasonable risks from consumer products. The Department of Transportation will also work to prevent automobile accidents and reduce injuries from accidents through various motor vehicle and highway design safety standards. In 1975, about 46,000 deaths resulted from motor vehicle accidents, an 18% reduction from the 56,000 deaths in 1973. The decline is due in large part to the reduced speed limits on highways.

FOREIGN HEALTH ASSISTANCE

In 1978, the United States will provide \$332 million for health activities in other countries and the U.S. territories, and for health assistance to foreign nationals in the United States. These funds will support efforts by various agencies, including the Agency for International Development, the Peace Corps, and international agencies to which the United States contributes financially, such as the World Health Organization and the Pan American Health Organization. The funds are distributed across all categories of health activities, as illustrated on Table K-27. Excluded from these figures are funds for health programs for U.S. employees abroad.

Table K-27. FOREIGN HEALTH ASSISTANCE
(In millions of dollars)

	Outlays		
	1976 actual	1977 estimate	1978 estimate
Health research.....	56	66	75
Health training:			
Assistance to individuals.....	22	25	27
Assistance to institutions.....	14	9	10
Construction of health facilities.....	12	10	14
Health planning and statistics.....	13	13	17
Health services.....	102	95	97
Prevention and control of health problems.....	46	66	91
Total	266	284	332

EXPENDITURES FOR HEALTH ACTIVITIES BY AGENCY

The following tables distribute the health-related outlays of Federal agencies by the categories used in this analysis. Health outlays of HEW, the Consumer Product Safety Commission, and parts of the Civil Service Commission, and the Departments of Agriculture, Housing and Urban Development, Interior, and Labor are included under the health function (550) in Part 5 of the budget document. Health-related outlays of all other agencies are assigned to other functions, reflecting the major mission of the programs of which they are a part. The following tables, therefore, indicate the predominant budget functional code for each agency. Other special analyses such as those on research and development, education, and training and employment also include some of the same outlays in their tabulations.

Table K-28. FEDERAL OUTLAYS FOR MEDICAL AND HEALTH-RELATED ACTIVITIES BY AGENCY, 1976

(In millions of dollars)

	Functional code	Health research	Training and education	Construction	Health planning activities	Direct Federal hospital and medical services	Indirect Federal hospital and medical services	Prevention and control of health problems	Total
Department of Health, Education, and Welfare (total).....	550	2,325	929	612	169	286	27,693	738	32,753
Health Services Administration.....	551	9	49	71	8	225	880	220	1,461
Health Resources Administration.....	550	23	491	466	162	-----	6	3	1,152
Alcohol, Drug Abuse, and Mental Health Administration.....	550	145	132	21	7	58	476	101	939
Center for Disease Control.....	553	35	4	-----	-----	-----	-----	136	174
National Institutes of Health.....	550	2,066	196	52	-----	-----	-----	33	2,348
Food and Drug Administration.....	553	22	-----	2	-----	-----	-----	195	218
Assistant Secretary for Health.....	550	-6	-----	-2	-10	3	15	4	5
Social Security Administration.....	551	13	-----	-----	-----	-----	17,765	-----	17,779
Social and Rehabilitation Service.....	551	3	-----	-----	-----	*	8,360	-----	8,363
Other HEW.....	550	15	56	3	3	-----	191	47	314
Department of Defense.....	051	108	252	230	*	2,292	559	49	3,490
Veterans Administration.....	703	94	241	192	20	3,260	234	-----	4,041
Department of Housing and Urban Development.....	451	-----	-----	165	34	-----	15	*	214
Department of Agriculture.....	352	58	-----	2	-----	-----	-----	288	348
Environmental Protection Agency.....	304	45	-----	-----	-----	-----	-----	-----	45
National Aeronautics and Space Administration.....	250	71	-----	-----	-----	-----	-----	4	75
Energy Research and Development Administration.....	251	256	*	10	*	-----	-----	86	352
Department of Labor.....	550	2	6	-----	*	*	-----	103	111
Department of State.....	150	3	8	*	1	*	12	24	48
National Science Foundation.....	251	45	*	-----	-----	-----	-----	*	45
Department of the Interior.....	300	34	11	4	-----	-----	12	76	137
Department of Transportation.....	400	6	2	1	11	10	-----	15	46
Department of Justice.....	750	2	-----	2	1	25	3	18	50
Other agencies.....	-----	46	28	23	18	10	86	104	315
Agency contributions to employee health funds.....	551	*	*	*	*	*	1,539	1	1,540
Total outlays for health, 1976.....	-----	3,095	1,476	1,243	256	5,884	30,155	1,505	43,613

*An asterisk denotes expenditures of less than \$1 million.

Table K-29. FEDERAL OUTLAYS FOR MEDICAL AND HEALTH-RELATED ACTIVITIES BY AGENCY, 1977

(In millions of dollars)

	Functional code	Health research	Training and education	Construction	Health planning activities	Direct Federal hospital and medical services	Indirect Federal hospital and medical services	Prevention and control of health problems	Total
Department of Health, Education, and Welfare (total).....	550	2,407	720	531	297	315	33,615	796	38,681
Health Services Administration.....	551	12	42	66	9	250	911	245	1,534
Health Resources Administration.....	550	36	386	372	250	-----	4	1	1,049
Alcohol, Drug Abuse, and Mental Health Administration.....	550	139	69	22	8	61	418	102	819
Center for Disease Control.....	553	76	4	-----	-----	-----	-----	144	223
National Institutes of Health.....	550	1,929	155	65	-----	-----	-----	29	2,178
Food and Drug Administration.....	553	24	-----	3	-----	-----	-----	213	240
Assistant Secretary for Health.....	550	8	-----	1	26	3	21	4	63
Social Security Administration.....	551	11	-----	-----	-----	-----	21,762	-----	21,773
Social and Rehabilitation Service.....	551	2	-----	-----	-----	1	10,265	-----	10,268
Other HEW.....	550	170	64	2	4	*	234	58	534
Department of Defense.....	051	126	274	331	*	2,501	599	57	3,888
Veterans Administration.....	703	105	291	293	23	3,804	325	-----	4,841
Department of Housing and Urban Development.....	451	-----	-----	385	1	-----	37	*	424
Department of Agriculture.....	352	65	-----	23	-----	-----	-----	320	408
Environmental Protection Agency.....	304	56	-----	-----	-----	-----	-----	-----	56
National Aeronautics and Space Administration.....	25 ^a	77	-----	-----	-----	-----	-----	5	81
Energy Research and Development Administration.....	251	305	1	19	*	-----	-----	109	434
Department of Labor.....	550	5	19	-----	*	-----	-----	102	125
Department of State.....	150	3	10	*	2	*	16	31	62
National Science Foundation.....	251	49	-----	-----	-----	-----	-----	*	49
Department of the Interior.....	300	40	12	1	-----	-----	12	93	158
Department of Transportation.....	400	6	2	3	11	22	-----	17	62
Department of Justice.....	750	2	-----	2	1	30	3	21	59
Other agencies.....	-----	55	24	25	19	14	79	130	346
Agency contributions to employee health funds.....	551	-----	-----	-----	-----	-----	1,757	1	1,758
Total outlays for health, 1977.....	-----	3,301	1,353	1,613	354	6,686	36,443	1,682	51,432

*An asterisk denotes expenditures of less than \$1 million.

Table K-30. FEDERAL OUTLAYS FOR MEDICAL AND HEALTH-RELATED ACTIVITIES BY AGENCY, 1978

(In millions of dollars)

	Functional code	Health research	Training and education	Construction	Health planning activities	Direct Federal hospital and medical services	Indirect Federal hospital and medical services	Prevention and control of health problems	Total
Department of Health, Education, and Welfare (total).....	550	2,561	713	354	236	323	37,559	826	42,574
Health Services Administration ¹	551	4	23	82	11	255	497	155	1,027
Health Resources Administration ¹	550	29	332	191	152	-----	*	*	704
Alcohol, Drug Abuse, and Mental Health Administration ¹	550	147	94	6	7	65	377	112	808
Center for Disease Control ¹	553	58	3	-----	-----	-----	-----	110	170
National Institutes of Health ¹	550	2,255	176	69	-----	-----	-----	31	2,532
Food and Drug Administration.....	553	27	-----	4	-----	-----	-----	246	277
Assistant Secretary for Health ¹	550	12	16	1	59	3	12,161	111	12,363
Social Security Administration.....	551	13	-----	-----	-----	-----	24,283	-----	24,297
Social and Rehabilitation Service.....	551	-----	-----	-----	-----	1	*	-----	1
Other HEW.....	550	16	70	2	7	-----	241	60	397
Department of Defense.....	051	130	286	191	*	2,551	654	77	3,888
Veterans Administration.....	703	108	317	347	25	3,954	367	-----	5,117
Department of Housing and Urban Development.....	451	-----	-----	365	6	-----	47	*	418
Department of Agriculture.....	352	74	-----	11	-----	-----	-----	331	416
Environmental Protection Agency.....	304	75	-----	-----	-----	-----	-----	-----	75
National Aeronautics and Space Administration.....	250	79	-----	*	-----	-----	-----	5	85
Energy Research and Development Administration.....	251	344	1	18	*	-----	-----	127	490
Department of Labor.....	550	4	20	-----	*	-----	-----	109	133
Department of State.....	150	4	12	-----	2	*	18	35	72
National Science Foundation.....	251	58	-----	-----	-----	-----	-----	*	58
Department of the Interior.....	300	40	11	2	-----	-----	12	98	162
Department of Transportation.....	400	7	3	4	16	26	-----	17	72
Department of Justice.....	750	2	-----	2	1	33	3	18	59
Other agencies.....	-----	106	24	27	23	14	79	142	417
Agency contributions to employee health funds.....	551	-----	-----	-----	-----	-----	1,963	1	1,964
Total outlays for health, 1978.....		3,592	1,387	1,321	308	6,902	40,703	1,789	56,001

*An asterisk denotes expenditures of less than \$1 million.

¹Outlays for these agencies as reported here include salaries and expenses funding which was transferred to the Office of the Assistant Secretary for Health in 1978. For that reason, total agency outlays here are somewhat different from those reported in the Budget Appendix.

SPECIAL ANALYSIS L

FEDERAL INCOME SECURITY PROGRAMS

Federal income security programs provide essential income protection for millions of Americans. A major, although not exclusive, objective of these programs is to increase the income of people at the lower end of the income scale. The programs included in this analysis are divided into two broad categories:

- Cash benefits, such as social security and other income replacement programs.
- In-kind benefits, such as health care and food stamps, which effectively increase real income by providing necessary goods.

In addition, several major tax expenditures contribute to income security.

OVERVIEW

Total Federal income security benefits are estimated to equal \$194 billion in 1978. This represents a \$13 billion increase (or 7.0%) over the 1977 total of \$181 billion.

There are many factors accounting for this change:

- By law, \$126 billion of the 1978 outlays are in programs whose benefits are tied to the cost of living.
- Outlays of \$12.3 billion for unemployment compensation in 1978 reflect a decrease in unemployment levels from 1977, although this decrease is partially offset by increases in benefit amounts and the number of eligible workers.

Table L-1. **FEDERAL INCOME SECURITY BENEFITS** (in millions of dollars)

	1976 actual	1977 estimate	1978 estimate
Federal outlays for cash benefits:			
Social security (OADS1).....	71,362	81,908	89,309
Federal employee benefits.....	16,703	18,722	21,032
Veterans benefits.....	8,734	9,548	9,633
Public assistance.....	9,803	10,179	11,044
Unemployment insurance.....	17,612	14,283	12,327
Railroad retirement.....	3,445	3,604	3,752
Other programs.....	1,105	1,091	1,036
Proposed legislation included above.....		(43)	(928)
Subtotal, cash benefit outlays.....	128,763	139,334	148,133
Federal outlays for in-kind benefits:			
Food and nutrition.....	7,714	7,690	6,809
Health care ¹	25,896	31,905	35,967
Housing.....	2,264	2,369	3,038
Proposed legislation included above.....		(-218)	(-3,365)
Subtotal, in-kind benefits outlays.....	35,875	41,964	45,814
Total benefits.....	164,639	181,298	193,947

¹ Outlays reported here would be included in the financial assistance for health care block grant to States under proposed legislation for 1978. See Part V, Health, of the Budget of the United States Government for additional information.

TARGET GROUPS

Federal income security programs maintain or supplement the income of persons and families whose capacity for self-support is reduced by old age, disability, illness, unemployment, poverty or death of the primary wage earner.

In situations where only partial self-support is currently possible or where self-support may be achieved in the future, income security programs provide supplementary or temporary support. Where self-support is not possible, income security programs provide basic support.

The analysis below is organized by target group: that is, the programs discussed provide support to people sharing similar problems and circumstances—the aged (annuitants and others), the unemployed, parents with small children and no breadwinner, and low-income persons with insufficient income to provide for their basic needs. Needs-tested benefits are included in this analysis by target group.

Table L-2. INCOME SECURITY BENEFITS BY TARGET GROUPS

(In millions of dollars)

	1976 actual	1977 estimate	1978 estimate	Change 1976-78	Percent change 1976-78
Annuitants.....	45,665	52,679	58,124	12,459	27.3
Other aged.....	45,752	52,804	57,171	11,419	25.0
Disabled.....	25,194	29,285	32,347	7,153	28.4
Mothers and children.....	8,468	9,137	9,888	1,420	16.8
Temporary unemployed.....	18,523	14,723	12,887	-5,636	-30.4
Other transitional low income.....	12,823	13,170	13,922	1,100	8.6
Other.....	8,214	9,499	9,608	1,394	17.0
Total.....	164,638	181,298	193,947	29,308	17.8

THE AGED

Income security benefits for the elderly consist of (1) wage replacement for workers retired from full-time gainful employment, (2) benefits to women who depended on their husband's income as their main source of support, and (3) assistance to those who were needy before becoming aged.

In-kind program benefits received by the aged include medical care through medicare and medicaid, as well as food and shelter on an income-tested basis.

Several provisions of the Federal personal income tax are designed to benefit the aged. The largest benefits result from the extra personal exemptions available to persons 65 or over and from the exclusion of all social security benefits (not just that portion representing a return of contributions) from their taxable income. These two tax expenditures are expected to result in a loss of receipts in 1978 of \$1.3 billion

and \$3.5 billion, respectively. In addition, the tax credit for the elderly is estimated to be a tax expenditure of \$0.4 billion in 1978 while the exclusion from income of railroad retirement benefits is estimated at \$0.2 billion. The combined loss of tax receipts from the retired and elderly due to these four provisions is an estimated \$5.9 billion in 1978. This aggregate is greater than the sum of the individual estimates because more elderly persons would be pushed to taxpaying levels of income or into higher tax brackets if all of these items were deleted from the tax code.

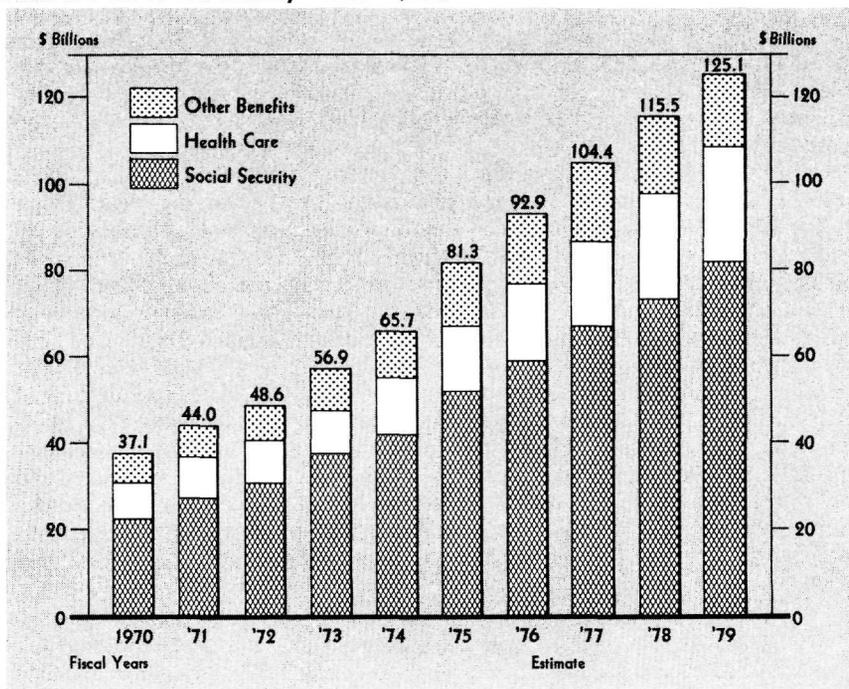
Other tax provisions are directed to the future security of aged persons by encouraging private provision for retirement years. The major benefits flow from the exclusion of employer contributions to and earnings of qualified pension funds from the employee's current taxable income. After allowing for deferred taxes collected from present retirees, the net loss in receipts from this tax expenditure is estimated to be \$9.9 billion in 1978. Similar tax provisions for employees not covered by any pension plan other than Social Security or for the self-employed will result in an estimated tax expenditure of \$1.5 billion in 1978. A temporary tax credit on earned income up to \$8 thousand has provided a tax expenditure of \$0.3 billion in 1976 for low-income workers with children. The Tax Reform Act of 1976 extended this credit through calendar year 1977. The President's budget, however, reflects proposed legislation to repeal this credit and to substitute other provisions that reduce income taxes.

Table L-3. INCOME SECURITY BENEFITS FOR THE AGED

(In millions of dollars)

	Benefits			Percent increase 1976-78
	1976 actual	1977 estimate	1978 estimate	
Covered employment:				
Social security (OASI) members.....	58,553	67,210	73,135	24.9
Federal civilian employees.....	6,385	7,565	8,609	34.8
Railroad employees.....	3,198	3,349	3,483	8.9
Uniformed services members.....	1,230	1,379	1,458	18.5
Coal miners' widows.....	233	259	285	22.4
Supplemental security income.....	1,810	1,754	1,731	-4.4
Income-tested veterans pension.....	1,606	1,737	1,789	11.4
Subtotal, cash benefit outlays.....	73,015	83,252	90,491	23.9
Medicare.....	14,996	18,274	20,118	34.2
Medicaid.....	3,030	3,722	4,301	41.9
Other in-kind.....	569	485	639	12.4
Subtotal, in-kind benefit outlays.....	18,595	22,481	25,058	34.8
Total.....	91,610	105,734	115,549	26.1

Federal Aid to the Elderly—Benefit Payments



Annuitants.—In all four federally run contributory retirement systems, the benefit calculations are based upon past earnings and payments are adjusted twice a year.

Under Old-age and survivors insurance (OASI), 15.4 million retired workers receive pensions in 1978. Some recipients in 1978 are primary beneficiaries under the railroad retirement system, but almost 40% of these particular retirees are also beneficiaries under the social security system. A total of 870,000 persons are beneficiaries of either the civil service retirement system or of the foreign service retirement system in 1978. Approximately 43% of the beneficiaries of the two Federal civilian employee systems also receive social security.

The estimated total number of primary beneficiaries of all the contributory retirement systems is 15.3 million persons in 1976 and 16.7 million in 1978.

Table L-4. ANNUITIES TO PRIMARY BENEFICIARIES IN CONTRIBUTORY RETIREMENT SYSTEMS: ANNUITY BENEFITS, BENEFICIARIES, AND AVERAGE PAYMENTS BY SYSTEM

	Benefit outlays (in millions of dollars)			Number of primary beneficiaries (thousands)			Average monthly payments (in dollars)		
	1976 actual	1977 est.	1978 est.	1976 actual	1977 est.	1978 est.	1976 actual	1977 est.	1978 est.
Old-age and survivors insurance.....	38,244	44,179	48,602	14,119	14,826	15,436	226	248	262
Civil Service Commis- sion.....	5,535	6,551	7,500	752	818	865	613	667	723
Railroad Retirement Board.....	1,829	1,878	1,938	423	417	412	360	375	392
Foreign Service retire- ment.....	57	72	84	4	4	5	1,327	1,382	1,478
Total.....	45,665	52,679	58,124	-----	-----	-----	-----	-----	-----

Other aged.—This category includes income support to the aged in which the benefits are based upon criteria other than past earnings. The criteria of the program may, for example, be the work history of some person related to the beneficiary, and may not necessarily be based on any measure of need. Underlying the purpose of these programs is the presumption that persons past a certain age (usually 65) are generally not self-supporting through their own current earnings.

Aged widows.—Aged widows account for \$18.2 billion in benefit outlays in 1978, or 32% of all benefits to the aged outside of annuities to primary beneficiaries. The increase in benefit outlays to aged widows between 1976 and 1978 is due to increased benefit levels under the social security and the railroad retirement systems. Some 5 million aged widows will receive benefits from social security in 1978, while 1.6 million widows will be covered in other programs. A considerable proportion of the widows covered by social security also receives benefits from other programs. Tax expenditures again augment the value of these benefits. The exclusion from taxable income of social security benefits for dependents and survivors is estimated to result in a \$0.8 billion revenue loss in 1978.

Aged wives of retirees.—The entitlement of wives under OASI and railroad retirement is independent of any contribution history of their own, and requires only that they exceed a particular age. Where a wife has dual entitlement under social security based upon her earnings history as well as her husband's, she will receive only the larger benefit. In the railroad retirement system, she receives both benefits. In 1978,

687,000 wives will have dual entitlement under social security in which the wife's benefit exceeds the benefit based upon her own earnings.

Table L-5. **BENEFITS FOR THE AGED EXCEPT ANNUITIES TO PRIMARY BENEFICIARIES: BENEFITS, BENEFICIARIES, AND AVERAGE PAYMENT**

	Benefit outlays (in millions of dollars)			Number of beneficiaries (thousands)			Average monthly payments (in dollars)		
	1976 actual	1977 esti- mate	1978 esti- mate	1976 actual	1977 esti- mate	1978 esti- mate	1976 actual	1977 esti- mate	1978 esti- mate
Civilian covered employment:									
Social security.....	20,309	23,031	24,533	11,677	11,856	11,963	145	162	171
Federal civilian employees.....	600	692	771	202	214	221	248	269	290
Railroad em- ployees.....	1,369	1,471	1,545	551	554	555	207	221	232
Coal miners' widows.....	233	259	285	98	102	107	198	211	221
Medicare.....	14,996	18,274	20,118	17,811	18,709	19,435	70	81	86
Uniformed services:									
Aged widows.....	542	597	598	238	239	239	190	208	208
Aged retirees.....	688	783	860	92	98	102	625	666	705
Aged veterans and widows: Income tested.....	1,606	1,737	1,789	1,810	1,860	1,832	74	78	81
Supplemental security income ¹	1,810	1,754	1,731	1,990	1,885	1,805	76	78	80
In-kind benefits to needy aged:									
Medicaid.....	3,030	3,722	4,301	4,041	4,279	4,429	62	72	81
Food.....	569	485	639	2,294	2,232	2,344	21	18	23
Housing.....	405	425	545	1,085	1,312	1,521	31	27	30
Total.....	46,157	53,229	57,716						

¹ Federal payment only.

Payments based on the minimum.—These are statutory minimum amounts paid to retired workers, to the dependents of such retired workers, and to noninsured beneficiaries age 72 and over.

Aged retirees of the uniformed services.—The retirement systems for the uniformed and military services are noncontributory, with benefits based on time in service and the rank held at retirement rather than the overall earnings history of the individual. Because military service is credited for social security coverage, there is substantial overlap of the military retirement systems beneficiaries and OASI beneficiaries.

THE DISABLED

Disabled.—The disabled constitute the second target group for whom there is a presumption of permanent inability to achieve self-support. Eligibility for an income security benefit for a disabled

individual may be based on membership in a contributory retirement system (OASDI or civil service), on military service, on occupation (coal miner), or on indigency (welfare).

Members of the social security system and the railroad retirement system are eligible for retirement benefits based upon their earnings history to the date of permanent disability, and are also eligible for medicare benefits. Federal civilian employees receive a disability benefit based on total disability for their previous occupation and are paid a minimum benefit of 40% of the average of their highest 3 years of earnings.

Benefits to the disabled in the uniformed services are scaled to the degree of physical impairment rather than previous levels of earnings. Disability retirement from the military and veterans compensation and indemnities are provided for disabilities which are presumptively service-connected. Veteran's pensions provide benefits for a non-service-connected but presumptively total disability to persons who have seen wartime military service and whose financial need can be demonstrated.

Under the Federal Coal Mine Health and Safety Act, compensation is paid to black lung victims in amounts related to the workers' compensation law for Federal employees (the Federal Employees Compensation Act). Eligible persons began registering for benefits in the spring of 1970.

Beginning in 1974, 1.3 million needy disabled received assistance under the new Federal Supplemental security income program enacted in 1972 to replace State administered programs of assistance to the blind and disabled. By 1978 that number will grow to almost 2.2 million needy blind and disabled.

In 1978, 5.0 million persons will receive benefits from the Disability insurance trust fund administered by the Social Security Administration. Another 365,000 individuals will receive benefits through Federal civilian employee programs. There is a substantial overlap between these latter two groups and those who receive disability benefits because of prior military service or employment in coal mines.

It is estimated that in 1978 5.7 million adults and children will be supported by public assistance based on disability. Nearly all of these persons are eligible for medicaid benefits.

Disabled persons benefit from the exclusion from taxable income of (1) social security disability insurance benefits, (2) worker's compensation benefits, and (3) payments such as sick pay and private disability payments. In toto, these exclusions are expected to reduce tax receipts in 1978 by \$1.8 billion. The exclusion from taxable income of veterans service-connected disability compensation is an additional tax expenditure of \$0.7 billion for the same period.

Benefits for a parent with dependent children and no spouse.—Benefit eligibility varies considerably for this last target group for whom self-support is assumed to be not universally possible. This group includes those parents with dependent children who either have no spouse or whose spouse is disabled. Eligibility is determined by either the work history of a deceased husband or a means test.

Table L-6. BENEFIT OUTLAYS FOR THE DISABLED: BENEFITS, BENEFICIARIES, AND AVERAGE PAYMENT

	Benefit outlays (in millions of dollars)			Number of beneficiaries (thousands)			Average monthly payments (in dollars)		
	1976 actual	1977 estimate	1978 estimate	1976 actual	1977 estimate	1978 estimate	1976 actual	1977 estimate	1978 estimate
Civilian covered employment:									
Disability insurance	9,222	10,929	12,294	4,352	4,709	4,982	177	193	206
Federal civilian employees.....	1,668	1,998	2,254	317	344	365	439	484	515
Railroad employees.....	213	219	233	45	45	46	394	406	422
Coal miners.....	638	582	571	349	325	303	152	149	157
Medicare.....	1,942	2,682	3,237	1,872	2,027	2,224	86	110	121
Uniformed services:									
Service-connected disability.....	5,215	5,755	5,818	3,187	3,215	3,226	136	149	150
Other: Income-tested.....	523	575	594	507	524	514	86	91	96
Public assistance to the disabled:									
Supplemental security income...	2,630	2,966	3,269	1,865	2,040	2,160	118	121	126
AFDC (disabled male head of family).....	643	655	725	1,365	1,365	1,373	39	40	44
Medicaid.....	2,131	2,618	3,027	2,957	3,131	3,240	60	70	78
In-kind benefits to needy disabled:									
Food.....	369	307	325	1,153	1,097	925	27	23	29
Total.....	25,194	29,285	32,347						

Table L-7. BENEFITS FOR MOTHERS WITH DEPENDENT CHILDREN AND NO HUSBAND: BENEFITS, BENEFICIARIES, AND AVERAGE PAYMENT

	Benefit outlays (in millions of dollars)			Number of beneficiaries (thousands)			Average monthly payments (in dollars)		
	1976 actual	1977 est.	1978 est.	1976 actual	1977 est.	1978 est.	1976 actual	1977 est.	1978 est.
Benefits to widows of covered employees:									
Social security (OASDI) members.....	3,587	3,769	3,880	1,937	1,916	1,888	154	164	171
Federal civilian employees.....	151	175	195	47	49	51	268	295	319
Railroad employees.....	34	36	36	11	11	10	258	273	300
Uniformed service members.....	433	475	498	561	573	573	64	69	72
Coal miners.....	34	40	42	25	25	25	113	134	140
Public assistance (AFDC) mothers with preschool children:									
Cash payments.....	2,621	2,665	2,950	5,561	5,563	5,580	39	40	44
Medicaid.....	1,609	1,977	2,286	8,595	8,787	8,821	16	19	22
Total.....	8,468	9,137	9,888						

Unemployment compensation.—The intent of income security outlays for able-bodied persons is to tide them over periods in which they cannot support themselves, until other measures correct the causes of such inability to provide self-support.

The major system of unemployment insurance, constituting 90% of unemployment benefits paid in 1978, is State-administered. It should be noted that the States vary in eligibility requirements, benefit levels, and duration of benefits.

Table L-8. BENEFITS FOR TRANSITIONAL LOW INCOME AND OTHER: BENEFITS, BENEFICIARIES, AND AVERAGE PAYMENT

	Benefit outlays (in millions of dollars)			Number of beneficiaries (thousands)			Average monthly payments (in dollars)		
	1976 actual	1977 est.	1978 est.	1976 actual	1977 est.	1978 est.	1976 actual	1977 est.	1978 est.
Temporary unemploy- ment:									
Unemployment in- surance system.....	17,307	13,990	11,922	9,778	10,578	9,763	148	110	102
Other unemploy- ment benefits.....	1,216	733	965	851	677	617	119	90	130
Long-term unemploy- ment:									
Unemployed fathers.....	271	355	390	584	708	736	39	42	44
Mothers with all children in school.....	1,825	1,781	1,975	3,863	3,740	3,750	39	40	44
Other income tested ¹	575	602	593	696	707	691	69	71	71
In-kind benefits, low income:									
Food ²	6,285	6,105	5,725	33,483	39,888	21,824	16	13	22
Housing ²	2,264	2,369	3,038	6,758	7,915	9,150	28	25	28
Medicaid.....	1,554	1,908	2,202	8,301	8,479	8,510	16	19	22
Uniformed services retirees under 65....	5,723	6,503	7,141	839	897	930	568	604	640
Food for non-needy children.....	492	792	120	26,050	26,390	-----	2	3	-----
Other.....	41,170	47,595	53,140	15,628	16,546	17,163	220	240	258
Total, transi- tional low income.....	78,682	82,733	87,211	-----	-----	-----	-----	-----	-----

¹ Includes all assistance to refugees and Indians.

² Includes all benefits to AFDC and UF families.

Special unemployment benefit programs are provided for Federal employees and ex-servicemen, railroad employees, and unemployed workers in industries adversely affected by foreign trade. Although federally financed, they are, except for railroad retirement unemployment insurance, State-administered.

The exclusion from taxable income of unemployment insurance benefits is a tax expenditure expected to decline from \$3.3 billion in 1976 to \$2.4 billion in 1978.

A second set of programs providing income security benefits to able-bodied men and women are means-tested cash and in-kind programs.

A third set of benefits, not based on need, lack of employment, or age, are provided to uniform services retirees under the age of 65 because of their length of service.

NEEDS-TESTED BENEFITS

The foregoing tables have provided displays of benefits for various target groups. Within these target groups, benefits may or may not be based on a needs or means test. Public assistance, veterans and sur-

Table L-9. NEEDS-TESTED BENEFITS BY TARGET GROUPS AND PROGRAM (in millions of dollars)

	Benefit outlays		
	1976 actual	1977 estimate	1978 estimate
By target group:			
Benefits to the aged:			
Public assistance.....	1,810	1,754	1,731
Veterans and survivors pension.....	1,606	1,737	1,789
Medicaid.....	3,030	3,722	4,301
Other.....	569	485	639
Subtotal, benefits to the aged.....	7,015	7,698	8,460
Benefits to the disabled:			
Public assistance.....	3,273	3,621	3,994
Veterans and survivors pension.....	523	575	594
Medicaid.....	2,131	2,618	3,027
Other.....	369	307	325
Subtotal, benefits to the disabled.....	6,296	7,120	7,940
Benefits to mothers:			
Public assistance.....	2,621	2,665	2,950
Medicaid.....	1,609	1,977	2,286
Other.....	228	237	242
Subtotal, benefits to mothers.....	4,458	4,879	5,479
Benefits to the unemployed and other low income:			
Public assistance.....	2,096	2,136	2,365
Medicaid.....	1,554	1,908	2,202
Food.....	6,285	6,105	5,725
Housing.....	2,264	2,369	3,038
Other.....	623	652	593
Subtotal, benefits to unemployed.....	12,823	13,170	13,922
Total needs-tested benefits.....	30,591	32,868	35,801
By program:			
Public assistance.....	9,920	10,304	11,098
Veterans and survivors pension.....	2,859	3,071	3,160
Medicaid.....	8,325	10,225	11,816
Food.....	7,222	6,898	6,689
Housing.....	2,264	2,369	3,038
Total needs-tested benefits.....	30,591	32,868	35,801

vivors pensions, medicaid, and food and housing programs are those which provide benefits to individuals based on a test of need. In addition to that test, eligibility for cash assistance may be based on such considerations as prior military service, age, disability, or absence of a breadwinner in a family. The following table arrays only those program benefits available to each target group on a needs-tested basis.

Table L-10. FEDERAL OUTLAYS FOR INCOME SECURITY BENEFITS, BY DEPARTMENT AND PROGRAM

Department, agency and program	Benefit outlays		
	1976 actual	1977 estimate	1978 estimate
Department of Health, Education, and Welfare:			
Social security:			
Old-age and survivors insurance.....	62,140	70,979	77,015
Disability insurance.....	9,222	10,929	12,294
Hospital insurance.....	12,267	15,030	16,099
Supplementary medical insurance.....	4,671	5,926	7,256
Supplemental security income.....	4,440	4,720	5,000
Public assistance:			
Maintenance payments.....	5,363	5,459	6,044
Medicaid.....	8,325	10,225	11,816
Special benefits for disabled coal miners.....	974	938	958
Assistance to refugees.....	67	74	-----
Public health service officers retirement.....	25	28	31
Medical care for retired commissioned officers.....	6	8	8
Proposed legislation included above.....	-----	(-175)	(-786)
Total Health, Education, and Welfare.....	107,500	124,315	136,521
Veterans Administration:			
Disability and dependency and indemnity compensation...	5,154	5,733	5,713
Veterans and survivors pensions.....	2,859	3,071	3,160
Life insurance (net subsidy).....	529	545	556
Other veterans benefits.....	191	198	204
Proposed legislation included above.....	-----	-----	(-79)
Total Veterans Administration.....	8,734	9,548	9,633
Department of Labor:			
Unemployment insurance (State programs).....	16,413	13,690	11,522
Special unemployment assistance.....	894	300	400
Railroad unemployment.....	218	173	165
Unemployment compensation for Federal employees and ex- servicemen.....	911	440	560
Trade adjustment activities.....	87	120	240
Federal employee worker's compensation.....	227	291	295
Special benefits for disabled coal miners.....	14	27	24
Total Labor.....	18,764	15,041	13,206
Department of Defense—Military:			
Military retirement.....	7,296	8,234	9,044
Medical care for retirees.....	627	716	787
Proposed legislation included above.....	-----	-----	(9)
Total Defense.....	7,923	8,950	9,831

Table L-10. FEDERAL OUTLAYS FOR INCOME SECURITY BENEFITS, BY DEPARTMENT AND PROGRAM—Continued

Department, agency and program	Benefit outlays		
	1976 actual	1977 estimate	1978 estimate
Department of Agriculture:			
Food stamps.....	5,266	4,390	4,332
Child nutrition.....	2,308	3,066	2,414
Special milk.....	88	180	25
Removal of surplus commodities.....	53	53	39
Proposed legislation included above.....			(-1,581)
Total Agriculture.....	7,714	7,690	6,809
Civil Service Commission: Civil service retirement.....	8,055	9,505	10,849
Total Civil Service Commission.....	8,055	9,505	10,849
Railroad Retirement Board: Railroad retirement.....	3,445	3,604	3,752
Total Railroad Retirement Board.....	3,445	3,604	3,752
Department of Housing and Urban Development:			
Public housing.....	1,392	1,414	1,950
Rent and mortgage interest supplements.....	873	955	1,088
Total Housing and Urban Development.....	2,264	2,369	3,038
Department of Transportation: Coast Guard retirement.....	122	140	155
Total Transportation.....	122	140	155
Department of State: Foreign Service retirement.....	65	82	95
Total State.....	65	82	95
Department of the Interior: General assistance to Indians....	50	52	54
Total Interior.....	50	52	54
Department of Commerce: NOAA officers retirement.....	2	2	3
Total Commerce.....	2	2	3
Total Federal outlays.....	164,639	181,298	193,947

SPECIAL ANALYSIS M

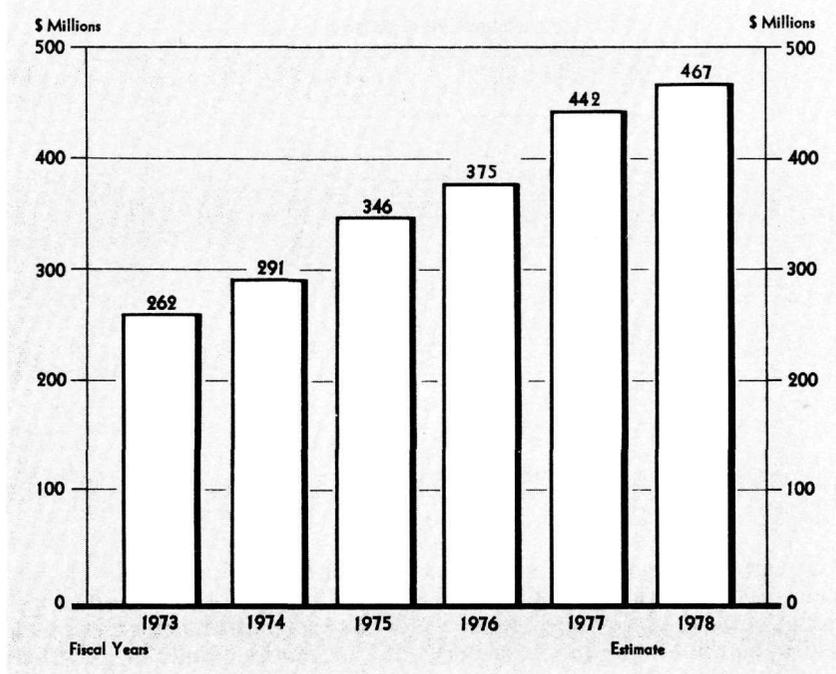
FEDERAL CIVIL RIGHTS ACTIVITIES

COVERAGE AND SCOPE OF THE ANALYSIS

This analysis of Federal civil rights activities comprises more than the traditional programs and policies related to civil rights enforcement. In addition to Federal activities regarding the protection of such rights as voting, public accommodations, fair housing, and equal employment opportunity in the public and private sectors, there are included Federal programs related to civil rights research and information dissemination and to the conciliation and prevention of racial disputes. Outlays for these civil rights activities have risen from \$346 million in 1975 to \$467 million in 1978.¹

Outlays for Civil Rights Enforcement

M-1



Programs relating to problems of the economically and socially disadvantaged, whether in employment and training, community development, or bilingual education, are not discussed in this analysis,

¹ Civil rights activities of the Postal Service, which by law is off-budget, are shown in the table as memorandum entries.

even though they may benefit a substantial number of minorities. These programs are considered in other analyses in this document.

Federal service equal employment opportunities.—The head of each Federal Executive department and agency is charged by Executive Order 11478 and the Civil Rights Act of 1964, as amended by the Equal Employment Opportunity Act of 1972 (Public Law 92-261), with establishing and maintaining an affirmative program of equal employment opportunity within the agency. Enforcement responsibility for the Government-wide program is assigned to the Civil Service Commission and special procedures are available to employees and applicants who believe they have been discriminated against in any aspect of Federal service. Out of the 38,812 people who contacted equal employment opportunity counselors in 1976 for advice and assistance, 7,059 filed formal discrimination complaints. If equal employment opportunity counseling, impartial investigation, and a third-party hearing do not resolve the matter to an individual's satisfaction, the complainant may appeal to the Commission's Appeals Review Board or may file a civil action in U.S. district court.

Table M-1. FEDERAL CIVIL RIGHTS OUTLAYS BY PROGRAM CATEGORY

(In millions of dollars)

	1976 actual	TQ actual	1977 estimate	1978 estimate
Civil rights enforcement: ¹				
Federal service equal employment opportunities.....	160.80	37.40	197.65	210.73
Military service equal opportunities ²	38.33	9.86	40.18	41.55
Private sector equal employment opportunities.....	104.38	26.95	114.56	118.40
Equal educational opportunity.....	19.64	4.43	24.73	26.40
Fair housing ³	16.71	3.80	19.56	20.27
Enforcement and investigation ⁴	22.18	8.55	27.74	29.55
Research and information dissemination.....	9.07	2.93	13.28	14.86
Civil rights conciliation and prevention of disputes.....	4.09	1.10	4.45	5.05
Total	375.20	95.02	442.15	466.81

¹ Civil rights enforcement programs guarantee and protect the basic civil rights as defined by law.

² Excludes outlays for contract compliance, fair housing and title VI activities reported elsewhere. Includes U.S. Coast Guard.

³ Excludes funds for contract compliance and departmental personnel who directly administer housing and urban development programs but concern themselves with the objectives of fair housing laws.

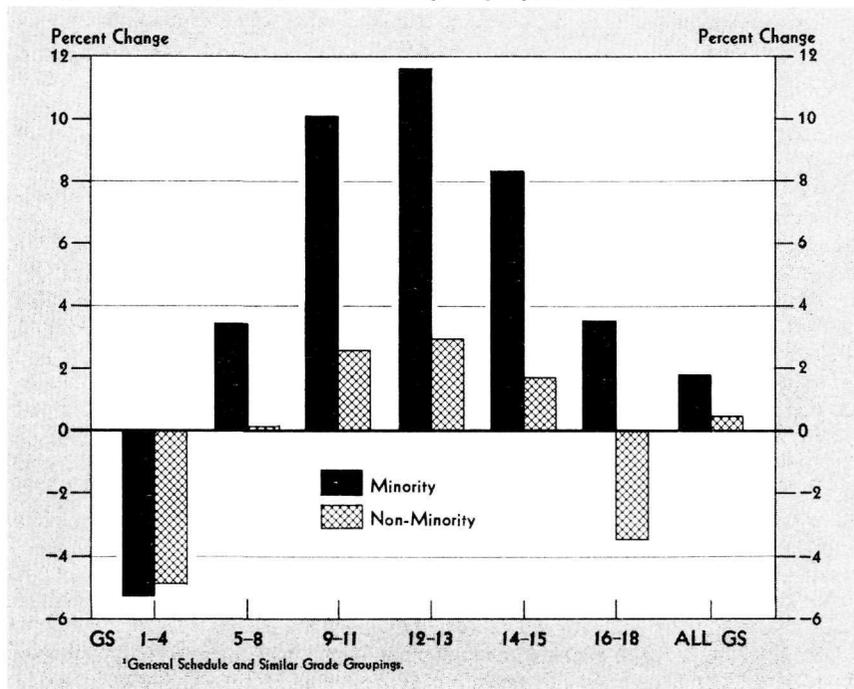
⁴ Includes all title VI efforts except HEW and HUD.

Government policy is clear that personnel actions shall be free from discrimination based on race, color, religion, sex, or national origin, and that Federal agencies shall take affirmative action to assure equal employment opportunity. Agency equal employment opportunity programs are documented in written plans of action that must be submitted to the Commission annually for review and approval. Careful consideration will be given to assure that recruitment activities reach all sources of job candidates, that present

employee skills are fully utilized, that opportunities for upward mobility are provided, and that managers are trained with regard to their equal employment opportunity responsibilities.

Changes in Minority and Non-Minority Employment¹ November 1974—November 1975

M-2



Outlays for Federal civil service equal employment opportunity programs (including upward mobility) will increase by 31% in the 2 years, 1976 to 1978, to \$211 million. Work-years in these programs will increase by 2,531 to 10,688.

As of November 30, 1975, more than one-fifth (21%) of Federal employees were members of minority groups. Recent surveys have reflected a continuing trend of more minorities in the middle and upper grade and pay levels. As of October 31, 1975, women represented 42.1% of the full-time Federal white-collar work force (excluding the Postal Service). Between October 1974 and October 1975, women represented 76% (14,114) of the total increase (18,493) in general schedule employment.

Under the Intergovernmental Personnel Act of 1970 (IPA), the Civil Service Commission provides technical and financial assistance in personnel management and employee development to State and local governments. This promotes and supports State and local equal employment opportunity efforts. During 1976, the Commission:

- Awarded \$1.7 million in IPA grant funds to support 68 projects exclusively designed to improve various aspects of equal employment opportunity in State and local governments.

- Provided technical assistance on request to more than 1,000 jurisdictions on developing affirmative action plans, removing artificial barriers to employment and promotion, and establishing job related selection methods.
- Developed and issued a variety of publications for State and local use, aimed wholly or partially at improving equal employment opportunity.

In 1978, the Commission will continue to provide technical and financial assistance in this area.

Military services equal employment opportunities.—Each of the military services² has placed equal opportunity officers at various levels within individual command structures. They guide, monitor, and evaluate all matters pertaining to the equal opportunity and treatment of military personnel and their dependents, and are responsible for and participate in race relations councils, seminars, and training. In 1978, outlays for insuring equal opportunities for members of the Armed Services, excluding fair housing expenditures, will total \$41 million and provide for more than 4,812 work-years.

Equal opportunity for servicewomen will receive added emphasis. As the number of women in the military services continues to rise at a rapid rate, greater utilization is being made of their talents. For example, the Army has now opened 92% of its enlisted occupational specialties to women, and the Navy is accepting women in 87% of the enlisted career specialties. Six women currently serve at the general/flag officer rank.

All services are now also training women as noncombat pilots and, in June 1976, women were admitted to service academies for the first time. Service ROTC programs are also open to women.

The Defense Race Relations Institute, located at Patrick Air Force Base, Fla., continues as the primary arm of the Defense Department's education program in race and human relations. The institute was established to give members of the Armed Forces a common body of knowledge in such areas as minority studies and behavioral science. The Institute has graduated more than 4,300 instructors from all the services in the past 6 years.

Recruiting efforts will continue to insure minority participation in the military services. All services have increased the percentage of minority recruiters. An example of their success is the service academies where the enrollment of 1,374 minorities is 10.4% of the total enrollment—more than 10 times the number enrolled in 1970. Significant progress has also been made in obtaining minority officers from reserve officer training programs and officer candidate training schools, and in giving minority officers the opportunity to attend senior and intermediate level professional military schools. Minorities in the ROTC program have increased from 11,911 in 1975 to 16,436 in 1976.

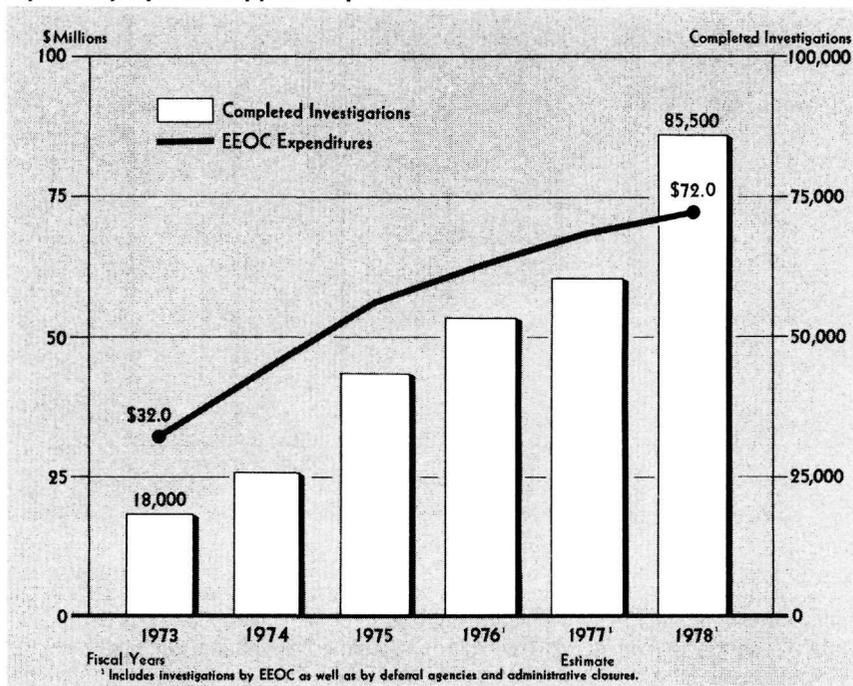
Currently there is a minority at the 4-star general rank, and 21 other minority general officers are on active duty. Prior to 1971, only 4 minorities had ever achieved general/flag officer rank in the entire history of the Armed Services. The top enlisted position in the Air Force continues to be held by a minority.

²Including the U.S. Coast Guard.

Private sector equal employment opportunities.—Title VII of the Civil Rights Act of 1964, as amended, prohibits discrimination in employment on the basis of race, color, religion, sex, or national origin by employers, unions, or employment agencies. Executive Order 11246, as amended, requires Federal and federally assisted Government contractors and subcontractors to provide similar opportunities. Outlays for the agencies charged with these responsibilities, the Equal Employment Opportunity Commission, the Justice Department, the Department of Labor, and 11 cooperating Federal agencies, will total \$118 million in 1978.

Equal Employment Opportunity Commission Activities

M-3



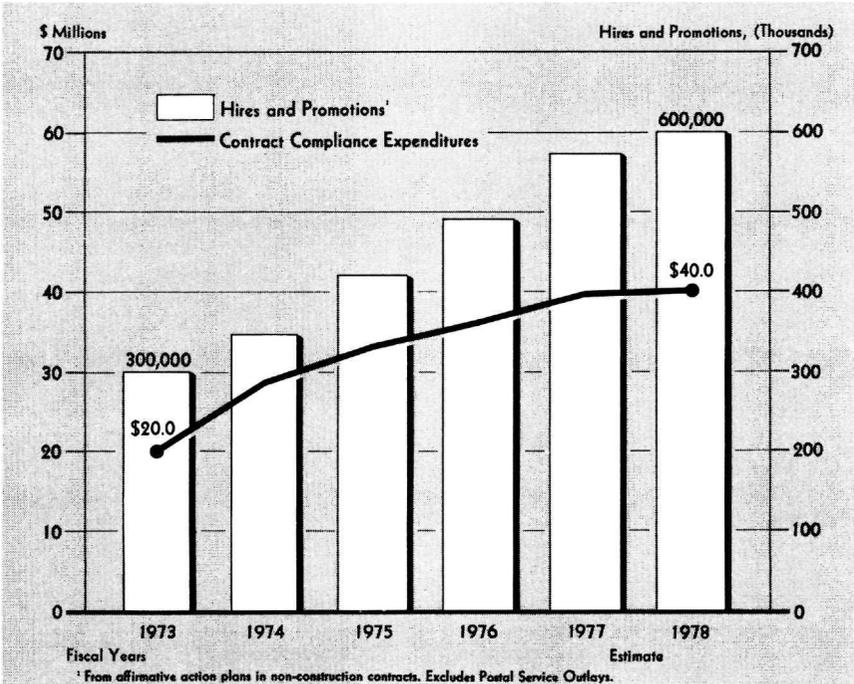
The Equal Employment Opportunity Commission will spend \$72.0 million in 1978 to carry out its responsibilities relating to nondiscrimination in employment in the private sector and State and local governments. An estimated 85,500 charge resolutions are projected through the combined efforts of the Commission and the State and local agencies to which, under law, charges are deferred. The Commission will increase the amount of its grants by 73% to \$10.4 million for State and local agencies that administer fair-employment practices statutes, to strengthen the Federal/State partnership in handling charges.

Enforcement of title VII, as amended, is also the responsibility of the Justice Department which, through conciliation and litigation,

seeks to secure compliance with the law where it finds patterns or practices of employment discrimination in State and local governments and their agencies. In 1978, the Justice Department plans to spend \$2.1 million to help eliminate such discrimination.

Federal Contract Compliance Activities

M-4



Executive Order 11246, as amended, prohibits the practice of discrimination in Federal contracts, subcontracts, and on federally assisted construction projects. The order covers both construction and industrial work forces, and requires affirmative action on the part of recipients of Federal contract moneys to promote the equal employment of minorities and women. In 1978, the Federal agencies responsible for implementing this order will spend \$40.0 million. More than 600,000 new hires and promotions will be affected by such affirmative action goals.

Eighty areawide plans for affirmative action in the construction industry, including the well-known "Philadelphia plan," have been put into effect. In addition, the Office of Federal Contract Compliance programs, within the Department of Labor, is continuing to develop proposals for statewide construction contracts. The goal for 1978 is to insure that all areas with substantial minority populations are covered under either a voluntary or imposed affirmative action plan. In order to strengthen the contract compliance program and make it more responsive to the needs of minorities and women, responsibility for enforcement will be consolidated in 1978, and the number of agencies with contract compliance responsibilities will be reduced from 17 to 11.

Other highlights include:

- The Federal Communications Commission will continue to investigate complaints of employment discrimination by broadcasters, cable television systems, and common carriers, and review licensees' annual reports of employment patterns as part of its program to enforce the rules of the Commission relating to equal employment opportunity.
- The Department of Labor will spend \$4.4 million in administering the Equal Pay Act. In 1976, as a result of these efforts, \$17.9 million in wages was received by 24,610 employees, primarily women, to rectify illegal pay practices. An additional \$7.8 million in back wages was also restored to 16,728 employees.

Equal educational opportunity.—Responsibility for insuring equality of educational opportunity rests both with the Department of Health, Education, and Welfare and with the Department of Justice. This responsibility includes guaranteeing students the full range of educational opportunity, as well as promoting a nondiscriminatory policy with regard to school staff and administration. In 1978, educational activities in support of these goals will expend \$26.4 million.³

To enforce Federal laws requiring equal education opportunities for public school students, the Justice Department will spend \$1.8 million in the coming year. Although substantial compliance with the constitutional mandate has been achieved in recent years, the Justice Department continues its enforcement supervision through more than 200 cases involving some 500 school systems. In addition, the Department engaged in active litigation in 103 of these cases to assure full compliance with the law, including nondiscrimination in the hiring and promoting of school personnel. Currently, the Federal Government is also taking steps to provide demonstration programs for non-English-speaking pupils to provide them full equality of opportunity. Title IX of the Higher Education Amendments of 1972 charged the Department of Health, Education, and Welfare with the responsibility of insuring nondiscrimination on the basis of sex in some 2,850 institutions of higher education throughout the United States. In 1978, the Department expects approximately 475 complaints will be investigated.

Fair housing.—Title VIII of the Civil Rights Act of 1968 prohibits discrimination in the sale, rental, or financing of housing, and in the provision of brokerage services, on the basis of race, color, religion, sex, or national origin. The Department of Housing and Urban Development (HUD) is charged with the administration and enforcement of this act and the promotion of fair housing throughout the United States. All executive agencies and departments are required to cooperate with HUD—the lead agency in this area—and to conduct their programs in a manner that affirmatively furthers fair housing opportunities for all Americans.

Expenditures for the administration of fair housing programs in executive departments and agencies will increase in 1978 to \$20.3 million.

³ Excludes amounts for nondiscrimination against the handicapped.

Highlights of the Government's fair housing efforts are:

- HUD will spend \$5.8 million to strengthen its efforts under title VIII and enable it to reduce the backlog in the reactive complaint system.
- The Department of Justice will spend \$2.1 million in the development, litigation, and negotiation of cases to enforce title VIII.
- The Department of Defense will spend \$6.5 million to assure the rights of all military personnel to available offbase housing.
- The General Services Administration (GSA) will spend \$1.1 million to assure that federally constructed or leased space is located where there is an adequate supply of low- and moderate-income housing available on a nondiscriminatory basis.

Table M-2. FEDERAL CIVIL RIGHTS OUTLAYS BY TYPE OF ACTIVITY
(In millions of dollars)

	1976 actual	TQ actual	1977 estimate	1978 estimate
Complaint conciliation.....	22.13	4.39	27.54	28.73
Complaint investigation.....	52.67	12.52	62.35	65.25
Compliance review and monitoring.....	74.18	19.35	88.53	94.28
Legal enforcement.....	27.32	4.62	31.56	33.37
Program direction, research and information dissemination.....	82.66	25.81	105.05	109.90
Technical assistance.....	5.79	.83	7.18	7.75
Upward mobility.....	72.12	17.64	79.94	85.98
Military services equal opportunities.....	38.33	9.86	40.00	41.55
Total.....	375.20	95.02	442.15	466.81

During 1976, HUD received 3,123 complaints, and closed 4,049. In addition, 584 conciliation agreements were negotiated, generally including both specific relief for the complainant and actions to eliminate any discriminatory practices found as a result of the complaint. In enforcing title VIII, HUD also requires the display of fair housing posters, oversees advertising guidelines and reviews affirmative marketing plans.

Title VIII requirements are an integral part of HUD regulations implementing title I of the Housing and Community Development Act of 1974, which authorizes community development block grants, and title II of that act, which establishes the new section 8 housing assistance program. To assure nondiscrimination under these programs, the Department will continue communitywide administrative meetings, expand compliance reviews, and increase cooperative efforts with other agencies, particularly the independent Federal financial regulatory agencies, in order to insure the affirmative administration of all programs relating to housing. Voluntary compliance agreements have been concluded with the real estate boards of major cities. HUD's enforcement efforts are supplemented by the Department of Justice and by private civil suits that may be brought under title VIII.

The Justice Department has brought or participated in 273 suits against defendants in 34 States and the District of Columbia. Court

orders have been entered, most of which required comprehensive affirmative relief to correct the effects of past housing discrimination and to maximize equal opportunity in the future. The Department has also obtained supplemental relief or brought contempt of court proceedings in cases where defendants had failed to implement provisions of earlier orders.

The Defense Department expects to continue its successful implementation of the open offbase housing program. Today, 99% of surveyed facilities are pledged to a policy of nondiscrimination. Recently, Defense revised its procedures to take stronger measures against landlords practicing race and sex discrimination. In 1978, Defense will devote 460 work-years of effort to furthering this record.

GSA, under Executive Order 11512, will expend 43 work-years on matters relating to the positive impact that selection of sites for Federal facilities can have on the social and economic conditions in the area. GSA and HUD are continuing to develop affirmative action plans where necessary to insure that an adequate supply of housing will be available on a nondiscriminatory basis.

Civil rights enforcement.—Primary responsibility for the enforcement of civil rights laws and constitutional guarantees is vested in the Justice Department. This includes the development, negotiation, conciliation, and litigation of cases and complaints. In 1978, the Justice Department and other agencies with enforcement responsibilities will spend \$29.5 million to carry out these responsibilities. The Department will focus on its ongoing coordination of Federal agencies, enforcement efforts under title VI of the 1964 Civil Rights Act which prohibits discrimination in federally assisted programs and under the general revenue sharing legislation. The Department will also carry on enforcement activities directed toward compliance with laws that prohibit the interference with basic civil rights, including the right to vote and the use of public accommodations and facilities.

In 1978, the Justice Department will continue to investigate, litigate and protect the civil rights of citizens who may have suffered violence or threats of violence, including special protections for migrant workers, prison inmates, and, with the Interior Department, American Indians. Attention will also be directed to civil litigation involving injustices and substandard conditions in correctional institutions, mental hospitals, and juvenile homes.

The voting rights program will expand its efforts to secure for all citizens, including non-English-speaking citizens, the right to register and vote without discrimination or intimidation. In addition, all proposed changes affecting voting under section 5 of the Voting Rights Act of 1965, as amended, are submitted to the Attorney General and must be investigated, reviewed, and adjudicated in the Department of Justice. In 1976, 2,658 submissions involving 6,902 changes were processed. In support of the voting rights program, the Civil Service Commission provides personnel to prepare and maintain lists of eligible voters and to observe election procedures in States or other political subdivisions designated by the Attorney General. The

Commission receives complaints, hears and determines challenges, and assists in the defense of challenge cases filed in the U.S. circuit courts of appeals.

Civil rights research and information dissemination.—Expenditures grouped in this category include all moneys for civil rights activities not counted elsewhere, as well as Federal research and information dissemination efforts. Outlays in this area will total \$14.9 million in 1978, and include the following highlights:

- The Commission on Civil Rights will spend \$10.4 million to carry on its factfinding function relating to denials of equal protection under the law.⁴
- The Women's Bureau, within the Department of Labor, will devote \$2.6 million to questions and issues relating to the utilization of womanpower and the economic, legal, and civil status of women. The Bureau works with State, national, international, local, and union organizations, and concerned individuals in achieving its goals, and provides support services to the Citizens Advisory Council on the Status of Women.
- The women's action program, Department of Health, Education, and Welfare (HEW), in association with the Secretary's Advisory Committee on the Rights and Responsibilities of Women, will spend \$0.4 million to analyze the effects of and develop the changes in HEW programs to achieve equality for women.

Civil rights conciliation and prevention of disputes.—The Community Relations Service of the Department of Justice was established by title X of the Civil Rights Act of 1964 to reduce and prevent racial tensions and to provide assistance to communities in resolving difficulties arising from discriminatory practices which disrupt peaceful relations among citizens. The Service actively cooperates with Federal, State, and local agencies, private and public groups, and individuals on methods and programs for the peaceful resolution of racial disputes.

In 1978, the Service will spend \$5.0 million for this purpose. This will permit an expansion in crisis resolution and State liaison activities. State liaison representatives continue to work with State and local officials in developing their own crisis contingency plans to enable communities to provide community relations services for themselves.

⁴ Excludes expenditures authorized under the Age Discrimination Act of 1975.

Table M-3. FEDERAL CIVIL RIGHTS OUTLAYS BY DEPARTMENT AND AGENCY (in millions of dollars)

	1976 actual	TQ actual	1977 estimate	1978 estimate
Department of Agriculture.....	6.00	1.54	6.53	5.44
Department of Commerce.....	1.03	.27	1.10	1.11
Department of Defense.....	51.89	13.24	54.72	58.79
Department of Health, Education, and Welfare.....	23.71	5.15	29.63	29.65
Department of Housing and Urban Development.....	10.58	2.78	11.59	12.34
Department of the Interior.....	1.64	3.9	2.12	2.07
Department of Justice.....	23.87	6.22	25.22	27.29
Department of Labor.....	11.57	3.37	13.58	14.00
Department of State.....	*	*	*	*
Department of Transportation.....	3.97	.83	4.31	4.64
Department of the Treasury.....	1.36	.34	1.56	2.18
Civil Service Commission ¹	161.66	38.71	200.56	212.06
Commission on Civil Rights.....	7.89	2.35	9.32	10.14
Energy Research and Development Administration ²	2.00	.50	2.20	3.23
Environmental Protection Agency.....	.84	.21	.88	1.24
Equal Employment Opportunity Commission.....	59.07	16.65	68.42	71.86
Federal Communication Commission.....	.35	.09	.40	.41
General Services Administration.....	4.87	1.47	6.08	6.15
Postal Service ³	(1.85)	(-.07)	(1.01)	(1.81)
Small Business Administration.....	1.19	.48	1.91	2.18
Veterans Administration.....	1.02	.25	1.24	1.24
Other independent agencies.....	.69	.18	.78	.79
Total.....	375.20	95.02	442.15	466.81

*Less than \$10 thousand.

¹ All Federal service equal employment opportunity outlays, including upward mobility, are reported under the lead agency, Civil Service Commission.

² The Atomic Energy Commission expired Jan. 19, 1975. The majority of its resources were transferred to this new agency upon its expiration.

³ Postal Service outlays appear in the Annexed Budget and are included here for memorandum purposes only.

SPECIAL ANALYSIS N

FEDERAL PROGRAMS FOR THE REDUCTION OF CRIME

Two basic responsibilities of government are the maintenance of order and the administration of justice. The Federal Government fulfills these responsibilities through crime reduction and criminal justice programs that include:

- Operation of the Federal criminal justice system;
- Support for crime and criminal justice research and development to determine new methods of controlling crime and strengthening criminal justice; and
- Financial and technical assistance to States and localities for crime reduction and criminal justice improvement.

The objective is to reverse the trend of rising crime, thereby decreasing the fear of criminal abuse and exploitation and the loss of human and economic resources associated with crime.

EVENTS OF THE PAST YEAR

Federal crime reduction activities reflect the continued high priority the administration has placed on these programs. During the past year:

- The President transmitted a Special Message on Drug Abuse to Congress that:
 - established two new Cabinet committees: Drug Law Enforcement, and Drug Abuse Prevention, Treatment, and Rehabilitation;
 - directed the Secretary of State, the Attorney General, and the Ambassador to the United Nations to discuss with foreign governments the development of adequate controls on the production and distribution of illicit drugs;
 - endorsed the Mexican Government's proposal to establish a mechanism for formally exchanging information and ideas on drug law enforcement;
 - proposed legislation to: (1) require minimum mandatory prison sentences for persons convicted of high-level trafficking in heroin, (2) enable judges to deny bail in certain drug cases, and (3) expand Customs authority to search for money being smuggled out of the United States;
 - urged congressional confirmation of the 1971 international treaty (Convention on Psychotropic Substances) aimed at controlling synthetic drugs.
- The Cabinet level Domestic Council Committee on Illegal Aliens, chaired by the Attorney General, completed 9 months of intensive study of problems related to illegal immigration. The Committee's preliminary report was released in early January.
- The Law Enforcement Assistance Administration funded 19 career criminal programs focused on habitual offenders. Accomplishments included significant reductions in court delays and plea

bargaining, conviction of 94% of all persons identified as habitual criminals, and incarceration of 93% of those convicted.

- Four new Federal correctional facilities were activated, including metropolitan correctional centers in New York and Chicago, a youth facility at Miami, Fla., and an adult institution at Butner, N.C.

During the first 9 months of 1976, overall crime increased only 2%. This compares to increases of 11% and 16% in 1975 and 1974, respectively. Violent crime—murder, robbery, aggravated assault, and forcible rape—decreased in the same period; this is the first time since this statistical series was started (1970) that violent crime has decreased.

1978 BUDGET HIGHLIGHTS

The 1978 budget proposes continued emphasis on Federal programs to reduce crime and improve criminal justice. Outlays from these programs are expected to total \$3.3 billion in 1978, \$102 million more than in 1977, and \$304 million greater than in 1976. Estimated total criminal justice expenditures by all levels of government—Federal, State, and local—are estimated to exceed \$26 billion in 1978.

Recognizing that the heaviest burden of crime reduction and criminal justice improvement rests upon State and local governments, the Federal Government will devote more than \$1 billion in Federal expenditures to assist those governments in carrying out these responsibilities. Federal funds channeled to State and local governments through the principal criminal justice assistance program—the Justice Department's Law Enforcement Assistance Administration (LEAA)—will result in \$819 million in outlays in 1978.

The Department of Justice, the primary Federal agency responsible for crime reduction and criminal justice programs, anticipates outlays of \$2.1 billion in 1978 for these purposes. Specific emphasis will be placed on the following program areas:

- *Law enforcement.*—The Federal Bureau of Investigation (FBI) will accelerate efforts to automate fingerprint operations. LEAA, in cooperation with FBI and other Federal, State, and local law enforcement agencies, will continue funding antifencing projects—such as the highly effective "Sting" operation in Washington, D.C.—to disrupt illicit commerce in stolen goods.
- *Adjudication.*—The Washington-based legal divisions and U.S. Attorney's offices around the country will receive additional resources to accommodate an increased and more complex caseload. LEAA will emphasize financial and technical assistance for State and local judicial systems to reduce court delay and improve administration.
- *Corrections.*—Additional prison and detention facilities will be provided to relieve overcrowding, accommodate increased inmate population, and reduce the use of older, inadequate institutions.

The Department of the Treasury has the second largest Federal crime reduction program because of its responsibility to enforce tax, currency, and other revenue laws. Outlays of \$459 million are expected in 1978 with special emphasis on the following enforcement areas:

- *Firearms and explosives.*—The Bureau of Alcohol, Tobacco and Firearms will evaluate, test, and make a decision whether to expand its concentrated urban enforcement project against illegal trafficking in firearms and explosives.

- *Counterfeiting and forgery.*—The Secret Service will devote an increased proportion of resources to the investigation and arrest of persons engaged in counterfeiting, forging, or altering currency, coins, checks, and bonds of the United States and foreign governments.

Total 1978 outlays for drug law enforcement are expected to exceed \$334 million. Because the incidence of drug abuse, especially heroin, appears to have a major effect on the incidence of crime, several programs to reduce the availability of drugs and imprison high-level traffickers will be strengthened:

- *Eradication.*—These activities will be encouraged, particularly the intensified eradication program begun in 1976 by the Mexican Government to reduce the supply of brown heroin.
- *Drug removal.*—Efforts to control drug smuggling at the Nation's borders through the use of contraband detection devices and "sniffer dog" teams will be expanded; additional investigative efforts will be concentrated on high-level traffickers.
- *Tax enforcement.*—Additional resources will be focused upon investigation of high-level drug traffickers who violate Federal tax laws.

Table N-1. OUTLAYS FOR FEDERAL CRIME REDUCTION BY AGENCY

(In thousands of dollars)¹

	Outlays		
	1976 actual	1977 estimate	1978 estimate
The Judiciary.....	145,620	174,518	191,788
Department of Agriculture.....	10,657	14,055	13,780
Department of Commerce.....	2,896	4,003	4,003
Department of Defense—Civil.....	6,579	7,503	8,453
Department of Health, Education, and Welfare.....	215,422	230,029	260,667
Department of Housing and Urban Development.....	8,192	3,605	-----
Department of the Interior.....	63,327	61,412	63,432
Department of Justice.....	1,960,848	2,073,671	2,084,713
Department of Labor.....	7,000	5,000	5,000
Department of State.....	41,818	35,150	35,600
Department of Transportation.....	67,692	100,167	109,075
Department of the Treasury.....	377,973	413,066	458,727
General Services Administration.....	3,443	3,367	2,941
Veterans Administration.....	131,035	119,172	108,287
Other independent agencies.....	681	765	798
Total Federal outlays.....	3,043,183	3,245,483	3,347,264

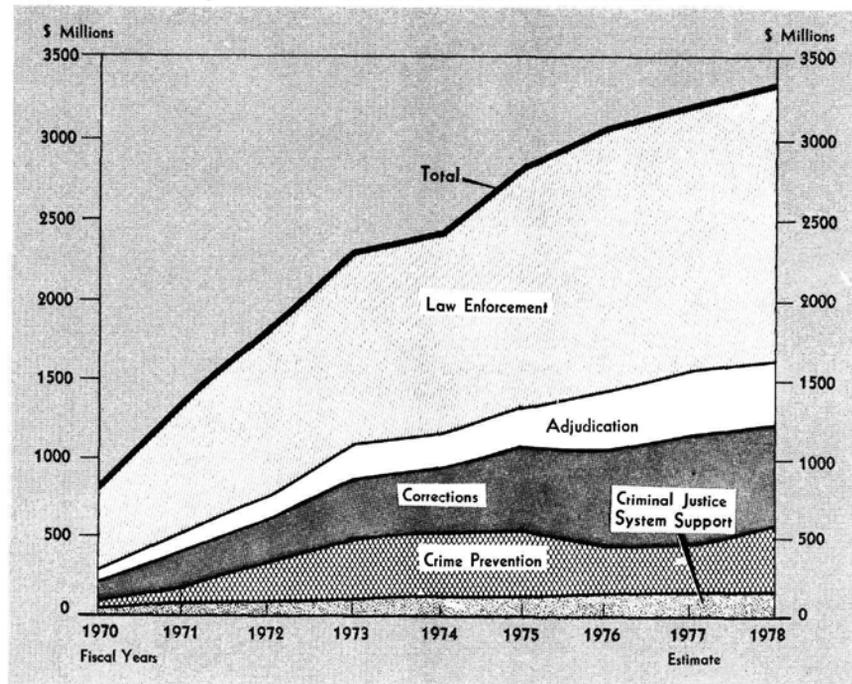
¹ Does not include outlays for the Department of Defense—Military and the U.S. Postal Service that are included in the 1978 Annexed Budget.

CRIME REDUCTION PROGRAMS BY ACTIVITIES

Budget outlays discussed in this special analysis pertain to all Federal programs directly related to crime reduction except those of

the Department of Defense.¹ The analysis excludes general social programs, even though such programs may indirectly reduce the causes of crime, and does not include resources devoted to background investigations for employment, administrative inspections, or investigations of a regulatory nature that might result in the application of criminal sanctions in rare cases. Where activities involve both criminal and civil proceedings, such as operation of Federal courts, an allocation of outlays to the crime-related function has been estimated. The discussion is not intended to be exhaustive but rather to highlight the wide range of activities and agencies involved in Federal crime reduction programs.

Growth in Outlays for Federal Crime Reduction Activities



Crime prevention.—Crime prevention programs include efforts to reduce crime through means other than direct enforcement or general criminal justice activities; that is, actions taken before the fact. The category includes public education, drug treatment, juvenile delinquency prevention, and community crime prevention projects.

¹ Defense Department outlays for law enforcement are estimated as (in thousands of dollars):

	1976 act.	TQ act.	1977 est.	1978 est.
Department of the Army.....	360,647	90,542	408,075	418,502
Department of the Navy.....	10,695	2,732	16,910	17,529
Department of the Air Force.....	201,863	46,550	184,410	188,789
Total, Department of Defense.....	573,205	139,824	609,395	624,820

Table N-2. OUTLAYS FOR FEDERAL CRIME REDUCTION BY PROGRAM AND ACTIVITY (in thousands of dollars) ¹

Major program and activity	Outlays		
	1976 actual	1977 estimate	1978 estimate
Crime prevention:			
Public education on law observance, enforcement, and crime prevention.....	24,343	28,372	46,427
Special programs for the treatment of narcotic addicts.....	173,877	172,727	195,595
Juvenile delinquency prevention.....	81,866	93,781	96,213
Development of community crime prevention services.....	22,789	12,583	24,952
Program total.....	302,875	307,463	363,187
Law enforcement:			
Enforcement of Federal criminal law.....	939,178	1,038,778	1,110,882
Protection of facilities and individuals.....	76,314	75,092	77,506
General law enforcement support.....	538,992	517,965	502,236
Research and development.....	27,071	31,539	26,618
Program total.....	1,581,555	1,663,374	1,717,242
Adjudication:			
Preparation of Federal criminal cases.....	98,860	114,436	121,429
Operation of the Federal court system.....	100,687	115,886	123,092
Assistance to States and localities.....	163,126	174,786	145,911
Research and development.....	16,811	17,117	13,853
Program total.....	379,484	422,225	404,285
Corrections:			
Operation of Federal correctional institutions.....	192,901	226,542	261,452
Federal probation, parole, and community treatment activities.....	63,843	78,611	84,950
Federal inmate education and training.....	11,553	14,392	15,607
Federal inmate medical treatment.....	24,596	30,731	33,786
Assistance to States and localities.....	287,921	301,553	273,129
Research and development.....	12,010	11,628	10,041
Other Federal correctional activities.....	2,872	3,287	3,450
Program total.....	595,696	666,744	682,415
Criminal justice systems support:			
Statistics on crime and criminal justice systems.....	42,011	34,539	34,228
Research on behavior and the causes of crime.....	12,775	13,165	10,153
Reform of criminal laws.....	1,536	1,660	1,650
Planning and coordination of crime reduction programs.....	127,251	136,312	134,104
Program total.....	183,573	185,676	180,135
Total Federal outlays.....	3,043,183	3,245,483	3,347,264

¹ Does not include Department of Defense—Military and U.S. Postal Service.

An estimated \$363 million will be spent on crime prevention activities in 1978. Specific program emphases are:

- *Community crime prevention.*—The Law Enforcement Assistance Administration will implement a new community anti-crime program to encourage citizen groups to participate in crime prevention programs, and will continue research to determine how physical and urban design variables affect criminal behavior

and influence community response to crime. The FBI will assist residents in safeguarding their homes and property through the crime resistance program.

- *Juvenile delinquency prevention.*—LEAA's Office of Juvenile Justice and Delinquency Prevention will support several programs started in 1976 and 1977, including removal and diversion of status and other juvenile offenders from the traditional juvenile justice system, restitution, community restoration, and special studies on youth groups, the violent youth offender, and school violence. In 1978 youth advocacy, alternative education programs, and studies of youth probation and alternatives to incarceration will be initiated. LEAA will also continue support for runaway youth programs in coordination with title 20 funds of the Social Security Act.
- *Drug treatment.*—The National Institute on Drug Abuse (NIDA) in the Department of Health, Education, and Welfare will continue to assist States and localities in developing statewide community-based drug abuse treatment programs. LEAA will extend the treatment alternatives to street crime program, which refers drug addicts to appropriate institutional or community services. Community treatment for drug dependent Federal offenders will be expanded by the Bureau of Prisons. In addition, the Veterans Administration will provide assistance to eligible veterans through its drug dependence treatment program, which combines medical, social, psychiatric, and vocational treatment to reduce dependence on opiates and other drugs.

Law enforcement.—Law enforcement consists of detection, identification, and apprehension of violators of Federal criminal law; protection of Federal facilities and individuals; and law enforcement research and development. Other general support is also included, such as the operation of criminal intelligence systems and forensic laboratories, education and training of enforcement officers, and international programs supporting domestic enforcement efforts. Outlays of \$1.7 billion are projected for law enforcement in 1978—the single largest category of all Federal crime reduction programs. Of this amount, \$246 million will constitute assistance to State and local law enforcement agencies. Specific initiatives in 1978 include:

- *Federal law enforcement.*—In addition to the enforcement activities mentioned above, the Immigration and Naturalization Service will strengthen the border patrol and increase the number of inspectors at new and expanded ports of entry. The Justice Department's Criminal Division will refocus its strike forces and concentrate on top organized crime figures, who are usually insulated from prosecution for their serious crimes. The Internal Revenue Service will strengthen the tax fraud investigation program; a task force is currently studying tax fraud to determine how this can best be done. The State Department will continue to assist foreign governments and international organizations in their efforts to disrupt the flow of illicit narcotics, primarily through training in drug enforcement and intelligence, equipment procurement, advisory assistance, and crop substitution projects.

- *Protection of facilities and individuals.*—The Secret Service will continue to provide security for foreign diplomatic missions in Washington, D.C. The Bureau of Indian Affairs will provide law enforcement services for approximately 380,000 persons on 100 reservations. The National Park Service in the Department of the Interior will expand visitor protection in selected areas.
- *Law enforcement research and development.*—Most Federal law enforcement agencies support modest research and development programs to identify better methods of carrying out their responsibilities. The Federal Government's primary law enforcement research effort is LEAA's National Institute of Law Enforcement and Criminal Justice. In 1978 the Institute will extend projects focusing on police management and police patrol strategies.
- *Other general support.*—The FBI will assist States and localities through fingerprint and laboratory analysis and police training programs. Other Federal law enforcement agencies will continue training State and local law enforcement officers in specific program areas. Several projects to improve police operations will be funded by LEAA. The Federal Law Enforcement Training Center will complete renovation of its facilities in Georgia.

Adjudication.—Adjudication includes the preparation and prosecution of criminal cases, operation of court systems, trial of cases, provision of legal defense, and related activities. Adjudication research and development and State and local assistance is also included. More than \$404 million will be devoted to these programs in 1978, including \$146 million in assistance to States and localities. Specific program emphases are:

- *Prosecution of Federal cases.*—The Justice Department's legal divisions, in concert with the U.S. attorneys, are responsible for prosecution of crimes against the United States. In 1978, the Department will emphasize its prosecution of white-collar crime, public corruption, organized crime, and large scale narcotics trafficking.
- *Operation of courts.*—The Federal judiciary will expend \$180 million in 1978 to operate criminal courts. Additional Federal judgeships, which are expected to be considered by Congress, would improve administration of the judiciary's responsibilities.
- *State and local assistance.*—LEAA provides assistance to State and local judicial systems to improve administration and reduce court delays. In 1978, emphasis will be placed on the creation and augmentation of State court planning capabilities, the delivery of technical assistance, and the support of fundamental improvements, such as the reorganization of court systems and the restriction of delay practices.
- *Research and development.*—LEAA's National Institute supports various research projects to determine improved methods of court operation. Specific projects planned in 1978 include studies of alternatives to traditional court processing, consistency in prosecution practices, performance measures for courts, and sentencing guidelines.

Corrections.—These programs encompass custody and treatment of criminal offenders, including supervision and operation of correctional institutions, inmate and offender treatment and training programs, probation and parole services, and other supportive services. Corrections research and development, and State and local assistance are also included. Expenditure of \$682 million will support correctional activities in 1978, of which \$273 million will be allocated to State and local correctional activities. Areas of focus are:

- *Care and custody of Federal offenders.*—The Bureau of Prisons in the Department of Justice is responsible for the care and custody of Federal offenders. In 1978, the Bureau will strengthen security and implement unit management at selected institutions. One new institution will be activated and two more will be expanded.
- *Construction of new facilities.*—In 1978, new construction will be accelerated to provide additional prison and detention space. Work will continue on youth facilities in Alabama, California, New York, and the New Jersey-Philadelphia area, an adult institution in New York, and a metropolitan correctional center in Detroit. New construction will begin on adult institutions in the south central and west coast regions.
- *State and local assistance and correctional research and development.*—Responsibility for this program is shared by LEAA and the National Institute of Corrections (NIC) in the Bureau of Prisons. In 1978, NIC will support projects to upgrade alternatives to incarceration, improve management and operation of correctional systems, and study rehabilitation and deterrence. LEAA will survey the needs of State and local correctional systems and support studies in adult probation and the reorganization and reorientation of field services.
- *Parole activities.*—The U.S. Parole Commission will continue efforts to implement the Parole Commission and Reorganization Act. Additional resources will be provided to improve the parole process.

Criminal justice system support.—This category includes activities that affect more than one component of the criminal justice system and consists of information systems and training, law and policy formulation, general research and development, and overall planning and coordination activities. In 1978, \$180 million will be expended for these activities. Specific components include:

- *Statistics.*—LEAA's National Criminal Justice Information and Statistics Service compiles information and statistics on crime and criminal justice, and provides assistance for State and local information systems. In 1978, special projects will include continuation of both the National Crime Panel victimization project and the comprehensive data systems program, which supports the development of uniform State criminal justice information systems. The FBI will continue to compile statistics on crime and related matters.

- *Research.*—The National Institute of Law Enforcement and Criminal Justice in LEAA will support several general crime and criminal justice research projects. The National Institute on Mental Health in the Department of Health, Education, and Welfare will continue research in biomedical and behavioral sciences to acquire knowledge of criminal and delinquent behavior.
- *Reform of law.*—The Justice Department will continue study of the Federal criminal code to develop more effective criminal justice procedures. LEAA will assist States and localities in efforts to revise existing laws.
- *Planning and coordination.*—LEAA supports activities to improve planning and coordination of criminal justice systems. Fifty-five State and territorial planning agencies and several local planning units will be funded in 1978. Emphasis will be placed on developing capabilities in planning, evaluation, monitoring, auditing, and overall management.

Table N-3. OUTLAYS FOR FEDERAL CRIME REDUCTION BY PROGRAM AND AGENCY (in thousands of dollars)¹

Program and agency	Outlays		
	1976 actual	1977 estimate	1978 estimate
Crime prevention:			
Department of Defense—Civil.....	178	189	204
Department of Health, Education, and Welfare.....	166,613	171,393	201,293
Department of Housing and Urban Development.....	6,721	3,000	-----
Department of the Interior.....	2,016	1,995	2,010
Department of Justice.....	90,250	91,102	118,893
Department of Transportation.....	350	800	1,000
Veterans Administration.....	36,738	38,968	39,767
General Services Administration.....	9	17	20
Program total.....	302,875	307,464	363,187
Law enforcement:			
Department of Defense—Civil.....	5,255	5,962	6,739
Department of Health, Education, and Welfare.....	4,982	5,894	6,206
Department of the Interior.....	58,233	53,605	54,550
Department of Justice.....	906,948	938,010	946,069
Department of State.....	41,818	35,150	35,600
Department of Transportation.....	67,276	99,298	107,999
Department of the Treasury.....	377,973	413,066	458,727
General Services Administration.....	3,264	2,535	2,740
Department of Commerce.....	6,813	10,238	9,878
Department of Housing and Urban Development.....	40	1	-----
Department of Agriculture.....	6,740	7,820	7,905
Securities and Exchange Commission.....	681	765	798
Veterans Administration.....	94,297	80,204	68,520
Other agencies.....	7,235	10,826	11,511
Program total.....	1,581,555	1,663,374	1,717,242
Adjudication:			
The Judiciary.....	83,833	99,297	109,447
Department of the Interior.....	1,132	3,844	3,680
Department of Justice.....	294,513	319,081	291,155
Department of Transportation.....	2	2	2
General Services Administration.....	4	1	1
Program total.....	379,484	422,225	404,285
Corrections:			
The Judiciary.....	51,624	64,355	70,830
Department of Defense—Civil.....	1,160	1,290	1,445
Department of Health, Education, and Welfare.....	41,734	48,787	50,097
Department of Housing and Urban Development.....	1,427	603	-----
Department of the Interior.....	1,946	1,968	3,192
Department of Justice.....	490,805	544,741	551,851
Department of Labor.....	7,000	5,000	5,000
Program total.....	595,696	666,744	682,415
Criminal justice systems support:			
Department of Defense—Civil.....	50	62	65
Department of Health, Education, and Welfare.....	2,029	3,995	3,071
Department of Justice.....	181,260	180,737	176,745
Department of Transportation.....	64	67	74
General Services Administration.....	166	815	180
Department of Housing and Urban Development.....	4	-----	-----
Program total.....	183,573	185,676	180,135

Table N-4. SELECTED CRIME REDUCTION AND CRIMINAL JUSTICE DATA (dollars in thousands)

Program and agency	1974 actual	1975 actual	1976 actual
Federal crime reduction outlays:			
Federal programs.....	\$1,407,227	\$1,679,103	\$1,877,763
Assistance to States and localities.....	\$1,023,906	\$1,142,297	\$1,158,249
Total crime reduction outlays.....	\$2,431,133	\$2,821,400	\$3,036,012
Criminal justice personnel:¹			
Total Federal criminal justice personnel.....	93,234	95,465	² 101,190
Law enforcement personnel.....	68,257	68,924	72,577
Adjudicative personnel.....	13,603	14,415	15,352
Corrections personnel.....	9,893	10,647	11,781
Other personnel.....	1,481	1,479	1,480
Total State and local criminal justice personnel.....	886,996	929,040	973,252
Law enforcement personnel.....	525,952	543,397	561,329
Adjudicative personnel.....	156,023	169,869	184,987
Corrections personnel.....	200,013	210,305	221,030
Other personnel.....	5,008	5,469	5,906
Federal investigations:			
FBI, investigative matters received.....	745,840	673,957	538,182
Immigration and Naturalization Service, investigations completed.....	32,101	38,067	43,170
Internal Revenue Service, cases closed.....	7,215	8,000	8,130
Customs Service, cases closed.....	21,981	24,508	27,145
Secret Service, cases closed.....	113,544	127,891	125,852
Bureau of Alcohol, Tobacco and Firearms, cases closed.....	5,455	5,203	4,385
Postal Service, criminal caseload.....	319,293	307,509	301,734
Disposition of Federal criminal cases:			
Investigative cases presented for decision—prosecution declined.....	102,535	105,737	108,667
Federal criminal cases commenced.....	47,050	46,951	44,172
Federal criminal cases terminated.....	48,200	46,467	45,668
Federal criminal cases pending.....	27,202	27,898	26,354
Federal criminal defendants convicted.....	34,699	38,766	39,988
High echelon organized crime figures convicted.....	69	54	54
Federal corrections:			
Average Federal inmate population.....	23,332	23,034	24,967
Average number of Federal offenders in non-Federal institutions.....	5,877	5,738	5,574
Court commitments to Federal institutions.....	16,144	17,718	20,296
Releases.....	14,630	17,442	16,262
Federal paroles granted.....	5,540	8,886	7,753
Persons under supervision of the Federal probation system.....	59,615	64,261	64,246
State and local crime:³			
Total number of crimes reported.....	10,192,034	11,256,566	(⁴)
Violent crimes.....	969,823	1,026,284	(⁴)
Property crimes.....	9,222,211	10,230,282	(⁴)
Crime rate (per 100,000 inhabitants).....	4,821	5,282	(⁴)
Standard metropolitan statistical areas.....	5,622	6,111	(⁴)
Other cities.....	4,027	4,437	(⁴)
Rural areas.....	1,747	1,997	(⁴)
Index offenses cleared by arrest (percent).....	21.3	21.0	(⁴)
Disposition of persons charged by police (percent):			
Convicted.....	63.3	64.5	(⁴)
Acquitted or dismissed.....	18.4	16.5	(⁴)
Referred to juvenile court.....	18.3	19.0	(⁴)

¹ Full-time only, from "Expenditure and Employment Data for the Criminal Justice System".² 1976 numbers are estimates. Actual amounts are not available.³ From FBI Uniform Crime Reports.⁴ Not available.

PART 3

SPECIALIZED ASPECTS AND
VIEWS OF FEDERAL PROGRAMS

INTRODUCTION

Part 3 discusses trends and developments in selected areas of Government activity—aid to State and local governments, research and development, and environmental quality. It covers three special analyses, those designated O through Q.

Special Analysis O summarizes Federal grants to State and local governments as well as assistance provided through loans, tax expenditures, and indirect aid. It traces the development of Federal aid over time and relates them to the finances of both the Federal Government and State and local governments. This analysis also provides a profile of Federal grants by region, and a description of the State and local government sector of the national income accounts.

Special Analysis P identifies Federal programs for the conduct of research and development, and for facilities related to such activities.

Special Analysis Q identifies Federal funding for selected environmental activities, including pollution control and abatement, environmental protection and enhancement, and understanding, describing, and predicting the environment.

SPECIAL ANALYSIS O

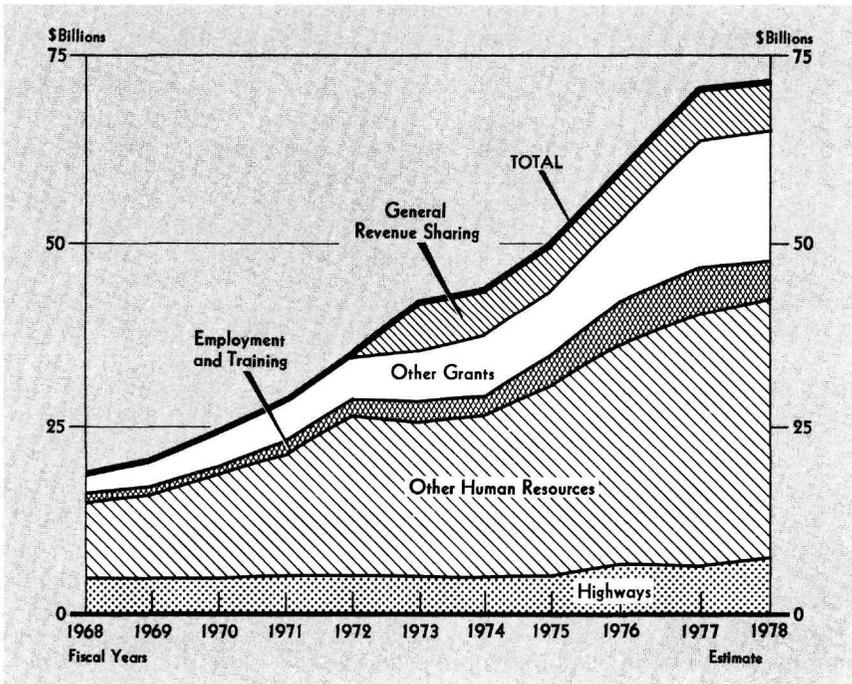
FEDERAL AID TO STATE AND LOCAL GOVERNMENTS¹

Proposed Federal grant-in-aid outlays to State and local governments are estimated to be \$71.6 billion in 1978, a 2% increase over the estimated 1977 total of \$70.4 billion, and a 21% increase over the 1976 total of \$59.0 billion. From 1966 to 1976, the average annual increase has been 16%, while total Federal outlays have grown 11% per year, and gross national product 8% per year. The relatively small growth from 1977 to 1978 is related primarily to declines in anti-recession grants as economic conditions improve.

Another form of Federal aid to State and local governments is lending. In 1978, the Federal Government is expected to disburse \$2.2 billion of new loans to State and local governments. Loan outlays net of repayments are expected to be \$145 million in 1978.

The chart shows trends over the past 10 years of major grant categories. Grants for highways remained fairly level through 1975, but increased approximately 50% from 1975-78. Grants for human resources which include the education, training, employment, and social

Federal Grants to State and Local Governments



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. Unless specifically indicated to the contrary, reference to "Federal aid" or "grants" from this point forward is confined only to grants-in-aid, including shared revenues.

services; health; income security; and veterans functions, account for more than half of the increase since 1968. Of these, employment and training grants grew during the recession in the mid-1970's, but are expected to decline in 1978 with economic recovery. The total of other grants is expected to level off in 1977 and 1978. The addition of general revenue sharing in 1973 increased the level of grants by approximately \$6 billion per year.

HIGHLIGHTS OF THE FEDERAL AID PROGRAM

Major grant consolidations.—The 1978 budget proposes the consolidation of 58 categorical programs into three major block grants, which would be phased in over several years. All matching requirements for these programs would be eliminated by these reforms. More thorough discussion of these proposals is provided in the functional sections in Part 5 of the Budget. The proposals are the following:

- The *Financial Assistance for Health Care Act*—the largest of the Federal grant-in-aid programs proposed—would consolidate medicaid and 19 other health programs. The primary purpose of this consolidation is to assist States in providing health care for their low-income population. Proposed 1978 budget authority of \$13.2 billion would be distributed according to a formula based on State low-income population, per capita income, and tax effort.
- The *Financial Assistance for Elementary and Secondary Education Act* would consolidate 23 separate grants into one program. Like some other education programs, the proposal provides for funds to be appropriated before the beginning of the school year so that school districts can include the grants in their budget formulation. The 1978 budget authority of \$3.8 billion is the same level of support as the estimated level for the separate grant programs in 1977.
- Under the proposed *Child Nutrition Reform Act*, 15 complex and overlapping child nutrition programs would be consolidated into one child nutrition block grant. This program would provide benefits to the 700,000 needy children who are not receiving assistance, while permitting savings of more than \$1 billion in 1978 by eliminating subsidies for the nonpoor. Budget authority of \$1.9 billion is proposed in 1978 for this program.

Other major grant changes.—The Congress, with strong Presidential support, reauthorized *general revenue sharing* in 1976 for the next 3¼ years, through 1980, providing \$25.6 billion during this period. The new legislation continues the program with outlays estimated at \$6.8 billion in 1978. The legislation places increased emphasis on eliminating discrimination on the bases of age, race, sex, and other criteria, and grantees are required to have public hearings on the use of the funds. Units of government that receive \$25,000 or more in a period must have an independent audit of all their budget transactions at least every 3 years. Grantees are no longer limited to spending the funds for specific activities formerly identified by the act, and funds may now be used as the non-Federal matching share for other Federal grants.

The *community development block grant* program continues to provide assistance to State and local governments. Recipients have considerable freedom in selecting projects for this program, so long as they are within the general guidelines of community development. This program will expire in 1978 unless reauthorized. Its reauthorization is strongly supported with proposed budget authority of \$3.5 billion for 1978. The budget proposes a change in the way funds are allocated under this program. Entitlements would be calculated under both the current formula (population, poverty, and housing overcrowding), and an alternative formula (poverty, loss of population, age of housing), with each community receiving the higher of the two amounts. Outlays for the program for 1978 are expected to be \$3.1 billion, an increase of \$850 million over the 1977 estimate.

Outlays for *Federal aid for highways* from the highway trust fund for 1976 were \$6.1 billion, substantially higher than in 1975, because various restrictions were removed from the obligation of 1975 funds, and because States had many projects planned and ready to carry out. This led to fewer projects ready for construction in 1976, resulting in relatively lower estimated outlays of \$5.6 billion for 1977. Estimated outlays for 1978 are \$6.7 billion, 20% higher than 1977 because of proposed increases in obligations for 1977 and 1978.

The *public assistance aid to families with dependent children* program is expected to have outlays of \$6.5 billion in 1978, an increase of \$237 million over 1977. This increase results from increases in the number of recipients and increases in State and local payment schedules.

Outlays for *construction of sewage treatment plants* are expected to increase from an estimated \$4.4 billion in 1977 to \$5.2 billion in 1978. Proposed budget authority for 1978 is \$4.5 billion, contingent upon enactment of reforms to ensure that only high-priority projects are undertaken.

The consolidation of *pollution control and abatement* grants is planned, giving States more flexibility in how their Federal funds are distributed among air, water quality, water supply, solid waste, and toxic substance control.

The *local public works* program provides \$2.0 billion in budget authority in 1977 to assist State and local government construction projects and help decrease unemployment. Outlays are expected to be \$802 million in 1978. This program provides 100% Federal funding for almost any type of public construction or renovation project. Areas with unemployment rates above the national average receive 70% of the funds, while areas at or below the national average receive 30%. The Administration believes that public works construction is an inappropriate means of stimulating increased employment, that it does not provide significant numbers of permanent lasting jobs and tends to result in the construction of low priority public facilities. Accordingly, no additional funding for grants is proposed for 1978.

Another temporary program designed to assist communities especially troubled by unemployment and to maintain basic services is the

antirecession fiscal assistance program. The funds will be allocated for the period from July 1, 1976, through September 30, 1977. For each quarter, \$125 million is allocated, plus \$62.5 million per quarter for each complete one-half percentage point that the national unemployment rate, lagged 2 quarters, is over 6%. In addition, the unemployment rate must have been over 6% the last month of the quarter ending 2 quarters earlier. For example, for the quarter beginning July 1976, \$312.5 million was allocated because the national unemployment rate was 7.6% the first quarter of 1976. Allocations for the five-quarter period cannot exceed \$1,250 million. Under current estimates, these funds will be used by June 30, 1977.

Two-thirds of these grants are reserved for local governments in areas that had an average unemployment rate of more than 4.5%, two quarters earlier. In addition, the community must also have had an unemployment rate of more than 4.5% in the last month of the quarter ending 3 months before the quarter for which grants are to be made.

The other third of the grants is distributed to States under the same procedure as described above for local governments. The amount each State receives is determined by the excess unemployment rate over 4.5% and the size of its general revenue sharing payment. The funds may be used to match other Federal grants. Approximately 26,000 units of State and local government are expected to receive payments from this program.

Temporary employment assistance program outlays are estimated to be \$2.4 billion in 1977 to provide an estimated 260,000 jobs. This program is proposed to be phased out during 1978. Outlays for 1978 are estimated to be \$1.0 billion. This phaseout is consistent with the anticipated improvement in employment, and reflects the fact that other programs already enacted and funded that provide jobs and aid to State and local governments—including the local public works programs—are expected to continue to have significant outlays in 1978.

The *employment and training assistance* program continues to provide assistance to unemployed and disadvantaged individuals. Outlays for this program are estimated to be \$2.8 billion in 1978, \$70 million less than in 1977.

Legislation is proposed for the *work incentive* (WIN) program to require certain applicants and recipients of aid to families with dependent children (AFDC) to seek work as a condition of being eligible for AFDC benefits. WIN-sponsored child care and supportive services would not be available after the first 30 days of employment, although individuals registered with WIN would continue to be eligible for social services provided under title XX of the Social Security Act.

Reform of the *impact aid* program is again proposed. Recognizing that Federal activities provide an economic benefit to host communities, the reform would provide Federal aid primarily to those school districts where free education is provided for children whose parents both live and work on Federal property. Since Federal property is exempt from local taxes, these families do not contribute directly to the cost of education, as other families do, and Federal contributions are justified. The reform would result in estimated savings of \$317 million in 1978.

Outlays for *urban mass transportation* grants continue to grow, and are estimated to be \$2.1 billion in 1978, a 16% increase over 1977 and a 63% increase over 1976. More than three-fourths of the grants go to large metropolitan areas that have or are building rapid transit systems. The remainder is primarily for bus systems in smaller communities.

Outlays for *criminal justice assistance* grants are estimated to decline 6% from 1977 levels and 15% from 1976 levels, accompanied by greater emphasis on evaluation and research in order to provide guidance for making basic decisions regarding the program.

The legal services program, formerly part of the Community Services Administration, is now operated by the private, nonprofit Legal Services Corporation and is no longer considered a grant-in-aid.

Nongrant programs and proposals affecting State and local governments.—Support is continuing for the *New York City seasonal financing fund*. Under this program, the Treasury Department is authorized to lend the city up to \$2.3 billion each year through June 1978. The city is charged an interest rate 1 percentage point above the Treasury borrowing rates, and must repay all loans before June 30, the end of its fiscal year. The loans are purchased by the off-budget Federal Financing Bank, and outlays therefore do not affect the budget totals.

Legislation has been enacted with administration support that allows the Federal Government to withhold military pay for State and local income taxes. The Advisory Commission on Intergovernmental Relations estimates that this will result in increased revenues to the State and local sector of \$94 million on an annual basis.

A major study of the needs and problems of the *unemployment insurance system* is underway, with results expected by 1979.

The *taxable municipal bond option* is again proposed in order to improve the efficiency of the municipal bond market. This will give State and local governments a 30% subsidy of their interest payments if they choose to sell bonds in the taxable market. It will not affect their right to sell bonds in the tax-exempt market. The proposal also includes a requirement that industrial development bonds be sold in the taxable market. Those currently eligible for tax exemption would receive a 20% subsidy of interest costs. Outlays under this program are considered a grant-in-aid and are estimated to be \$44 million in 1978. Most of these outlays are expected to be offset by increased tax receipts.

Funds are requested for the new *coastal energy impact* program to provide loans and loan guarantees for communities that must expand public facilities or services as a result of coastal energy development activities, such as Outer Continental Shelf oil development.

Tax expenditures.—Federal aid is also provided through a number of tax expenditures. (More information on tax expenditures is provided in Special Analysis F, "Tax Expenditures".)

First, the deductibility of most State and local taxes permits taxpayers who itemize their deductions to offset part of these taxes with a reduced Federal income tax liability. Hence, a State or locality can raise a dollar of revenue with less than a dollar net cost to its taxpayers. The receipts forgone by the Federal Government in 1978 are estimated to be \$0.9 billion for gasoline taxes, \$5.0 billion for

property taxes on owner-occupied homes, and \$7.6 billion for other nonbusiness State and local taxes.

Second, the exclusion of interest on State and local securities from Federal taxable income permits these jurisdictions to borrow at reduced interest rates. The tax expenditures for the exclusion of interest on State and local general purpose debt is estimated to be \$5.4 billion in 1978, with a somewhat smaller benefit going to these Governments. Interest on industrial revenue bonds—which are nominally governmental debt, but are backed only by revenues from private industry—is also excluded from income. These tax expenditures are expected to decrease because of the taxable municipal bond option that would transfer some of these bonds to the taxable market. Benefits from this tax-exempt borrowing go largely to private companies. The exclusion on the debt to finance pollution control facilities will reduce Federal receipts an estimated \$0.3 billion and the exclusion on other industrial development borrowing an estimated \$0.3 billion.

FEDERAL GRANTS-IN-AID BY FUNCTION, AGENCY, AND REGION

Pursuant to the Congressional Budget Act of 1974, the Congress reviews the budget and sets targets by function. Consequently, the functional classification of the budget has become important not only for analysis, but also as a control mechanism. Part 5 of the Budget discusses the entire Federal budget by function.

Table O-1 provides a functional distribution of Federal grant-in-aid outlays. Major trends in 1978 include increases in natural resources, environment, and energy, reflecting higher spending for water and sewer construction; and a decline in training and employment programs, reflecting improved economic conditions and less need for programs to alleviate the effects of unemployment.

The functional composition of the grant program has changed significantly over the years, as shown in table O-2. The most dramatic growth has occurred in the health function, which has increased from 4% of Federal aid in 1957 to an estimated 19% in 1978. This re-

Table O-1. FEDERAL GRANT-IN-AID OUTLAYS BY FUNCTION

(In millions of dollars)

Function	1976 actual	TQ actual	1977 estimate	1978 estimate
National defense.....	89	15	59	56
Natural resources, environment, and energy.....	3,082	1,090	5,222	6,008
Agriculture.....	425	123	349	334
Commerce and transportation.....	7,991	2,011	8,362	9,962
Community and regional development.....	3,825	1,140	5,846	6,058
Education, training, employment, and social services.....	13,761	3,805	15,485	14,089
Health.....	10,914	2,721	12,402	13,550
Income security.....	10,875	2,785	12,804	12,541
Veterans benefits and services.....	52	13	75	99
Law enforcement and justice.....	795	169	716	682
General government.....	127	35	167	144
Revenue sharing and general purpose fiscal assistance..	7,102	2,002	8,938	8,057
Total outlays.....	59,037	15,909	70,424	71,581

flects primarily increased spending for medicaid. Other recent changes are the addition of general revenue sharing, increases in outlays for environmental protection, and the relative decline in grants for highway and income security programs, the latter being related primarily to the assumption by the Federal Government of the public assistance programs benefiting the aged, blind, and disabled.

Table O-2. PERCENTAGE FUNCTION DISTRIBUTION OF FEDERAL GRANTS-IN-AID

	Actual						Estimate	
	1952	1957	1962	1967	1972	1976	1977	1978
Natural resources, environment, and energy.....	1	1	2	2	2	5	7	8
Agriculture.....	4	9	6	3	1	1	*	*
Commerce and transportation.....	18	24	36	27	15	14	12	14
Community and regional development.....	1	1	3	6	9	6	8	8
Education, training, employment, and social services.....	9	8	8	25	26	23	22	20
Health.....	8	4	5	10	17	18	18	19
Income security.....	57	49	38	25	26	18	18	18
Revenue sharing and general purpose fiscal assistance.....	2	3	2	2	1	12	13	11
Other.....	*	1	*	*	1	3	2	2
Total.....	100	100	100	100	100	100	100	100

*Less than 0.5%.

Table O-3 shows grant outlays by agency. The Department of Health, Education, and Welfare will provide an estimated 41% of total grants-in-aid in 1978.

Table O-3. FEDERAL GRANT-IN-AID OUTLAYS BY AGENCY

(In millions of dollars)

Agency	1976 actual	TQ actual	1977 estimate	1978 estimate
Department of Agriculture.....	3,383	860	4,403	3,475
Department of Commerce.....	585	170	1,225	1,125
Department of Defense—Military.....	89	15	59	56
Department of Health, Education, and Welfare.....	24,816	6,358	27,984	29,466
Department of Housing and Urban Development.....	4,101	1,198	5,515	6,465
Department of the Interior.....	571	247	704	857
Department of Justice.....	789	168	710	672
Department of Labor.....	6,167	1,866	6,837	5,430
Department of Transportation.....	7,811	1,955	8,029	9,757
Department of the Treasury.....	6,569	1,655	8,346	7,183
Environmental Protection Agency.....	2,563	955	4,622	5,352
Veterans Administration.....	52	13	75	99
Community Services Administration.....	383	116	496	417
District of Columbia.....	226	89	280	290
Washington Metropolitan Area Transit Authority.....	170	52	315	179
Other.....	762	191	824	758
Total outlays.....	59,037	15,909	70,424	71,581

Distribution of grants by region.—Table O-4 shows that Federal aid on a per capita basis varies widely among regions. The thinly populated Western States traditionally rank high because of highway construction grants and shared revenues from Federal land holdings. For example, the Rocky Mountain States have a low regional population density, extensive Federal land holdings and, until recently, the highest per capita aid.

This effect has diminished in recent years, however, as human resource programs have grown relative to physical resource programs. Further, the addition of general revenue sharing has tended to equalize per capita figures among the regions. Region VIII, which had per capita grants 37% above the national average in 1969, was only 14% over the average in 1975, while region V has risen from 22% below the average to only 16% below. Regions II and III have experienced the most rapid growth during the period.

Table O-4. DISTRIBUTION OF GRANTS BY REGION, SELECTED FISCAL YEARS

Federal region ¹	1975 ² total grants	Per capita		
		1969	1975	Percent change, 1969-75
I. Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island.....	\$3.0	\$102	\$246	141
II. New York, New Jersey, Puerto Rico, Virgin Islands.....	8.0	103	281	173
III. Virginia, Pennsylvania, Delaware, Maryland, West Virginia, District of Columbia.....	6.2	94	260	177
IV. Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Alabama, Mississippi, Florida.....	7.3	101	209	107
V. Illinois, Indiana, Michigan, Ohio, Wisconsin, Minnesota.....	8.8	77	195	153
VI. Arkansas, Louisiana, Oklahoma, New Mexico, Texas.....	4.7	111	214	93
VII. Iowa, Kansas, Missouri, Nebraska.....	2.2	88	196	123
VIII. Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming.....	1.6	136	266	96
IX. Arizona, California, Nevada, Hawaii, other territories.....	5.9	116	235	103
X. Idaho, Oregon, Washington, Alaska.....	1.9	117	267	128
United States.....	49.7	99	233	135

¹ These are not the same regions as those used for national income account computations.

² In billions of dollars.

See "Federal Aid to States," Department of the Treasury, for additional information concerning State distribution of Federal grants.

HISTORICAL PERSPECTIVES

Although grants from the National Government technically predate the Constitution, they were very small until the end of the 19th century, and did not become a truly significant factor in government expenditure until after World War II. In 1950, Federal grants to State and local governments totaled \$2 billion, and by 1965 they had risen to \$11 billion. In 1976, they were \$59.0 billion, an average annual increase of 16% since 1966. This compares to an average annual growth

of 11% for total Federal outlays over the same period. In 1978, Federal grants are expected to constitute 16.3% of total Federal outlays, and 22.3% of domestic Federal outlays.

Table O-5 shows the growth in grant outlays since 1950. Apart from a few one-time factors, such as a \$1 billion advance payment of public assistance funds in 1972 (with a corresponding decrease in 1973), and retroactive payments of general revenue sharing entitlements in 1973, the growth of Federal grant outlays has been relatively steady.

Table O-5. HISTORICAL TREND OF FEDERAL GRANT-IN-AID OUTLAYS
(Dollar amounts in millions)

	Grants	Composition of Grants-in-Aid		Federal Grants as a percent of:		
		Grants for payments to individuals	Other grants	Federal Outlays		State and local expenditures ²
				Total	Domestic ¹	
1950.....	\$2,253	\$1,421	\$832	5.3	8.8	10.4
1955.....	3,207	1,770	1,437	4.7	12.1	10.1
1960.....	7,020	2,735	4,285	7.6	15.9	14.7
1965.....	10,904	3,954	6,950	9.2	16.6	15.3
1970.....	24,018	8,867	15,151	12.2	21.1	19.4
1971.....	28,109	10,789	17,320	13.3	21.4	19.9
1972.....	34,372	13,421	20,951	14.8	22.8	22.0
1973.....	41,832	13,104	28,728	17.0	24.8	24.3
1974.....	43,308	14,030	29,278	16.1	23.3	22.7
1975.....	49,723	16,105	33,618	15.3	21.3	23.2
1976.....	59,037	19,511	39,526	16.1	21.7	24.7
TQ.....	15,909	5,122	10,787	16.8	22.6	25.5
1977 estimate.....	70,424	23,513	46,911	17.1	23.1	26.7
1978 estimate.....	71,581	25,459	46,122	16.3	22.3	25.0

¹ Excludes outlays for the national defense and international affairs functions.

² As defined in the national income accounts.

Approximately 35% of estimated 1978 grants are payments to individuals. These programs include, among the larger ones, medicaid, public assistance cash payments, housing payments, and nutrition programs for children and the elderly. The public assistance program for the blind, disabled, and aged—known as supplemental security income—became a direct Federal program in January 1974. The figures for this program are therefore included as grants for payments to individuals in 1973 but not as grants in 1974.

Table O-5 also shows grants-in-aid as a percent of State and local expenditures. This percent has increased from 15% in 1965 to 25% in 1976, and is also estimated to be 25% in 1978.

OTHER SOURCES OF FEDERAL AID INFORMATION

The budget grant-in-aid series is designed to provide a comprehensive picture of Federal grants-in-aid, focusing on programs that are financed but not directly administered by the Federal Government. The census series (published in *Governmental Finances*) and the national income accounts (NIA) series (published in the *Survey of Current Business*) are parts of a broader statistical concept encompassing the entire economy, and as a consequence they define Federal grants-in-aid

somewhat differently from the budget series. They both omit the following items that the budget series includes:

- Federal aid to the Governments of Puerto Rico and U.S. territories;
- 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 that the budget definition of grants excludes but census and the NIA series include 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. Since both census and the NIA series focus on cash payments to State and local governments, they count these as grants. One major kind of outlay included in the budget and census definitions but excluded from the NIA series is payments for low-rent public housing, which the NIA count as subsidies by the Federal Government rather than as grants. Table O-6 shows other minor differences among the three series, but the differences are largely offsetting and, thus, these three series reflect similar patterns.

In addition to these data sources, *Federal Aid to States*, published by the Treasury Department, provides a detailed listing of outlays by State for more than 90 grant programs. The *Catalog of Federal Domestic Assistance*, prepared by the Office of Management and Budget and available from the Government Printing Office, provides a detailed listing of grant-in-aid and other assistance programs, and provides information on eligibility criteria, application procedures, estimated obligations, and other 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 provides current information on agencies that are accepting proposals for specific programs. This source also provides information on eligibility criteria and application procedures.

Table O-6. THREE MEASURES OF FEDERAL GRANTS-IN-AID TO STATE AND LOCAL GOVERNMENTS, 1972-75 (in billions of dollars)

	1972	1973	1974	1975
Budget (Special Analysis O)	34.4	41.8	43.3	49.7
Less principal exclusions:				
Agricultural commodities.....	-0.6	-0.5	-0.6	-0.5
Geographical exclusions.....	-0.4	-0.6	-0.7	-0.9
Plus payments for research.....	1.1	1.2	1.3	1.5
All other (net).....	-0.9	-0.2	-0.4	-0.2
Federal payments (Census)	33.6	41.7	42.9	49.6
Less low-rent public housing.....	-0.7	-1.0	-1.1	-1.3
All other (net).....	-0.3	-0.3	-0.2	.....
Grants-in-aid (national income accounts)	32.6	40.4	41.6	48.3

*Less than \$50 million.

Federal Outlays, published by the Community Services Administration, uses various proration techniques and financial concepts, primarily obligations, to estimate grant payments at the State, county, and large-city level. Their grant estimates therefore often differ from those in the budget. These estimates are cross-referenced where possible with the program identification number in the *Catalog of Federal Domestic Assistance*.

The Office of Management and Budget has available upon request a document entitled, "Administrative Policies and Information Sources Relating to Federal Domestic Assistance Programs." This guide is a brief overview to these policies and information sources, with particular emphasis on their interrelationships.

GRANTS ADMINISTRATION

The rapid growth of the grant system in the past 10 years has caused increasing complexities in its administration. In earlier years, many grants were designated for specific categories by Federal legislation or regulation, and came to be known as categorical grants. They frequently required matching funds from the recipient governments, and gave little discretion in their use to State and local officials. In the 1960's and early 1970's, these grants expanded and many persons involved with grants administration at all levels of government looked for better alternatives. As a result, most major new programs give considerably more discretion to State and local officials.

Table O-7 shows the increasing role of general-purpose and broad-based aid since 1972. General-purpose aid involves grants with almost complete discretion for their use at the State and local level; broad-based aid gives State and local governments considerable discretion within a broadly defined program area, such as employment and training or community development. In 1972 there was virtually no general-purpose or broad-based aid. Since that time these programs have grown to be 23.8% of total grants-in-aid in 1976. The administration supports this trend by proposing the block grants for health, education, and nutrition; with these proposals, such grants would be 46.0% of total grants in 1978.

Most general-purpose and broad-based grants significantly reduce or eliminate the requirement that recipients match Federal funds with their own. Despite the increase in these grants, matching requirements for all grants have not changed significantly. In 1972, State and local governments were estimated to provide approximately \$1 of matching funds for \$3 of Federal aid, and this ratio is virtually unchanged for 1976. The decrease in matching requirements for general-purpose and broad-based aid has been offset by the significant growth in programs such as Medicaid, which requires substantial matching aid.

Although the specific-purpose grants constitute a smaller portion of the total than previously, there continue to be hundreds of grants of this nature with different matching requirements, application procedures, duplication of programs, and other administrative problems.

The numerous efforts undertaken to correct some of these problems include:

- Grant consolidations described above.
- Establishment of uniform administrative requirements for grants to State and local governments, universities, hospitals, and non-

Table O-7. OUTLAYS FOR GENERAL-PURPOSE, BROAD-BASED, AND OTHER GRANTS-IN-AID (dollar amounts in millions)

	1972	1974	1975	1976	TQ	1977	1978
General-purpose aid:							
General revenue sharing.....		\$6,106	\$6,130	\$6,243	\$1,588	\$6,776	\$6,814
Other general purpose fiscal assistance and TVA ¹	\$516	655	878	807	434	2,230	1,324
Subtotal, general purpose aid.....	516	6,761	7,008	7,050	2,022	9,006	8,138
Broad-based aid:							
Community development block grants.....			38	983	439	2,262	3,112
Comprehensive health grants.....	90	89	82	128	18	104	94
Employment and training ²			2,340	2,603	876	2,668	2,598
Social services (title XX).....			2,047	2,251	561	2,713	2,533
Criminal justice assistance.....	281	518	577	519	137	486	522
School aid in federally affected areas.....	602	529	577	558	66	791	433
Local public works.....						791	802
Financial assistance for health care (proposed).....							12,302
Child nutrition reform (proposed).....							2,000
Financial assistance for elementary and secondary education (proposed).....							336
Subtotal, broad based aid.....	973	1,136	5,661	7,042	2,097	9,815	24,732
Other aid.....	32,883	35,411	37,054	44,945	11,790	51,603	38,711
Total.....	34,372	43,308	49,723	59,037	15,909	70,424	71,581
Addendum (Percent of total)							
General-purpose aid.....	1.5	15.6	14.1	11.9	12.7	12.8	11.4
Broad-based aid.....	2.8	2.6	11.4	11.9	13.2	13.9	34.6
Other aid.....	95.7	81.8	74.5	76.1	74.1	73.3	54.1
Total.....	100.0						

¹ For detail, see grants in the revenue sharing and general purpose fiscal assistance function, table 9. Amounts in table O-7 above include shared revenues from the Tennessee Valley Authority, shown in the natural resources, environment, and energy function.

² Comprehensive Employment and Training Act, titles I and II, and summer employment program.

profit institutions. These replaced thousands of different and often conflicting requirements. For example, two one-page expenditure reports replaced about 250 others, some of which ran five or six pages each. For applications, 3 standard forms of approximately 6 pages each replaced more than 200 different applications that averaged 33 pages each. (Federal Management Circular 74-7 and OMB Circular A-110.)

—Establishment of uniform cost principles applicable to grants to State and local governments. This replaced dozens of different and sometimes conflicting sets of principles established by different agencies. (Federal Management Circular 74-4.)

—Implementation of joint funding legislation allowing State and local governments to submit only one application for projects requesting resources from several Federal agencies. Responsibility

for operation of joint funding has been decentralized to the Federal regional councils. (OMB Circular A-111.)

- Expansion of the system of State and areawide clearinghouses to review and comment on proposals for Federal and federally assisted projects. Governors have designated clearinghouses for every State, and over 545 sub-State clearinghouses cover 95% of the population in the contiguous United States. More than 200 Federal grant-in-aid programs are now covered, encompassing developmental, social, and economic activities. (OMB Circular A-95.)

THE STATE AND LOCAL GOVERNMENT SECTOR OF THE NATIONAL INCOME ACCOUNTS¹

The national income accounts (NIA) provide a comprehensive statistical description of the U.S. economy that includes State and local government receipts and expenditures. These State and local data provide a measure of the relationships between these governments as a sector of the economy and other sectors. The data are presented here to provide a context in which to compare the grant-in-aid data.

There are three major differences between NIA data and the budgetary accounting for a government's receipts and expenditures. First, financial transactions and the purchase and sale of land are excluded from the NIA data but are generally included in a government's data. Second, a large number of transactions in the NIA accounts are recorded on an accrual basis, while many governments show transactions on a cash basis. Third, NIA data aggregate total State and local transactions, whereas many governments separate general fund data from that of special funds. As a result of these differences, NIA totals are not the same as an aggregate of these governments' financial budgets. However, they do provide timely estimates of *total* State and local fiscal transactions not otherwise available and, with care, can be used as financial indicators.

NIA State and local sector.—Table O-8 provides an historical tabulation of these data with the surplus or deficit broken into two basic components, social insurance funds and the operating account.² As the table shows, the insurance funds have been in surplus since 1950. The funds accumulate assets to pay for their future liabilities. Because surpluses of these insurance funds are not generally available to pay for deficits in operating accounts, the operating account is generally thought to be a better measure of State and local fiscal condition than the surplus or deficit for the sector as a whole. However, the accrued liability of many of these social insurance funds exceeds their assets, posing a potential threat to State and local financial health in future years.

Since the late 1940's the operating account has generally been in deficit. This is not unusual, since it includes capital expenditures, often financed through borrowing. Surpluses in 1972 and 1973 resulted from the first general revenue sharing distributions and new receipts generated by significant tax increases in 1971 and 1972.

¹ Special Analysis A of this volume provides general information on the national income accounts.

² The operating account is defined here as all activities except those of social insurance funds. This includes expenditures for capital investment.

Table O-8. NATIONAL INCOME ACCOUNTS, STATE AND LOCAL SECTOR
(In billions of dollars)

Calendar year	Receipts	Expenditures	Surplus or deficit (-)		
			Entire sector	State and local social insurance funds	Operating account
1950.....	21.3	22.5	-1.2	0.7	-1.9
1955.....	31.7	32.9	-1.3	1.3	-2.6
1960.....	49.9	49.8	0.1	2.3	-2.2
1965.....	75.1	75.1	—*	3.4	-3.4
1970.....	134.9	132.2	2.8	6.8	-4.0
1971.....	152.6	148.9	3.7	7.5	-3.8
1972.....	177.4	163.7	13.7	8.1	5.6
1973.....	193.5	180.5	13.0	8.9	4.1
1974.....	210.2	203.0	7.3	10.1	-2.8
1975.....	234.3	227.5	6.9	12.0	-5.1

SEASONALLY ADJUSTED, ANNUAL RATES

Calendar quarter					
1974:					
I.....	201.9	193.2	8.7	9.5	-0.8
II.....	208.0	200.2	7.8	9.8	-2.0
III.....	214.5	206.5	8.0	10.3	-2.3
IV.....	216.6	212.0	4.5	10.8	-6.2
1975:					
I.....	222.2	217.5	4.7	11.3	-6.6
II.....	230.4	223.4	6.9	11.9	-5.0
III.....	239.7	231.8	7.9	12.3	-4.4
IV.....	245.0	237.2	7.9	12.5	-4.6
1976:					
I.....	251.6	239.5	12.2	12.7	-0.6
II.....	254.3	245.0	9.2	13.0	-3.8
III.....	262.1	249.3	12.7	13.2	-0.5

*Less than \$50 million.

In 1974, the operating account returned to a deficit situation. In part, this reflected a return to previous patterns, as State and local expenditure increases absorbed the new, higher income streams. It also reflected the worsening economic situation, with State and local governments opting to draw down on balances accumulated during 1972-73 rather than enact new tax increases. The operating account improved somewhat in the first three quarters of 1976, primarily because the increase in spending slowed and receipts from own source receipts increased. Virtually all of the increase in own source receipts was from improvement in economic conditions, rather than increases in tax rates.

Another form of Federal aid to State and local governments is direct and guaranteed loans. Short- and long-term direct loan disbursements (excluding repayments) are expected to be \$2.2 billion in 1978, 29% of which is for long-term debt. Federal disbursements for long-term loans to State and local governments were approximately 4% of total long-term debt issued by State and local governments for fiscal year 1975.

DETAILED FEDERAL AID TABLES

The following two tables present detailed Federal aid data for the 3 budget years and the transition quarter. Table O-9, "Federal Grants to State and Local Governments—Outlays and Budget Authority," provides detailed budget authority and outlay data for grants and shared revenues. Table O-10, "Federal Direct Loans to State and Local Governments," provides disbursement and net outlay data for loan programs. Disbursements do not include repayments, and net outlays are disbursements minus repayments.

Table O-9. FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—OUTLAYS AND BUDGET AUTHORITY

(In millions of dollars)

1976 actual	TQ actual	1977 estimate	1978 estimate	Agency and program	Func- tional code	1976 actual	TQ actual	1977 estimate	1978 estimate
OUTLAYS				BUDGET AUTHORITY					
38	7	39	36	National defense;					
51	8	20	20	Department of Defense—Military:					
				Civil Preparedness Agency.....	051	41	10	39	37
				National Guard centers construction.....	051	28	-----	20	18
<u>89</u>	<u>15</u>	<u>59</u>	<u>56</u>	Total, national defense		<u>69</u>	<u>10</u>	<u>60</u>	<u>55</u>
Natural resources, environment and energy:									
				Department of Agriculture:					
114	27	116	90	Watershed planning and flood control.....	301	106	17	69	71
13	3	12	13	Resource conservation and development.....	302	10	3	11	9
49	3	47	28	Forest Service.....	302	46	10	40	28
				Department of Commerce:					
13	5	23	38	NOAA coastal zone management.....	302	18	5	35	45
23	6	22	22	NOAA—Operations research and facilities.....	306	24	6	22	22
				Department of the Interior:					
1	-----	*	2	Bureau of Reclamation.....	301	1	-----	*	2
10	2	9	10	Office of Water Research and Technology.....	301	9	2	9	12
156	43	180	200	Land and water conservation fund.....	303	176	24	175	352
73	17	85	100	Fish and Wildlife Service.....	303	95	1	95	118
6	2	12	7	Preservation of historic properties.....	303	11	3	10	-----
-----	-----	-----	14	Historic preservation fund.....	303	-----	-----	-----	34
8	2	5	5	Energy Research and Development Administration.....	305	10	1	5	5
				Environmental Protection Agency:					
134	36	192	192	Abatement and control.....	304	159	28	140	138
<u>2,429</u>	<u>919</u>	<u>4,430</u>	<u>5,160</u>	Sewage treatment plant construction.....	304	-----	-----	1,080	4,500

-----	5	17	44	Federal Energy Administration.....	305	5	-----	22	47
48	20	68	81	Tennessee Valley Authority (shared revenue).....	301	-----	-----	-----	-----
5	-----	3	-----	Water Resources Council.....	301	5	-----	3	-----
3,082	1,090	5,222	6,008	Total, natural resources, environment and energy.....	675	99	1,717	5,383	
Agriculture:									
101	28	127	135	Cooperative State Research Service.....	352	111	28	124	132
181	48	199	199	Cooperative Agricultural Extension Work.....	352	191	47	200	201
143	47	21	1	Commodity Credit corporation—Donations.....	351	-----	-----	-----	-----
—*	*	2	-----	Agricultural Marketing Service—Cooperative Projects in Marketing..	352	2	*	2	-----
425	123	349	334	Total, agriculture.....	303	75	326	332	
Commerce and transportation:									
6	2	11	18	Department of Agriculture: FmHA: Housing.....	401	16	4	16	-----
4	2	7	7	Department of Commerce: EDA—Minority business development....	403	2	1	7	7
*	*	2	-----	Department of Housing and Urban Development: Urban transportation.....	404	-----	-----	-----	-----
Department of Transportation:									
5	1	7	6	State boating safety assistance.....	406	6	1	6	6
269	26	308	548	Airport and airway trust fund.....	405	3	515	510	550
32	7	42	38	Highway beautification.....	404	-----	-----	27	33
6,132	1,605	5,609	6,741	Federal aid, highways (trust fund).....	404	4,829	3,238	3,425	6,654
30	13	124	170	Other highway aid ¹	404	41	56	68	99
78	21	100	130	National Highway Traffic Safety Administration.....	404	56	126	15	152
2	5	64	64	Federal Railroad Administration.....	404	40	15	71	71
1,262	279	1,773	2,059	Urban Mass Transportation Administration.....	404	947	-----	455	455
1	1	2	2	Materials Transportation.....	407	2	-----	2	2
170	52	315	179	Washington Metropolitan Area Transit Authority.....	404	100	27	116	37
7,991	2,011	8,362	9,962	Total, commerce and transportation.....	6,042	3,983	4,719	8,066	

See footnotes at end of table.

Table O-9. FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—OUTLAYS AND BUDGET AUTHORITY—Continued
(In millions of dollars)

1976 actual	TQ actual	1977 estimate	1978 estimate	Agency and program	Func- tional code	1976 actual	TQ actual	1977 estimate	1978 estimate
OUTLAYS				BUDGET AUTHORITY					
				Community and regional development:					
				Funds appropriated to the President:					
315	72	321	320	Appalachian regional development programs.....	452	307	12	114	292
		1		Public works acceleration.....	452				
252	59	237	118	Disaster relief.....	453	78	17	152	114
				Department of Agriculture:					
75	24	163	199	Rural water and waste disposal grants.....	451	250	38	200	50
7	3	11	11	Rural development grants.....	452	12	3	10	
4	1	5		Rural community fire protection grants.....	452	4	1	4	
				Department of Commerce:					
202	59	188	187	Economic development assistance.....	452	205	51	203	102
		791	802	Local public works.....	452			1,990	
74	19	66	68	Regional Action Planning Commissions.....	452	90	22	62	40
				Department of Housing and Urban Development:					
983	439	2,262	3,112	State housing finance and development.....	451	600			
1,166	295	1,000	700	Community development block grants.....	451	1,838		3,448	3,500
				Urban renewal.....	451				
271	33	201	53	Other categorical programs replaced by community develop- ment block grants.....	451				
92	20	98	63	Comprehensive planning grants.....	451	75		62	25
1	*	3	5	New Communities Administration.....	451				
2	*	2	3	Department of the Interior: Bureau of Indian Affairs.....	452	2	1	2	3
380	116	494	415	Community Services Administration.....	451	485	122	477	365
1	*	1	1	Joint Federal-State Land Use Planning Commission for Alaska.....	452	1	*	1	1
3,825	1,140	5,846	6,058	Total, community and regional development.....		3,948	267	6,725	4,492

269	79	129	-----	Education, training, employment, and social services:					
				Department of Commerce: Job opportunities program.....	504	374	-----	-----	-----
				Department of Health, Education, and Welfare:					
			336	Financial assistance for elementary and secondary education.....	501	-----	-----	-----	3,776
2,159	695	2,218	2,428	Elementary and secondary education.....	501	2,393	2,226	2,699	150
25	13	30	25	Indian education.....	501	35	-----	25	25
558	66	791	433	School assistance in federally affected areas.....	501	653	55	734	327
211	54	269	271	Emergency school assistance.....	501	270	3	273	273
90	16	197	250	Education for the handicapped.....	501	100	200	315	-153
748	90	726	744	Occupational, vocational, and adult education.....	501	673	224	1,131	-----
43	8	51	30	Higher education.....	502	16	-----	25	-----
137	16	166	153	Library resources.....	503	60	160	214	52
7	—*	3	1	Educational development.....	503	-----	-----	-----	-----
*	7	32	62	Special projects and training.....	503	25	-----	69	67
299	84	352	331	Work incentives.....	504	389	75	357	331
2,251	561	2,713	2,533	Social services.....	506	2,816	608	2,713	2,533
2	1	3	3	American Printing House for the Blind.....	501	2	1	3	3
				Assistant Secretary for Human Development:					
486	136	498	509	Child development.....	501	488	117	509	509
1,108	299	1,294	1,312	Youth, aging, and vocational rehabilitation programs.....	506	1,169	302	1,339	1,281
		5	20	Allied services.....	506	-----	-----	20	20
				Department of the Interior: Bureau of Indian Affairs, Indian education					
12	2	20	20	programs.....	501	12	4	20	20
				Department of Labor:					
2,853	980	2,889	2,819	Employment and training assistance.....	504	2,636	524	2,989	2,819
1,887	519	2,358	1,000	Temporary employment assistance.....	504	2,825	-----	2,384	-----
				Emergency employment assistance.....	504	-----	-----	-----	-----
182	-26	99	54	Grants for employment services.....	504	81	20	89	54
344	170	515	616	Unemployment trust fund: training and employment.....	504	492	119	524	616
		5	-----	Mountain plains education and economic development.....	505	5	-----	-----	-----
2	*	2	2	Community Services Administration.....	501	-----	-----	-----	-----
70	26	103	107	Corporation for Public Broadcasting.....	503	78	18	103	107
17	6	23	30	National Foundation on the Arts and Humanities.....	503	22	14	23	30
13,761	3,805	15,485	14,089	Total, education, training, employment, and social services.....		15,614	4,670	16,558	12,839

See footnotes at end of table.

Table O-9. FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—OUTLAYS AND BUDGET AUTHORITY—Continued
(In millions of dollars)

1976 actual	TQ actual	1977 estimate	1978 estimate	Agency and program	Func- tional code	1976 actual	TQ actual	1977 estimate	1978 estimate
OUTLAYS				BUDGET AUTHORITY					
7	*	3	-----	Health:					
				Special Action Office for Drug Prevention.....	553				
30	6	29	29	Department of Agriculture: Animal and Plant Health Inspection					
				Service—Meat and poultry.....	553	29	7	29	29
				Department of Health, Education and Welfare:					
905	142	872	361	Health Services Administration.....	551	765	177	841	6
67	11	45	19	Center for Disease Control.....	553	44	6	57	-----
535	156	478	437	Alcohol, Drug Abuse, and Mental Health Administration.....	551	512	65	545	202
768	168	706	362	Health Resources Administration.....	552	367	33	311	86
			12,302	Financial assistance for health care.....	555				13,172
8,568	2,229	10,229	-----	Medicaid.....	551	8,510	2,220	10,229	-----
1	*	2	2	Department of the Interior: Mining Enforcement and Safety Admin- istration.....	553	2	*	2	2
33	8	38	38	Department of Labor: Occupational Safety and Health Administration..	553	34	9	39	39
<u>10,914</u>	<u>2,721</u>	<u>12,402</u>	<u>13,550</u>	Total, health.....		<u>10,264</u>	<u>2,519</u>	<u>12,053</u>	<u>13,536</u>
				Income security:					
				Department of Agriculture:					
277	62	34	-----	Agricultural Marketing Service—Funds for strengthening markets, income and supply-donations.....	604	229	162	79	-----

267	65	251	305	Food stamps—administration.....	604	250	62	275	330
1,878	390	3,007	172	Child nutrition and special milk programs.....	604	2,021	460	2,969	-----
141	41	273	47	Special supplemental food program (WIC).....	604	248	96	247	-----
8	*	26	10	Food donations.....	604	17	4	27	10
-----	-----	20	28	Elderly nutrition program.....	604	-----	-----	21	30
-----	-----	2,000	-----	Child nutrition reform.....	604	-----	-----	-----	1,857
5,849	1,606	6,306	6,543	Department of Health, Education, and Welfare: Public assistance—	604	5,898	1,576	6,306	6,543
1,588	411	1,948	2,532	maintenance.....	604	13,785	98	9,411	16,526
-----	-----	-----	-----	Department of Housing and Urban Development: Housing assistance..	604	-----	-----	-----	-----
868	210	938	904	Department of Labor: Unemployment trust fund: administration of	603	924	144	888	904
-----	-----	-----	-----	payments.....	-----	-----	-----	-----	-----
10,875	2,785	12,804	12,541	Total, income security.....	-----	23,372	2,602	20,225	26,200
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	Veterans benefits and services:	-----	-----	-----	-----	-----
-----	-----	-----	-----	Veterans Administration:	-----	-----	-----	-----	-----
22	6	44	38	Medical care.....	703	22	6	44	38
*	*	1	1	Medical administrative expenses.....	703	*	*	1	1
9	2	8	14	Grants for construction of State nursing homes.....	703	10	-----	10	15
20	5	22	42	Health training.....	703	27	8	34	41
-----	-----	-----	4	Grants for State cemeteries.....	705	-----	-----	-----	5
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
52	13	75	99	Total, veterans benefits and services.....	-----	60	14	89	100
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	Law enforcement and justice:	-----	-----	-----	-----	-----
-----	-----	1	2	National Institute of Corrections.....	754	-----	-----	2	2
789	168	709	670	Department of Justice: criminal justice assistance.....	754	686	144	583	553
6	1	6	10	Equal Employment Opportunity Commission.....	751	6	2	6	10
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
795	169	716	682	Total, law enforcement and justice.....	-----	692	145	591	566
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

See footnotes at end of table.

Table O-9. FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—OUTLAYS AND BUDGET AUTHORITY—Continued
(In millions of dollars)

1976 actual	TQ actual	1977 estimate	1978 estimate	Agency and program	Func- tional code	1976 actual	TQ actual	1977 estimate	1978 estimate
OUTLAYS						BUDGET AUTHORITY			
				General government:					
				Department of Interior:					
19	16	43	22	Administration of Territories.....	806	27	24	42	20
82	21	88	89	Trust Territory of the Pacific Islands.....	806	85	15	90	96
10	-5	20	26	General Services Administration.....	804				
15	4	15	7	Civil Service Commission (intergovernmental personnel assistance).....	806	15	4	15	
<u>127</u>	<u>35</u>	<u>167</u>	<u>144</u>	Total, general government.....		<u>127</u>	<u>42</u>	<u>147</u>	<u>116</u>
				Revenue sharing and general purpose fiscal assistance:					
89	110	50	191	Department of Agriculture: Forest Service (shared revenue).....	852	89	110	50	191
4	4		5	Department of Defense: Flood Control Act (shared revenue).....	852	4		5	4
173	140	239	365	Department of Interior:					
3	*	5	3	Bureau of Land Management.....	852	173	139	240	365
				Fish and Wildlife Service.....	852	3	1	3	3

33	3	18	19	Internal revenue collections for the Virgin Islands (shared revenue) ..	852	16	4	18	19
			44	Department of the Treasury:					
				Taxable municipal bond option.....	852				990
				Customs receipts for Puerto Rico and the Virgin Islands (shared revenue) ..	852	187	54	200	204
187	39	200	204	Internal revenue collections for Puerto Rico (shared revenues).....	852	140	29	120	122
139	29	120	122	General revenue sharing.....	851	6,355	1,664	6,655	6,855
6,243	1,588	6,776	6,814	Anti-recession financial assistance fund.....	852		312	938	
		1,250		Federal payment to the District of Columbia (shared revenue).....	852	249	66	280	290
226	89	280	290	Federal Energy Administration, payments to Virgin Islands and Puerto Rico.....	852	5			
5									
<u>7,102</u>	<u>2,002</u>	<u>8,938</u>	<u>8,057</u>	Total, revenue sharing and general purpose fiscal assistance...	<u>7,222</u>	<u>2,380</u>	<u>8,509</u>	<u>9,044</u>	
<u>59,037</u>	<u>15,909</u>	<u>70,424</u>	<u>71,581</u>	Total, grants and shared revenues.....	<u>68,387</u>	<u>16,808</u>	<u>71,719</u>	<u>80,730</u>	

*Less than \$500 thousand.

¹ A small amount of domestic highway programs is classified in the budget in the international function. For purposes of this special analysis the budget authority and outlays for these grants are shown in the commerce and transportation function. The amounts are as follows (in millions):

	1976	TQ	1977	1978
Budget authority.....	0.7	0.1	0.8	1.0
Outlays.....	.7	.2	1.2	1.0

Table O-10. FEDERAL DIRECT LOANS TO STATE AND LOCAL GOVERNMENTS

(In millions of dollars)

Agency and program by function	Disbursements				Net outlays			
	1976 actual	TQ actual	1977 estimate	1978 estimate	1976 actual	TQ actual	1977 estimate	1978 estimate
Natural resources, environment and energy:								
Department of Commerce: Coastal energy impact fund.....				67				67
Department of the Interior: Reclamation loans.....	12	6	31	17	9	5	27	13
Total, natural resources, environment, and energy.....	12	6	31	84	9	5	27	80
Commerce and transportation:								
Department of Transportation:								
Federal aid highways (trust fund).....	90	36	50		90	36	41	-60
Right-of-way revolving fund.....	22	9	46	33	22	9	46	33
Urban Mass Transportation Administration.....	1				1		*	*
Total, commerce and transportation.....	113	45	96	33	113	45	87	-27
Community and regional development:								
Department of Commerce: Economic development assistance.....	9	19	11	6	9	2	9	4
Department of Housing and Urban Development:								
Urban renewal fund—loans and planning advances.....	377	112	200	200	22	21	-25	-50
Revolving fund (liquidating programs).....	5	1	15	111	-10	-3	*	-1
District of Columbia:								
Loans for capital outlay.....	115	80	175	175	104	80	162	158

Advances to stadium sinking fund, armory board.....	1		1	1				
Total, community and regional development.....	507	212	402	493	125	100	146	111
Education, training, employment, and social services:								
Department of Health, Education, and Welfare:								
Higher education.....	286	65	260		285	64	260	
Higher education facilities.....	2	2	4	4	-9	*	-10	-10
Department of Housing and Urban Development: College housing loans.....	19	*	95		-49	-11	19	
Total, education, training, employment, and social services.....	307	67	359	4	227	53	269	-10
Health:								
Department of Health, Education, and Welfare: Medical facilities.....	57	7	34	20	1	7	4	-8
Income security:								
Department of Housing and Urban Development: Low-rent public housing..	278	50	600	600	12	16		
General government:								
Department of the Interior: Administration of Territories.....	1		5		*	*-	-1	-1
Revenue sharing and general purpose fiscal assistance:								
Department of Treasury: New York City seasonal financing fund.....	1,260	1,075	2,050	950				
District of Columbia: Repayable advances.....	40	15	40		41	41	20	
Total, revenue sharing and general purpose fiscal assistance.....	1,300	1,090	2,090	950			20	
Total.....	2,575	1,477	3,617	2,184	528	267	552	145

SPECIAL ANALYSIS P

FEDERAL RESEARCH AND DEVELOPMENT PROGRAMS

The significant increases for research and development (R. & D.) programs in the 1978 budget, reflected in this analysis, further demonstrate the administration's belief that science and technology can make vital contributions to the Nation's future defense, economy, and human welfare.

This analysis summarizes the funding of R. & D. incorporated in the budgets of 29 separate departments and agencies. Research and development is not, however, a separately programmed or budgeted activity of the Federal Government. Its funding must be considered primarily in light of the potential contributions of science and technology to meeting agency or national goals and not as an end in itself.

The following analysis consists of two parts. The first presents a summary and highlights of R. & D. programs in the 1978 budget, as well as long-term trends. The second describes the R. & D. programs of the 11 agencies whose activities comprise more than 98% of the total Federal investment in R. & D.

PART I. HIGHLIGHTS AND TRENDS

Proposed Federal obligations for the conduct of research and development, and for the scientific and engineering facilities related to such activities, will total \$28.0 billion in 1978, an increase of almost \$2 billion, or 8% over 1977, as displayed in table P-1.

Table P-1. TOTAL FEDERAL FUNDING FOR CONDUCT OF R. & D. AND RELATED ACTIVITIES (in billions of dollars)

	Obligations				Outlays			
	1976 actual	TQ* actual	1977 estimate	1978 estimate	1976 actual	TQ* actual	1977 estimate	1978 estimate
Conduct of R. & D.	20.7	5.5	24.5	26.3	20.2	5.4	22.6	25.3
R. & D. facilities .....	.8	.3	1.5	1.6	.8	.3	.9	1.2
Total	21.5	5.8	26.0	28.0	21.0	5.7	23.5	26.5

* Transition quarter, July 1-September 30, 1976.

CONDUCT OF RESEARCH AND DEVELOPMENT

Federal R. & D. programs can be broadly classified in three major categories—defense, civilian, and space related. Increases in funding for the conduct of R. & D. under these categories are shown in table P-2.

Table P-2. CONDUCT OF R. & D. BY MAJOR PROGRAM CATEGORY
(In billions of dollars)

Program category	Obligations			Outlays		
	1976 actual	1977 estimate	1978 estimate	1976 actual	1977 estimate	1978 esti- mate
Conduct of R. & D.:						
Defense ¹	10.3	11.9	13.1	10.0	11.2	12.7
Civilian.....	7.5	9.5	10.0	7.3	8.5	9.4
Space ²	2.9	3.1	3.2	2.9	2.9	3.1
Total.....	20.7	24.5	26.3	20.2	22.6	25.3

¹ Includes military-related programs of the Department of Defense and the Energy Research and Development Administration.

² Includes NASA programs in planetary exploration and space shuttle development but excludes NASA programs in aeronautical research, pollution monitoring, earth resources observations, and technology utilization, which are categorized as civilian-related R. & D. The space category also includes an ERDA program in applications of nuclear energy to space technology.

Highlights of each of the major program categories are presented below.

Defense.—This category includes the military-related R. & D. programs of the Department of Defense and the Energy Research and Development Administration. Obligations for conducting defense-related R. & D. will total \$13.1 billion in 1978, an increase of \$1.2 billion, or 10% over 1977. The proposed 1978 program continues the development of major strategic and tactical weapons systems. It also provides increased funding for research and technology related to longer range military needs. The 1978 budget reflects a commitment to the modernization of Defense equipment and an effort to provide options for more capable weapons systems in the future. Emphasis will be placed in 1978, for example, on R. & D. to:

- accelerate development of the M-X intercontinental ballistic missile;
- develop new land warfare equipment, including the XM-1 tank and the Advanced Attack Helicopter;
- work on vertical and short takeoff and landing (VSTOL) aircraft technology by the Navy.

Civilian.—Energy-related R. & D. is the largest component of the civilian category, and health R. & D. the second largest. Other substantial programs in this category include R. & D. relating to agriculture, environment, transportation, and education. Civilian applications of space technology are also included. Obligations for the conduct of civilian-related R. & D. will total about \$10.0 billion in 1978, an increase of \$551 million or 6% over 1977. More specifically, the 1978 budget includes funds to:

- provide for further growth in the overall level of basic research supported by the Federal Government, chiefly through increasing the basic research programs of the National Science Foundation, the Energy Research and Development Administration, the Department of Agriculture, and the National Institutes of Health;

- begin, in the Department of Agriculture, a new 5-year program of competitive grants for fundamental research in agriculture to lay the groundwork for increasing crop productivity in the 1990's and beyond;
- more than double the level of funding for earthquake research, as part of a coordinated interagency program that includes work on earthquake monitoring and prediction by the Geological Survey and research in earthquake engineering and on the social, legal, and economic aspects of earthquake prediction sponsored by the National Science Foundation;
- increase funding for competitive research in health sciences supported by the National Institutes of Health while continuing, at the high levels of recent years, research on human biological processes and on the causes, prevention, and treatment of disease;
- initiate an effort to assess further the value of remote sensing techniques for use in crop forecasting and other applications by developing a fourth experimental earth resources satellite for launch by the National Aeronautics and Space Administration in 1981;
- substantially increase research supported by the Department of Transportation to upgrade the air traffic control system, including research on the use of satellites to control aircraft over the North Atlantic;
- accelerate R. & D. in the Energy Research and Development Administration on technologies to use domestic fossil fuel resources in an environmentally acceptable manner—and at reasonable cost—and further increase assistance to industry in advancing energy conservation and solar and geothermal energy technologies; and,
- increase R. & D. efforts on nuclear safety and safeguards at the Nuclear Regulatory Commission and the Energy Research and Development Administration, and continue development of fusion technology and demonstration of the breeder reactor.

The largest increase for civilian R. & D. programs in 1978 will be for energy-related R. & D. The agencies involved in developing new energy technologies (chiefly ERDA) will increase in budget authority for direct energy R. & D. (including facilities) from \$2.9 billion in 1977 to \$3.9 billion in 1978. Indirect or supporting energy research will also increase, including research on the environmental, health, and safety aspects of energy systems. More detailed analysis of the Federal energy R. & D. effort is provided in the annual "National Plan for Energy Research, Development, and Demonstration" published by ERDA.

These and other increases in the civilian category will be offset in part by decreases in the R. & D. programs of the Environmental Protection Agency, the Department of Transportation, the Department of Justice, and other agencies. Such decreases result from a number of factors including the orderly termination of R. & D. programs that have met their objectives.

Space.—This category includes those NASA programs oriented primarily toward space exploration and shuttle development, and excludes applications of space technology programs such as the remote sensing from space of Earth resources (categorized above as

civilian R. & D.). Obligations for conducting space research and development will total \$3.2 billion in 1978, an increase of \$68 million or 2% over 1977. In 1978, NASA will:

- continue development and testing of two prototype space shuttle orbiter vehicles and initiate procurement of three others to establish a fleet of five shuttles that is expected to begin operations from the Kennedy Space Center in Florida in 1980;
- initiate development of an Earth-orbiting space telescope to be launched by the space shuttle in 1983;
- develop an orbiter and probe to conduct a comprehensive study of Jupiter and its 12 satellites;
- continue a cooperative program with the European Space Agency to build a space laboratory, to be carried into orbit by the shuttle, for experiments in astronomy, life sciences, and industrial processing.

CONDUCT OF BASIC RESEARCH

The Federal Government supports approximately 68% of the Nation's basic research effort, that is the search for new knowledge and understanding of basic phenomena and processes rather than specific application of such knowledge. Research in such fields as chemistry and physics, astronomy, materials, mathematics, oceanography, biology, and social sciences precedes and underlies advances in applied science. Universities and colleges, other nonprofit organizations and some industries also support basic research, but from a national point of view, industry as a whole tends to underinvest in basic research because results are generally not immediately applicable to the development of new products.

Obligations for the support of basic research (included in funds for the conduct of R. & D. cited above) will increase from about \$2.8 billion in 1977 to more than \$3.0 billion in 1978, as shown in table P-3.

Table P-3. CONDUCT OF BASIC RESEARCH (in billions of dollars)

	Obligations			Outlays		
	1976 actual	1977 estimate	1978 estimate	1976 actual	1977 estimate	1978 estimate
Conduct of basic research, total.....	2.5	2.8	3.0	2.5	2.6	2.9

Overall Federal funding for basic research will increase 9% in 1978, an estimated 3% in constant dollars (that is, adjusted for inflation). The 1978 budget continues the specific action taken in the 1977 budget to provide for such real growth in Federal support, following an 8-year period from 1967 to 1975 in which overall support for basic research declined in constant dollars. The National Science Foundation, a key agency in fostering basic research in all fields of science, will support basic research at a level of \$688 million, a 12% increase over its 1977 level. Other major supporters of basic research, as shown in table P-5, are the National Institutes of Health, the Energy Research and Development Administration, the National Aeronautics and Space Administration, and the Departments of Defense and Agriculture.

SUPPORT OF R. & D. AT COLLEGES AND UNIVERSITIES

Within the \$26.3 billion proposed for R. & D. in 1978, \$3.2 billion will be obligated by the Federal agencies to support colleges and universities (including medical schools) in the conduct of research and development, representing approximately two-thirds of the R. & D. financed in these institutions from all sources.

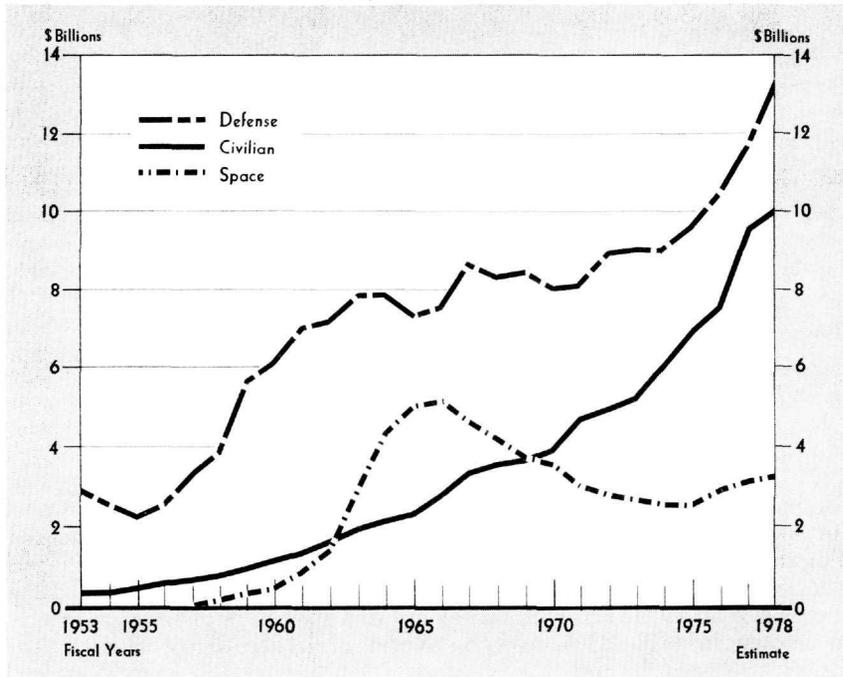
Colleges and universities have traditionally been the primary performers of basic research not only for the Federal Government, but also for the Nation as a whole. Approximately half of the Federal R. & D. funds that colleges and universities receive goes to conduct basic research; approximately 40% to conduct applied research (primarily medical), and the remainder to undertake development activities. HEW and the National Science Foundation are the major sponsors of R. & D. conducted at colleges and universities at estimated levels of \$1,600 million and \$562 million, respectively, in 1978. DOD, USDA, ERDA, and NASA will each provide more than \$100 million to colleges and universities in 1978.

LONG-TERM TRENDS IN FEDERAL SUPPORT FOR THE CONDUCT OF R. & D.

Federal funding for the conduct of research and development has substantially expanded in scope and level since 1953. Chart P-1 indicates trends in Federal R. & D. funding in the defense, civilian, and space categories for the last 25 years.

Conduct of Research and Development — Obligations

P-1



Note.—See Table P-12 at the end of the analysis for the information used in preparing this chart.

After World War II and until the establishment of NASA in 1958, the bulk of the Federal budget for research and development went to defense-related activities sponsored by the Department of Defense and the Atomic Energy Commission. Funding for defense-related R. & D. has grown almost five times since 1953, although as a percentage of total Federal R. & D. it has dropped from 90% in 1953 to 50% in 1978.

Space programs grew rapidly after the launch of the Soviet Sputnik in 1957, peaking in 1965-67 with the completion of major development efforts for the manned lunar landing of 1969. Since then, Federal R. & D. funding devoted to space-related activities has declined and emphasis has shifted to the development of the space shuttle, the exploration of the solar system and universe, and applications of space technology.

Federal support of R. & D. for purposes other than defense and space has increased steadily since the early 1950's, when the major programs were those in agriculture, medicine, and atomic energy. In the 1960's, new thrusts in housing, transportation, law enforcement, and other domestic programs contributed to R. & D. funding increases.

In the 1970's, civilian-oriented R. & D. has increased rapidly as a result of continuing large increases for health research, increasing emphasis on applications of space technology for civilian use, and particularly the expansion of energy R. & D. that began in 1973.

FACILITIES

Amounts for scientific and engineering facilities are considered separately from funding for the conduct of research and development. Obligations for the construction or renovation of facilities or for the acquisition of major items of equipment used to conduct R. & D. will increase by \$181 million to about \$1.6 billion in 1978. A variety of general and specialized facilities are provided for in agency R. & D. budgets.

Of particular note is the inclusion of funds in the ERDA and NSF budgets for synchrotron light sources that will employ radiation to investigate the basic structure of materials and biological systems. Funds are also provided to continue construction of the large colliding beam facility at the Stanford Linear Accelerator to develop and test new theories in high-energy physics concerning the ultimate nature of matter. Construction of several other major projects will continue, including a wind tunnel at NASA's Langley Research Center, an aircraft engine test complex at DOD's Arnold Research Center, and the unique NSF-funded very large array radiotelescope at Socorro, N. Mex.

PART II: AGENCY R. & D. PROGRAMS

Funding of R. & D. by the 29 agencies reporting expenditures for this purpose is shown in table P-4.

Table P-5 displays estimates for the conduct of basic research by major funding agencies.

Table P-6 shows funds for support of R. & D. at colleges and universities by Federal agencies.

Table P-7 separately aggregates obligations and outlays for the construction and renovation of facilities used in the conduct of R. & D. and for the acquisition of major items of equipment.

Summaries follow of the R. & D. activities of the 11 agencies that support more than 98% of federally funded R. & D.

Table P-4. CONDUCT OF RESEARCH AND DEVELOPMENT BY MAJOR DEPARTMENTS AND AGENCIES (in millions of dollars)

Department or agency	Obligations			Outlays		
	1976 actual	1977 estimate	1978 estimate	1976 actual	1977 estimate	1978 estimate
Defense—Military functions.....	9,592	11,132	12,317	9,329	10,391	11,919
Energy Research and Development Administration.....	2,499	3,610	4,064	2,225	3,168	3,735
National Aeronautics and Space Administration.....	3,488	3,800	3,833	3,521	3,557	3,745
Health, Education, and Welfare.....	2,543	2,910	2,976	2,566	2,532	2,799
National Science Foundation.....	617	693	766	623	650	724
Agriculture.....	467	530	579	460	544	573
Interior.....	322	349	355	315	342	351
Transportation.....	274	367	359	303	337	336
Environmental Protection Agency.....	221	311	266	251	313	277
Commerce.....	228	247	250	224	243	258
Nuclear Regulatory Commission.....	94	122	148	81	114	138
Veterans Administration.....	103	116	118	97	108	112
Housing and Urban Development.....	61	55	60	54	59	60
Agency for International Development.....	24	27	42	23	24	32
Justice.....	44	45	36	48	46	41
Labor.....	26	35	36	24	34	35
Smithsonian.....	26	31	32	28	31	31
Tennessee Valley Authority.....	19	32	31	19	32	31
All other ¹	46	49	54	42	49	54
Total.....	20,694	24,461	26,322	20,233	22,574	25,251

¹ Includes the Departments of State and Treasury, the Corps of Engineers, the General Services Administration, the Arms Control and Disarmament Agency, the Consumer Products Safety Commission, the Civil Service Commission, the Federal Communications Commission, the Federal Trade Commission, the Library of Congress, and the Advisory Commission on Intergovernmental Relations.

Table P-5. CONDUCT OF BASIC RESEARCH BY MAJOR DEPARTMENTS AND AGENCIES (in millions of dollars)¹

Department or agency	Obligations			Outlays		
	1976 actual	1977 estimate	1978 estimate	1976 actual	1977 estimate	1978 estimate
Health, Education, and Welfare..... (National Institutes of Health).....	660 (590)	744 (659)	796 (710)	694 (627)	644 (568)	745 (662)
National Science Foundation.....	541	612	688	534	574	650
Energy Research and Development Administration.....	346	389	427	330	370	413
National Aeronautics and Space Admin- istration.....	298	352	365	297	321	360
Defense—Military functions.....	248	274	314	225	279	314
Agriculture.....	171	193	215	168	200	210
Interior.....	121	127	143	125	125	137
Smithsonian.....	26	31	32	28	31	31
Commerce.....	22	25	24	21	24	25
Environmental Protection Agency.....	14	21	18	13	21	14
All other ²	16	17	19	16	15	20
Total.....	2,463	2,785	3,041	2,451	2,604	2,919

¹ Amounts reported in this table are included in totals for conduct of R. & D.

² Includes the Departments of Justice, Labor, Transportation, and State; the Veterans Administration, the Civil Service Commission, the Consumer Product Safety Commission, the Corps of Engineers, and the Library of Congress.

Table P-6. RESEARCH AND DEVELOPMENT SUPPORT TO COLLEGES AND UNIVERSITIES (in millions of dollars)¹

Department or agency	Obligations			Outlays		
	1976 actual	1977 estimate	1978 estimate	1976 actual	1977 estimate	1978 estimate
Health, Education, and Welfare..... (National Institutes of Health).....	1,423 (1,215)	1,577 (1,341)	1,600 (1,373)	1,459 (1,266)	1,287 (1,056)	1,415 (1,195)
National Science Foundation.....	445	497	562	446	463	521
Defense—Military functions.....	291	312	339	282	312	353
Energy Research and Development Administration.....	144	170	223	129	152	200
Agriculture.....	125	141	169	115	145	156
National Aeronautics and Space Admin- istration.....	119	117	120	111	116	119
Environmental Protection Agency.....	33	42	38	22	33	31
Interior.....	31	32	34	31	31	34
Commerce.....	31	33	30	27	29	28
Agency for International Development..	13	14	29	13	15	24
Transportation.....	15	23	24	20	20	23
All other ²	20	22	24	20	18	23
Total.....	2,690	2,980	3,192	2,675	2,621	2,927

¹ Amounts reported in this table are included in totals for conduct of R. & D.

² Includes the Departments of Justice, State, Labor, Treasury, and Housing and Urban Development; the Smithsonian Institution, the Veterans Administration, the Arms Control and Disarmament Agency, the Nuclear Regulatory Commission, the Consumer Product Safety Commission, and the Corps of Engineers.

Table P-7. RESEARCH AND DEVELOPMENT FACILITIES BY MAJOR DEPARTMENTS AND AGENCIES (in millions of dollars)

Department or agency	Obligations			Outlays		
	1976 actual	1977 estimate	1978 estimate	1976 actual	1977 estimate	1978 estimate
Energy Research and Development Administration.....	412	681	1,014	370	473	670
Defense-Military functions.....	141	468	347	141	166	311
National Aeronautics and Space Administration.....	94	146	161	120	125	133
National Science Foundation.....	52	39	47	50	37	45
Transportation.....	14	25	22	12	20	19
Agriculture.....	16	23	15	9	35	23
Health, Education and Welfare.....	28	25	15	45	31	21
Commerce.....	7	7	7	8	6	5
Veterans Administration.....	12	9	4	3	10	9
Environmental Protection Agency.....	6	7	2	7	5	5
Tennessee Valley Authority.....	10	13	1	16	13	1
All other ¹	9	12	1	3	13	6
Total.....	801	1,455	1,636	784	934	1,248

¹ Includes the Departments of Justice and Interior, the Nuclear Regulatory Commission, and the Smithsonian Institution.

DEPARTMENT OF DEFENSE

The research and development budget of DOD is larger than that of any other Federal agency, and comprises about 47% of the total of R. & D. funding in the 1978 budget. The primary purpose of DOD R. & D. is to develop new weapons systems to improve the Nation's defense. The 1978 budget continues the development of major strategic and tactical programs. Research and technology in areas related to DOD missions will be increased. Obligations for the conduct of R. & D. in 1978 will total \$12,317 million, an increase of \$1,185 million over 1977, while obligations for R. & D. facilities will decrease from \$468 million in 1977 to \$347 million in 1978, reflecting completion of major portions of an aircraft-engine test complex at the Arnold Engineering Development Center in Tennessee.

In strategic weapons programs, development of the M-X intercontinental ballistic missile will be accelerated, while work will continue on improving ballistic missile warheads. Two long-range cruise missiles—for air and sea launch—will also continue in development. Efforts on antiballistic missile technology will be maintained, as will further development efforts on two systems now in production—the B-1 strategic bomber and the Trident submarine.

Programs to develop weapons for tactical forces reflect increased emphasis on the XM-1 tank and the Advanced Attack Helicopter. Other important weapons systems under development include the Air Force F-16 aircraft, the Navy F-18 aircraft, and the Patriot surface-to-air missile. The combat potential of remotely piloted vehicles and of high-energy lasers will continue to be studied and tested. Efforts to standardize weapons systems among the NATO allies include seeking commonality of components for main battle tanks and adapting the French/German Roland short-range air defense missile system.

The Navy will pursue development programs in antisubmarine warfare and fleet air defense, and will continue development of a surface effects ship, which operates on an "air cushion" above the water. Development of a tactical cruise missile to improve the strike capability of combat ships will also continue. Navy effort on vertical and short takeoff and landing (VSTOL) aircraft will increase.

As part of the space shuttle development program, DOD in conjunction with NASA will continue developing a booster for high-altitude orbits and will prepare Vandenberg Air Force Base in California for west coast shuttle launch and recovery operations.

Table P-8. DEPARTMENT OF DEFENSE—MILITARY RESEARCH AND DEVELOPMENT (in millions of dollars)

Type of activity	1976 actual	1977 estimate	1978 estimate
OBLIGATIONS			
Conduct of R. & D.:			
Research, development, test, and evaluation:			
Technology base.....	1,482	1,706	1,881
Advanced technology development.....	557	643	685
Strategic programs.....	2,222	2,252	2,444
Tactical programs.....	2,895	3,719	4,413
Intelligence and communications.....	887	1,047	1,165
Programwide management and support.....	1,131	1,326	1,306
Other appropriations.....	418	440	423
Total conduct of R. & D.....	9,592	11,132	12,317
Total conduct of basic research included above.....	248	274	314
Total conduct of applied research, included above.....	1,107	1,299	1,437
Total conduct of development, included above.....	8,238	9,558	10,566
R. & D. facilities.....	141	468	347
Total obligations.....	9,733	11,599	12,664
OUTLAYS			
Conduct of R. & D.....	9,329	10,391	11,919
R. & D. facilities.....	141	166	311
Total outlays.....	9,470	10,557	12,230

ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION

ERDA was established in 1975 to be the major Federal agency for the planning, coordination, and conduct of energy R. & D. programs. Of all civilian R. & D. (i.e., not related to defense missions or to space exploration), energy R. & D. is the largest single component—and it is growing at a faster rate than R. & D. directed toward other civilian objectives. ERDA also funds a substantial program of R. & D. related to the development and testing of nuclear weapons.

Obligations for the conduct of all R. & D. by ERDA will total \$4,064 million in 1978, an increase of \$454 million or 13%. Of this total, obligations for the conduct of nonmilitary R. & D. will increase from \$2,840 million in 1977 to \$3,238 million in 1978. Obligations for the conduct of R. & D. for military purposes will increase from \$770

million in 1970 to \$826 million. Obligations for construction and equipment will total \$1,014 million, an increase of \$333 million.

Increases for the facilities as well as for the conduct of R. & D. are directed toward accelerating R. & D. on all major technology options to supplement—but not supplant—R. & D. being funded by the private sector. New or improved methods of generating electricity will be emphasized. Conservation, and geothermal R. & D. will be increased, efforts in the fossil energy programs will be accelerated, and R. & D. on the nuclear fuel cycle will be expanded (with special emphasis on ways to dispose of radioactive waste and to prevent diversion of materials that could be used to build nuclear weapons). In addition, programs in basic scientific research will be strengthened to build up the technology base for long-range energy R. & D. efforts.

Major increases are proposed in programs to demonstrate the production of synthetic fuels from coal, to develop technologies to increase oil and gas production, to burn coal more efficiently and to extract gas and oil from shale. Continued funding for solar and geothermal R. & D. will be used to further develop new technologies that will provide electricity, thermal energy, and clean fuels in an economically sound and environmentally acceptable manner. Increases are also provided to further assist private sector efforts to develop, market, and use conservation methods and technologies.

Increases are provided for fusion power development programs to allow continued research on three approaches to magnetic confinement fusion as well as for continued research on the laser fusion approach.

In the fission power development and demonstration area, programs for improving the assessment of domestic uranium resources will be accelerated, as will development of advanced uranium enrichment techniques. Efforts to control the spread of nuclear weapons capabilities will be expanded by ERDA and other Federal agencies through the development of technologies that minimize proliferation risks, and through the development and evaluation of information to be used by the President in 1978 to determine whether reprocessing of nuclear fuel can be conducted in a manner consistent with national nonproliferation objectives. The liquid metal fast breeder reactor (LMFBR) program will continue, as a means of developing information on the safety, environmental impact, safeguards, and commercial viability of this technology necessary for a decision in 1986 on the acceptability of widespread commercial deployment.

In ERDA's environmental R. & D. program, biomedical and environmental research studies will be expanded, mainly to support the development of nonnuclear energy technologies.

The basic energy sciences program will be expanded in the fields of nuclear science; materials sciences; and molecular, mathematical, and geosciences in support of long-range advancements in energy technologies.

Development will continue on improved naval nuclear propulsion plants and reactor cores. Increases in the weapons program provide for the development and design of new weapons types, and underground testing of these devices.

The ERDA's budget for construction of research and development facilities includes funds for a 10 MWe solar thermal central receiver pilot plant, new mirror experimental facilities for magnetic fusion

research, and high energy gas laser facilities at the Lawrence Livermore Laboratory and at the Los Alamos Scientific Laboratory.

Included in the liquid metal fast breeder reactor program is funding for the Safety Research Experimental facilities project and for a high performance fuel laboratory that will develop and demonstrate remote, automated, and fully safeguarded mixed plutonium and uranium oxide fuel fabrication technology. Two new environmental research facilities are provided for under the environmental research and development program, while the high energy physics program provides funds for continuation of the positron-electron colliding beam facility begun in 1977. The 1978 estimate also includes funding for high intensity uranium beams in the nuclear physics program and for the national synchrotron light source, a new facility for using radiation to investigate the basic structure of materials and biological systems.

Table P-9. ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION—RESEARCH AND DEVELOPMENT (in millions of dollars)

Programs and groups of programs	1976 actual	1977 estimate	1978 estimate
OBLIGATIONS			
Conduct of research and development:			
Direct nuclear energy research and development:			
Fission power reactor and nuclear fuel cycle.....	551	916	1,222
Laser and magnetic fusion.....	191	263	316
NRC safety facilities.....	-----	28	24
Nuclear materials security and safeguards.....	12	27	38
Subtotal.....	753	1,235	1,600
Direct nonnuclear energy research and development:			
Fossil.....	323	547	514
Solar.....	93	261	229
Geothermal.....	31	53	86
Conservation.....	66	155	154
Subtotal.....	512	1,016	983
Supporting energy research and development:			
Environmental research and development.....	135	161	181
Basic energy sciences.....	113	129	147
Subtotal.....	248	289	328
Weapons and naval reactor R. & D.....	717	770	826
Other:			
High energy and nuclear physics.....	208	235	256
Space application and other programs.....	60	65	71
Subtotal.....	268	300	327
Total conduct of research and development.....	2,499	3,610	4,064
Total conduct of basic research, included above.....	346	339	427
Total conduct of applied research, included above.....	369	475	531
Total conduct of development, included above.....	1,764	2,747	3,107
Research and development facilities.....	412	681	1,014
Total obligations.....	2,911	4,291	5,078
OUTLAYS			
Conduct of R. & D.....	2,225	3,168	3,735
R. & D. facilities.....	370	473	670
Total outlays.....	2,595	3,641	4,405

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

The entire NASA budget is considered research and development. In 1978, NASA will seek to maintain a balanced program across all of its activities—shuttle development, space exploration, applications of space technology, and aeronautical R. & D. Obligations for the conduct of R. & D. will increase by \$250 million in 1978 to a total of \$3.8 billion. Obligations for the construction of facilities will total \$162 million, an increase of \$44 million above 1977. These increases are related to the continuation of space shuttle development and to the start of several new programs, including the Earth-orbiting space telescope, an orbiter/probe to investigate Jupiter, and a fourth experimental Earth resources satellite (Landsat-D).

Funding is provided in 1978 to continue orbiter development and flight testing and to start the procurement of an operational fleet of five space shuttle orbiters. The space shuttle will provide the capability for a wide variety of uses (including placing satellites and laboratories in Earth orbit and recovering satellites for service and repair), with greater flexibility and cost savings than is possible with the present expendable launch vehicles. The program is proceeding toward the first approach and landing test in 1977, the first manned orbital flight in 1979, and initial operational capability by mid-1980. NASA plans to achieve, by 1982, a full operational capability of five shuttle orbiters operating from facilities at the Kennedy Space Center in Florida and at Vandenberg Air Force Base in California.

The space science programs will continue to emphasize the exploration of the solar system and the universe using unmanned spacecraft. A new mission, the Jupiter Orbiter/Probe, to be launched in 1981 is included in the 1978 budget. Two Pioneer spacecraft are continuing the exploration of the outer planets—one spacecraft is now escaping the solar system and the other will fly by Saturn in 1979. Two Viking unmanned orbiter/lander spacecraft launched to Mars in 1975 are now mapping the planet from orbit and continuing several geophysical and biomedical experiments. Two Mariner spacecraft are being developed for Jupiter-Saturn flyby missions scheduled for launch in 1977. An orbiter and probe are being developed for launch to Venus in 1978 to initiate atmospheric investigations of that planet.

In addition to the planetary missions, development will continue in 1978 on spacecraft to conduct high energy and ultraviolet astronomy from Earth orbit. High energy astronomy observatories will be launched during 1977-79 to study X-ray, gamma-ray, and cosmic-ray sources in the galaxy and distant parts of the universe. Work is proceeding on the solar maximum mission satellite which is scheduled to be launched in 1979 to study the Sun during the next period of peak solar flare activity in 1979-80.

Particularly noteworthy is the inclusion of funds in the 1978 NASA budget to begin development of the advanced Earth-orbiting space telescope. This observatory, capable of viewing objects as far away as 60 billion light-years, could help mankind better understand the composition, origin, size, and history of the universe. The project is designed to capitalize on the unique environment of space, above the obscuring effects of the Earth's atmosphere. The telescope will be launched by the space shuttle in 1983.

In the space applications program, NASA is continuing development of a third Earth resources technology satellite (Landsat-C),

Table P-10. NATIONAL AERONAUTICS AND SPACE ADMINISTRATION—RESEARCH AND DEVELOPMENT (in millions of dollars)

Program and type of activity	1976 actual	1977 estimate	1978 estimate
BUDGET PLAN			
Conduct of R. & D.:			
Space flight.....	1,556	1,637	1,749
Space sciences.....	433	379	405
Space applications.....	178	198	228
Space research and technology.....	75	82	97
Aeronautical research and technology.....	175	190	230
Energy technology applications.....	6	6	5
Supporting activities.....	248	263	290
Research and program management.....	776	829	830
Total conduct of R. & D. budget plan.....	3,447	3,583	3,833
Total conduct of basic research, included above.....	293	320	365
Total conduct of applied research, included above.....	930	989	1,060
Total conduct of development, included above.....	2,224	2,274	2,408
R. & D. facilities.....	82	118	162
Total budget plan.....	3,529	3,701	3,995
OUTLAYS			
Conduct of R. & D.....	3,521	3,557	3,745
R. & D. facilities.....	120	125	133
Total outlays.....	3,641	3,682	3,878

to be launched in late 1977 or early 1978 to conduct further experiments on the use of satellites for agricultural forecasting, identifying geological features, and other applications. R. & D. will begin on a fourth, and more advanced Earth resources satellite (Landsat-D), for launch in 1981. Development is also proceeding on Tiros-N to provide major improvements in weather forecasting, and on the heat capacity spacecraft to be launched in 1978 to sense potential sources of geothermal energy. In the area of environmental quality, development is proceeding on Nimbus-G, scheduled for launch in 1978 to demonstrate the capability of monitoring worldwide pollution from space, and on Seasat-A, to be orbited in 1978 to monitor ocean conditions.

Aeronautical research and technology will continue to emphasize the reduction of aircraft engine noise and fuel consumption. A major budget increase is requested in 1978 to develop technology, by 1985, to reduce fuel consumption in commercial transports. The level of support for fundamental studies in aeronautics will also be increased.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Department of Health, Education, and Welfare (HEW) obligations in 1978 for the conduct of R. & D. will increase by \$66 million over the 1977 level, reaching a total of \$2,976 million. Obligations for R. & D. facilities will be \$15 million.

The largest share of the Department's R. & D. funds is devoted to the biomedical area. The National Institutes of Health (NIH) is the primary source of support for health research in the United States with obligations of \$2,230 million in 1978. These funds will finance

research into human biological processes and the mechanisms of such diseases as cancer, heart and lung diseases, arthritis, diabetes, and venereal disease. Basic research in areas such as cell biology and genetics will be increased through the use of competitive extramural grants. Funding for studies of carcinogens in the environment will be increased, to support programs of the Environmental Protection Agency.

HEW also supports research into the basic biological and behavioral processes affecting mental health and illness, as well as the biochemical and psychological mechanisms related to psychiatric disorders and substance abuse. Research efforts to discover new approaches to pre-

Table P-11. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE—
RESEARCH AND DEVELOPMENT

(In millions of dollars)

Program areas and organizational units	1976 actual	1977 estimate	1978 estimate
OBLIGATIONS			
Conduct of R. & D.:			
Health:			
National Institutes of Health.....	2,005	2,215	2,280
Alcohol, Drug Abuse, and Mental Health Administration.....	140	154	146
Food and Drug Administration.....	36	41	47
Center for Disease Control.....	46	55	56
Health Resources Administration.....	36	37	32
Assistant Secretary for Health.....	11	14	14
Health Services Administration.....	15	12	10
Subtotal, health.....	2,289	2,527	2,585
Education:			
Office of Assistant Secretary for Education.....	13	13	19
Office of Education.....	63	158	140
National Institute of Education.....	70	90	109
Subtotal, education.....	145	261	268
Welfare:			
Office of Human Development.....	63	73	68
Social Security Administration.....	14	20	23
Departmental Management.....	25	20	22
Social and Rehabilitation Service.....	7	9	9
Subtotal, welfare.....	110	123	123
Total conduct of R. & D. obligations.....	2,543	2,910	2,976
Total conduct of basic research, included above.....	660	744	796
Total conduct of applied research, included above.....	1,444	1,598	1,608
Total conduct of development, included above.....	439	569	572
R. & D. facilities.....	28	25	15
Total obligations.....	2,571	2,935	2,991
OUTLAYS			
Conduct of R. & D.....	2,566	2,532	2,799
R. & D. facilities.....	45	31	21
Total outlays.....	2,610	2,562	2,820

vention and treatment of drug abuse, alcohol abuse, and mental illness will be continued. Research will also be conducted in such diverse health services areas as long-term care, malpractice insurance, and cost containment. In addition, demonstrations of health maintenance organizations will be funded.

The National Institute for Education (NIE) is the focal point for educational R. & D. NIE supports research in the areas of equality of education; essential skills education; education and work; dissemination of research information; and school finance, productivity, organization, and management. R. & D. obligations by NIE will increase by \$19 million, from \$90 million in 1977 to \$109 million in 1978.

The total obligations for the conduct of R. & D. in human services and welfare programs will remain level, at \$123 million. The Office of Human Development, whose obligations will total \$68 million in 1978, will continue to fund R. & D. activities that support its role in providing ameliorative services to the aged, physically and mentally handicapped, Native Americans, children, and other subgroups of the population-at-risk.

NATIONAL SCIENCE FOUNDATION

Obligations for the conduct of R. & D. will increase from \$693 million in 1977 to \$766 million in 1978, representing an increase of 11% in the Foundation's research support activities. In addition, \$47 million will be obligated for research facilities in 1978, an increase of \$8 million above 1977.

Most of the increase in the Foundation's budget will be designated for support of basic research in a number of scientific disciplines. Funding for support of basic research will increase from \$612 million to \$688 million, or about 12%, representing a continuation of the initiative in the 1977 budget of providing some real increase in the overall level of Federal basic research support following a decline in overall funding from 1967 to 1975 (in inflation-adjusted dollars). One area of particular emphasis in 1978 will be support of advanced instrumentation in chemistry, biology, physics, materials, and other fields. Other areas of research emphasis include fundamental earthquake studies, basic plant sciences, and key aspects of human behavior.

In keeping with a Presidential initiative on earthquake prediction research involving NSF and the U.S. Geological Survey, the Foundation's applied research program will stress engineering of structures to better withstand earthquakes, and study of the legal, legislative, social, and economic issues relating to earthquake prediction.

Funding will be increased for major programs in astronomy, atmospheric, Earth, and ocean sciences. Funding will be continued for the Antarctic program and for a broad range of international science and technology efforts conducted through bilateral and multilateral arrangements. Construction and limited operation of the Very Large Array radiotelescope will continue.

DEPARTMENT OF AGRICULTURE

Obligations of the Department of Agriculture for the conduct of research and development, excluding construction of facilities, will increase from \$530 million in 1977 to \$579 million 1978.

Currently, new technology in food production and related areas is being utilized as rapidly as it is developed. In addition to hastening the achievement of applied research results, basic research leading ultimately to breakthroughs in the state-of-the-art of agricultural production methods is needed to meet long-range food needs in the United States and throughout the world. Since the results of such research may not reach the application stage for many years, research must be initiated now if food needs projected to the year 2000 and beyond are to be effectively met.

Additional funds will be provided in 1978, primarily for an expanded competitive grants program in basic research open to the entire scientific community. These funds will be applied to four major areas of research related to meeting long-range food needs: nitrogen fixation, photosynthesis, genetic engineering, and crop protection from pests and diseases.

Research will be initiated in existing programs to develop crop-loss appraisal and assessment systems, and current research on genetic vulnerability will be increased substantially. Research initiated in 1977 will be continued in 1978 on pesticide impact assessment to determine the consequences of major pesticide use curtailment by EPA and to develop supportive information aimed at continued registration of vital agricultural pesticides.

Economic research will include increased effort to analyze Federal credit programs in rural areas, and a new effort to assess the impacts of existing food, nutrition, and income assistance programs and possible alternatives. Forest Service research will include the initiation of an assessment of supply, demand, and utilization of forest and other renewable resources as required by the Forest and Rangeland Renewable Resources Planning Act of 1974.

The Department of Agriculture, in cooperation with State and private research organizations, will continue development of a national system designed to improve coordination in the planning, financing, and evaluation of agricultural efficiency and effectiveness of agricultural research.

DEPARTMENT OF THE INTERIOR

Obligations for the Department of the Interior for the conduct of research and development will increase from \$349 million in 1977 to \$355 million in 1978.

An area of special importance in the Department's 1978 R. & D. program is accelerated funding for basic and applied research to try to achieve a reliable capability to predict major earthquakes within 10 years and to define national and regional earthquake hazard areas. Funding for earthquake-related research performed or funded by the U.S. Geological Survey will more than double (from \$11 million in 1977 to \$28 million in 1978), as will funding for related research supported by the National Science Foundation. A capability to

predict reliably the timing and area of earthquakes could lead to reducing potential damages.

Research programs are also conducted by the U.S. Geological Survey to provide an accurate appraisal of the Nation's mineral resources, including new or improved methods, and techniques and instruments for mineral exploration on land and submerged continental margins. An extensive program of investigation of new technologies for surface and underground mining by the Bureau of Mines is designed to lead to improvements in productivity and in mine health and safety and to a reduction in the environmental impact of mining.

The efficient allocation and conservation of scarce water and water-related resources will be studied by the Bureau of Reclamation. Studies directed toward better understanding of basic principles of hydrology necessary for the appraisal and evaluation of the Nation's water resources, including the effects of underground waste storage, will be undertaken by the Office of Water Research and Technology. Special studies will be conducted by the Bonneville Power Administration involving electric energy planning, the development of new transmission and equipment design concepts to improve system performance, and development of new power system control techniques. Participation in the ERDA wind energy research development and demonstration program will continue.

Research is conducted by the Fish and Wildlife Service to improve the management of habitat to protect fish and wildlife resources and the environment in general. Studies supporting the direct management of fisheries and migratory birds include such subjects as population dynamics, fish disease prevention and control, restoration of endangered species, and the effects of toxic substances.

Archeological investigations and salvage are carried on by the National Park Service in various areas threatened by inundation through reservoir construction and other Federal or federally connected construction activities.

DEPARTMENT OF TRANSPORTATION

Obligations for the conduct of R. & D. by the Department of Transportation are estimated at \$367 million for 1977 and \$359 million for 1978, reflecting a carryover of obligations from 1976 to 1977. In 1978, obligations for air and urban transportation will increase, while those for highway and marine R. & D. will remain essentially level. Highway safety and railroad R. & D. obligations will decrease, although their budget authority will increase.

Air transportation R. & D. will increase by \$6 million to provide for continued technological upgrading of the air traffic control system and for improved surveillance, communication, and landing aids development. The Aerosat program, a joint U.S./Canadian/European effort to evaluate the use of satellites to improve air traffic control operations over the North Atlantic air routes will be emphasized.

Advanced traffic management systems to increase the capacity and reduce delays on the Nation's highways system will continue to be

developed. Highway traffic safety research will continue to emphasize accident investigation and data analysis and will support the setting of Federal safety standards leading to improved vehicle occupant protection, the reduction of drug and alcohol related accidents, and the improvement of driver performance.

Urban mass transportation R. & D. will be increased by \$6 million for technology to improve buses, urban rail systems, and automated guideway transit systems, including technical support for the downtown people mover program. People movers are under design in St. Paul, Houston, Los Angeles, and Cleveland, and will be partially funded by Federal capital grants. Demonstrations of improved transit service, methods, and management techniques to improve the use of current urban transportation systems will be emphasized. Results of these demonstrations are intended to foster greater productivity from the capital assets funded by Federal grants to local governments.

Railroad R. & D. funding will emphasize improved rail freight and passenger services and rail safety research including equipment and human factor failures.

Marine R. & D. will continue to stress pollution abatement and control systems development, improved aids to navigation, and programs to enhance safety at sea, including commercial vessel and recreational boating safety.

ENVIRONMENTAL PROTECTION AGENCY

EPA supports research and development to determine the sources and effects of pollution. The overall objective is to provide a strong scientific basis to develop standards and effective control strategies and to identify and evaluate long-range environmental problems. While obligations and outlays will drop in 1978, new budget authority for the conduct of R. & D. will increase from \$264 million in 1977 to \$266 million. An area that will be substantially expanded is that of evaluating resource conservation and hazardous waste disposal techniques, in support of EPA's program of regulating disposal of solid waste.

The air pollution research and development program seeks to develop predictive models for pollutant emission, transport, transformation and removal, and to verify these models by actual measurements. In 1978, air health effects research will include work on sulfates, nitrates, and respirable particulates.

The goals of the water quality research program are to develop: (1) criteria for clean, safe, ecologically stable water in various aquatic environments; (2) useful and validatable monitoring methods; (3) cost-effective and efficient wastewater treatment technology for both municipalities and industries; and (4) strategies for control of pollution from various nonpoint sources such as farming, mining, and oil spills.

Water supply activities include research, development, and field evaluations designed to provide a dependable and safe supply of drinking water. The program supports the development of valid criteria for establishing standards for organic, inorganic, and microbiological contaminants of drinking water and the control technology necessary for economic attainment of drinking water standards.

EPA's research program supporting regulatory activities with respect to pesticides includes: the development of data required to sup-

port administrative reviews and litigation; monitoring; development of new methods of pest control; and development of long-term pesticides research strategy.

The interdisciplinary program in health and ecological effects includes the development of pollutant assessment documents and the funding for EPA's contribution to the National Center for Toxicological Research (NCTR), to study the long-term effects of low doses of toxic chemicals by various exposure routes.

EPA's R. & D. programs also address the problems of toxic materials which cross traditional media lines; support for implementing the new Toxic Substances Control Act; the use and development of predictive techniques for early identification of substances most likely to pose a hazard to man or the environment; implementation of methods for monitoring air, water, and soil for selected toxic chemicals; and development of strategies under a variety of Federal authorities to control multimedia toxic pollutants.

EPA's energy R. & D. program seeks to assess the dangers to the health and environment from the adverse environmental effects of energy systems. Its primary goals are: (1) to provide a sound data base necessary for the Agency to establish regulations, and (2) to evaluate environmental control options for those extraction, processing, and utilization practices which can cause significant health and ecological damage.

DEPARTMENT OF COMMERCE

Obligations for the conduct of R. & D. and for related facilities by the Department of Commerce, will increase by \$2 million to \$256 million in 1978.

This reflects increases for the research and development programs of the National Oceanic and Atmospheric Administration (NOAA) and decreases in programs of the National Bureau of Standards (NBS), the National Fire Prevention and Control Administration (NFPCA), the Economic Development Administration (EDA) and the Maritime Administration (MARAD).

The principal objectives of Department of Commerce, research and development programs include continued improvement of the Nation's environmental and weather prediction and warning capabilities; management, conservation and development of fisheries resources; studies concerning the causes and amelioration of economic distress; development of technology to improve the competitive position of the U.S. maritime industry; and encouragement of technological advancement through improved performance and measurement standards.

NOAA will continue research in the area of improving the detection and tracking of weather systems and violent storms, the extension of environmental forecasting, and the modification of severe storms and hurricanes. NOAA also will continue its development of systems and components in the area of mapping, charting, and marine description. Further, NOAA will increase research aimed at the conservation, development, and management of fisheries resources and commercial fisheries.

The National Fire Prevention and Control Administration will continue to conduct research to reduce the loss of life and property from fires and will provide the essential technical knowledge on which new

and improved fire prevention, control, and extinguishment efforts can be based.

In 1978, the technology development and utilization programs of NBS will emphasize (1) standards and measurement procedures, (2) energy conservation and energy efficiency in industrial processes, and (3) computer security techniques.

Research and development activities conducted by EDA explore the causes and consequences of economic distress and methods of alleviating such conditions. Through demonstration projects, EDA attempts to determine appropriate, specific responses to accomplish economic development actions to directly benefit local and regional economic development groups and organizations.

Major MARAD research and development efforts will be directed toward techniques of building ships for less cost in U.S. shipyards, developing new ship machinery, automating ship operations, and developing the maritime research simulator. The National Marine Research Center at Kings Point, N.Y., will continue to provide technology assistance to shippers and shipbuilders. In 1978, MARAD programs will be funded at a slightly lower level than in 1977. This is due to the termination of the nuclear ship project and planned completion of the ship operations information system (SOIS) program.

NUCLEAR REGULATORY COMMISSION

Obligations of the Nuclear Regulatory Commission for the conduct of R. & D. will increase from \$122 million in 1977 to \$148 million in 1978.

The Commission's R. & D. program is directed toward the improvement of data needed on the safety, health effects, and environmental impact of nuclear powerplants and other nuclear fuel cycle facilities.

The increased level of research will accelerate the confirmation and quantification of the degree of conservatism used in present licensing assessment methodologies and thus reduce the economic penalties associated with overly conservative licensing criteria where they may exist.

OTHER AGENCY PROGRAMS

The remaining 18 agencies reporting R. & D. expenditures support a total of 2 percent of federally funded R. & D. Like the programs of the agencies providing the majority of R. & D. support, R. & D. programs of these other agencies are closely related to the accomplishment of their missions. For example, HUD supports R. & D. on lowering the cost of housing production and on problems of housing safety and security such as the hazards of lead-based paint or problems of housing deterioration and neighborhood decay. The Veterans Administration sponsors biomedical research on health care services and delivery of rehabilitative services for disabled veterans. The Library of Congress funds research in scientific communication and documentation, and in paper chemistry. At the Department of Treasury, the Bureau of Engraving and Printing supports technology on deterrents to the counterfeiting of U.S. securities, while the U.S. Customs Service investigates surveillance and inspection systems.

A portion of the R. & D. budget of many agencies reporting such expenditures goes to economic and policy studies concerning the impact of proposed or existing legislation or regulatory standards. For example, the Department of Labor's R. & D. budget is for impact studies of laws and standards in such areas as occupational safety and health and employee benefit plans. An important R. & D. activity at HUD is the collection and analysis of economic and financial data relevant to housing programs. In the 11 agencies reporting total R. & D. obligations of \$6 million or less, the entire R. & D. effort is devoted to policy studies concerning agency activities.

SUPPLEMENTARY INFORMATION

The following table provides the information on long-term trends that was used as a basis for preparing Chart P-1:

Table P-12. TRENDS IN CONDUCT OF R. & D. BY MAJOR PROGRAM AREA (obligations in billions of dollars)

Year	Defense	Civilian (other than space)	Space	Total
1953.....	2.8	0.3	-----	3.1
1954.....	2.5	.3	-----	2.9
1955.....	2.2	.4	-----	2.5
1956.....	2.5	.5	-----	3.0
1957.....	3.3	.6	-----	3.9
1958.....	3.8	.7	0.1	4.6
1959.....	5.6	.9	.3	6.7
1960.....	6.1	1.1	.4	7.6
1961.....	7.0	1.3	.8	9.1
1962.....	7.2	1.6	1.4	10.3
1963.....	7.8	1.9	2.9	12.5
1964.....	7.8	2.1	4.3	14.2
1965.....	7.3	2.3	5.0	14.6
1966.....	7.5	2.7	5.1	15.3
1967.....	8.6	3.3	4.6	16.5
1968.....	8.3	3.5	4.2	15.9
1969.....	8.4	3.6	3.7	15.6
1970.....	8.0	3.9	3.5	15.3
1971.....	8.1	4.6	2.9	15.6
1972.....	8.9	4.9	2.7	16.5
1973.....	9.0	5.2	2.6	16.8
1974.....	9.0	6.0	2.5	17.4
1975.....	9.6	6.9	2.5	19.0
1976.....	10.3	7.5	2.9	20.7
1977 (estimate).....	11.9	9.5	3.1	24.5
1978 (estimate).....	13.1	10.0	3.2	26.3

SPECIAL ANALYSIS Q
FEDERAL ENVIRONMENTAL PROGRAMS

INTRODUCTION

In 1978, 22 Federal agencies and departments expect to have outlays of \$11.5 billion for environmental programs. This is an increase of 10% over 1977 Federal outlays of \$10.5 billion. Although covering a wide range of activities, Federal environmental programs are classified in three broad categories: Pollution control and abatement; understanding, describing, and predicting the environment; and environmental protection and enhancement activities. The trends in total Federal expenditures for each category from 1973 to 1978 are shown in the following chart. The relationship between budget authority and outlays in each category from 1976 to 1978 is shown in table Q-1.

Environmental Outlays, by Category, 1973-1978

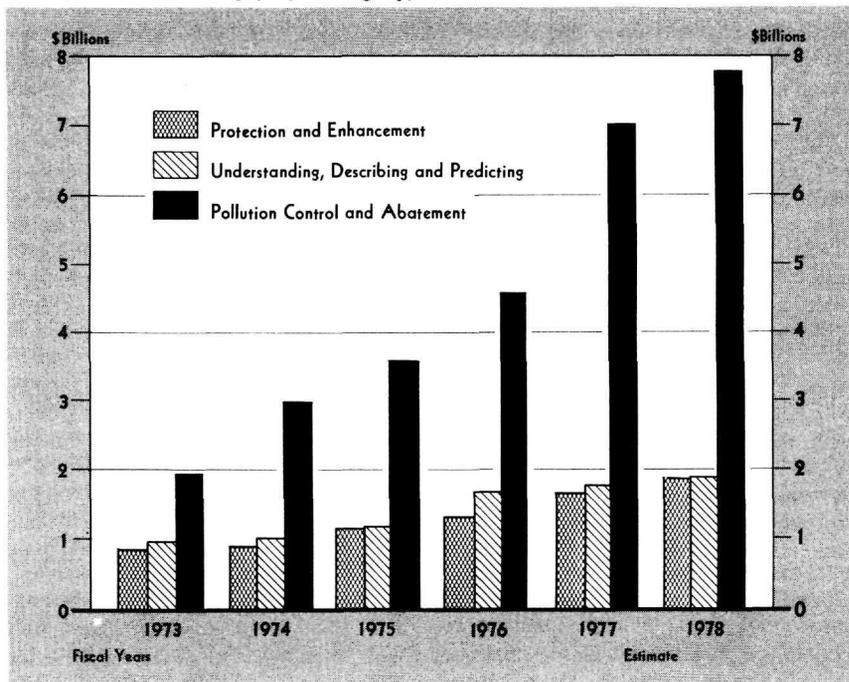


Table Q-1. BUDGET AUTHORITY AND OUTLAYS—FEDERAL ENVIRONMENTAL PROGRAMS (in millions of dollars)

Activities	1976 actual	TQ actual	1977 estimate	1978 estimate
BUDGET AUTHORITY				
Pollution control and abatement.....	1,972.3	453.9	2,122.8	2,200.9
Construction grants.....	196.7	19.5	1,676.7	4,675.6
Understanding, describing, and predicting.....	1,701.3	443.4	1,824.7	1,958.6
Protection and enhancement.....	1,449.7	289.4	2,423.0	1,900.9
Total.....	5,320.0	1,206.2	8,047.2	10,736.0
OUTLAYS				
Pollution control and abatement.....	1,931.3	467.7	2,214.5	2,207.3
Construction grants.....	2,604.6	966.1	4,854.3	5,565.0
Understanding, describing and predicting.....	1,651.3	459.5	1,736.9	1,859.7
Protection and enhancement.....	1,294.4	405.0	1,687.4	1,869.8
Total.....	7,481.6	2,298.3	10,493.1	11,501.8

As the chart indicates, total Federal outlays for environmental programs have increased by 210% since 1973. It should be noted that total Federal outlays for all Government programs have increased 79% during the same period. Pollution control and abatement activities, including construction grants, represent the largest category of programs while understanding, describing, and predicting, and protection and enhancement rank second and third, respectively, in size of programs.

Federal expenditures include both direct outlays (in-house activities) and transfers (grants) to State or local governments or to the private sector. In 1978, transfer payments will comprise 56% of environmental outlays. The distribution of 1978 Federal outlays for environmental programs according to direct or transfer spending is summarized below.

1978 FEDERAL OUTLAYS FOR ENVIRONMENTAL PROGRAMS

(In millions of dollars)

	Outlays	
	Direct	Transfer
Enhancement.....	1,298.8	571.0
Understanding, describing, and predicting.....	1,859.7	(¹)
Pollution abatement (excluding construction grants).....	1,875.0	332.3
Construction grants.....	(²)	5,565.0
Total.....	5,033.5	6,468.3

¹ Understanding, describing, and predicting transfers are not separately identifiable.

² Not applicable.

In addition to budget outlays, the Federal Government supports the environmental effort through tax expenditures. These expenditures result from provisions in the tax code that exempt the interest income from pollution control bonds. These bonds are issued by State and local governments to finance pollution control facilities used by

private firms. These tax expenditures are estimated to be \$320 million in 1978. They are not included in any tables of the Special Analysis, which covers only appropriated funds.

POLLUTION CONTROL AND ABATEMENT

In 1978, pollution control and abatement outlays represent 68% of total Federal outlays for environmental protection. These outlays consist of the sum of the outlays identified in table Q-1 as pollution control and abatement and construction grants. In 1978, outlays are estimated to be \$7,772.3 million. Approximately two-thirds of these outlays are Environmental Protection Agency grants of \$5.2 billion for the construction of sewage treatment facilities.

There are three primary areas of direct Federal activity—reducing pollution from Federal facilities, establishing and enforcing standards, and conducting research and development to identify the sources of pollution and to reduce pollution. These direct activities account for 24% of Federal outlays for pollution control. The remaining outlays are transfers to State and local governments for the establishment and operation of pollution control programs, grants for research and development, and funding for manpower development activities. Budget authority and outlays for these activities are shown in table Q-2.

Table Q-2. POLLUTION CONTROL AND ABATEMENT ACTIVITIES—BY FUNCTION (in millions of dollars)

Activities	1976 actual	TQ actual	1977 estimate	1978 estimate
BUDGET AUTHORITY				
Financial aid to State, interstate, and local governments.....	374.6	52.2	1,836.0	4,832.9
Research and development.....	723.8	181.3	777.8	800.4
Standard setting and enforcement.....	424.7	119.1	485.5	525.5
Reduce pollution from Federal facilities.....	431.5	74.9	479.1	516.8
Manpower development.....	13.0	2.5	11.2	8.2
Other.....	201.4	43.4	209.9	192.7
Total.....	2,169.0	473.4	3,799.5	6,876.5
OUTLAYS				
Financial aid to State, interstate, and local governments.....	2,769.4	1,010.8	5,111.5	5,819.9
Research and development.....	683.0	190.3	809.8	790.2
Standard setting and enforcement.....	394.2	112.8	466.8	495.8
Reduce pollution from Federal facilities.....	477.9	66.8	447.1	456.2
Manpower development.....	11.1	2.6	9.8	7.8
Other.....	200.3	50.5	223.8	202.4
Total.....	4,535.9	1,433.8	7,068.8	7,772.3

Activities involved.—Financial aid.—In 1978, Federal aid to State and local governments is estimated to be \$5,819.9 million. Ninety-six percent of this will be used for construction of sewage

treatment facilities, funded primarily through the Environmental Protection Agency (EPA). Most of these expenditures result from the \$18 billion authorized in the Federal Water Pollution Control Act Amendments of 1972. Beginning in 1978, a 10-year funding plan of \$4.5 billion per year is proposed, contingent on enactment of program reform legislation. The reform legislation will focus Federal funds on those types of projects most effective in improving the quality of the receiving waters and will reduce the Federal share of the program from \$330 billion to \$45 billion by

- eliminating funding for collection sewers, storm water discharges, and sewer rehabilitation,
- reducing funding for the control of combined sewer overflows,
- limiting eligibility to the portion of facilities needed to serve existing population,
- limiting eligibility to secondary treatment facilities, except where the benefits of additional standards exceed their costs,
- extending for 1 year the deadline for obligating the \$18 billion authorization.

The Department of Commerce and the Department of Agriculture also fund treatment facilities, and HUD block grant funds are sometimes utilized for collector sewer construction.

The remainder of these grant funds are utilized in the funding of air and water pollution control agencies of State and local governments. These agencies are responsible for establishing and maintaining programs to monitor and enforce air and water quality standards. In 1978, EPA is consolidating existing categorical grants for air and water control, water supply, solid waste and toxic substances. The consolidated grants program will insure that States have maximum flexibility to allocate funds to State and local agencies in accordance with State priorities. Grants are also provided for public water systems supervision and underground injection control programs to insure the safety of drinking water. EPA is the primary administrator of these grants.

Research, development, and demonstration.—Outlays for research, development, and demonstration are expected to be \$790.2 million in 1978. These outlays include research whose primary purpose is to abate pollution (\$605.2 million) and research conducted for other reasons but with the secondary effect of reducing pollution (\$185.0 million). An example of secondary research is a program in the Department of Agriculture that promotes the effective use of pesticide control methods. This usually results in reducing the need for pesticides, thereby reducing pollution.

Thirty-five percent of the environmental research and development outlays will be expended by EPA. Other agencies with spending in this category include the Energy Research and Development Administration (ERDA), the National Aeronautics and Space Administration (NASA), and the Department of Agriculture. These agencies directly spend 93% of the research outlays either through contracts or in-house activities. The remainder is transferred to State and local governments and private institutions.

Environmental research and development begins with identification of pollutants and their sources, then to an assessment of the pollutants'

impact on public health and the environment in general. Next, technology is developed to control pollution either through retrofit devices or by changing production methods. The final stage of research and development involves efforts to develop methods and procedures for monitoring the emission of pollutants.

The amount shown as research in table Q-2 is divided further into the various types of research detailed above. In 1978, 34% of the pollution control research and development outlays will be spent to develop control technology. Twenty-two percent will be spent on the health effects of pollution and 22% on the sources and environmental effects of pollution. The remaining 22% will be used for monitoring research, grants, and administrative costs. Since 1974, pollution research outlays have increased 90%. During this same period, health effects research has shown the largest increase—more than 600%. (Detailed grants data were not collected prior to 1974.)

Examples of pollution abatement related research and development activities in 1978 include:

- Research related to the establishment or review of health related ambient air quality standards. (EPA)
- Research and development to control pollution from the Army ammunition plants and to assess the resultant health effects. (Army)
- Research to ensure that rapidly expanding energy technologies that are under development will have minimal impact on the environment. (ERDA, Interior, and EPA)
- Development of a pollution monitoring satellite to provide data on the concentration and distribution of aerosols in the ozone layer of the upper atmosphere. (NASA)

Standard setting and enforcement.—As shown in table Q-2, outlays for standard setting and enforcement are estimated to be \$495.8 million in 1978—a 6% increase from 1977. Standard setting and enforcement includes a wide range of activities related to the regulatory efforts of the Federal Government in the area of pollution abatement. This includes monitoring, surveillance, standard setting, enforcement, technical support, and the costs of preparing environmental impact statements.

Monitoring and surveillance actions refer to direct Federal monitoring of discharged pollutants from point sources and testing of ambient levels of pollutants. Monitoring and surveillance data are instrumental in developing and reviewing standards and in the enforcement of these standards.

The agencies with the most expenditures in this area are EPA, ERDA, the Bureau of Land Management (BLM), and the Coast Guard. Examples of activities performed by these agencies are: (1) testing of new automobiles by EPA during or immediately after production to determine compliance with emission standards; (2) enforcement by the Coast Guard of regulations on pollutants discharged into the marine environment; and (3) the preparation of baseline studies and environmental impact statements by the BLM on oil and gas leasing on the Outer Continental Shelf, coal leasing, and onshore oil and gas pipeline projects.

Pollution abatement from Federal facilities.—Federal agencies are actively involved in efforts to reduce pollution from their facilities in accordance with the Federal, State, or local regulations in force at the facility.¹ It is estimated that Federal agencies with environmental programs will spend \$456.2 million for this purpose. These expenditures include remedial actions to control pollution, production process changes to reduce generation of pollution, the additional costs of switching to cleaner fuels, and operating and administrative costs of controlling pollution.

Outlays for these programs will increase 2% in 1978. Remedial actions such as the installation of electrostatic precipitators, dust collectors, and sewage systems comprise 74% of these outlays in 1978.

Of the outlays reported in this category, \$343.7 million (75%) will be expended by the Department of Defense. This funding includes noise and air pollution control of Air Force aircraft, control of pollution at Army ammunition plants, and improvement of Navy sewage systems.

Manpower development.—In 1978, Federal outlays of \$7.8 million will be used for various manpower development programs that relate to improving the Nation's pollution abatement capabilities. About 55% of these funds are for in-house training, with the remainder used for fellowships and training grants. Agencies involved in these programs are EPA, DOD, and ERDA.

Other control and abatement activities.—Other outlays for pollution control and abatement will decrease by \$21.4 million in 1978 to \$202.4 million. Included in this category are the costs of constructing and equipping new EPA facilities and improving existing EPA facilities. Other items are the construction of Indian sanitation facilities by HEW, technical assistance funds, and public information costs.

Pollution abatement by media.—Table Q-3 presents Federal outlays and obligations for pollution control and abatement categorized by media. Outlays and obligations for water programs receive the largest share of Federal funds because of the large grant programs that fund the construction of sewage treatment facilities. It should also be noted that only funding for those activities that directly lead to pollution abatement are included in table Q-3. Research programs that may ultimately lead to abatement and control of pollutants but that do not have abatement as their primary objective are excluded.

Examples of activities which are excluded from table Q-3 are:

- Urban Mass Transportation Administration programs in the Department of Transportation that work to improve transit operations, thereby reducing pollution as a secondary benefit.
- Pest management and control programs developed by the Department of Agriculture that promote the effective use of pesticide control methods. In most instances, effective pest control methods actually reduce the need for pesticides, thereby reducing pollution.

¹ Outlays are for facilities or properties which are either owned or leased by the Federal Government and reflect expenditures on both new and existing facilities.

Table Q-3. POLLUTION CONTROL AND ABATEMENT ACTIVITIES—BY MEDIA OR POLLUTANT (in millions of dollars)

	Outlays 1976 actual	Obligations			
		1976 actual	TQ actual	1977 estimate	1978 estimate
Media polluted:					
Water.....	3,306.7	5,212.3	915.6	7,875.2	6,197.9
Construction grants or loans....	(2,638.0)	(4,550.2)	(753.9)	(7,165.9)	(5,563.2)
Other.....	(668.7)	(662.1)	(161.7)	(709.3)	(634.7)
Air.....	362.8	303.0	115.6	442.1	312.3
Land.....	105.6	115.8	34.1	166.1	162.9
Other (e.g., living things, materials).....	464.7	465.9	202.8	579.2	706.8
Multimedia (i.e., more than one of above).....	132.8	136.4	34.5	191.3	197.1
Total.....	4,372.6	6,233.4	1,302.6	9,253.9	7,577.0
Selected pollutants:¹					
Solid wastes.....	104.9	93.4	30.4	99.8	99.5
Pesticides.....	61.5	60.0	18.8	71.5	73.9
Radiation.....	100.4	112.8	31.3	147.2	174.1
Noise.....	43.5	44.1	12.0	58.0	55.3

¹ Funds for selected pollutants are included in "media" distribution above.

Table Q-3 only shows amounts spent for each medium and pollutant; it gives no indication of how the money was spent. For example, outlays during 1976 for water pollution control (excluding construction grants) were made primarily for the reduction of pollution from Federal facilities (44%), for standard setting and enforcement (21%), and for research and development (16%). Expenditures for air pollution are concentrated in research and development (42%), in reducing pollution at Federal facilities (28%), and in standard setting and enforcement programs (18%). Expenditures for land pollution are divided almost evenly among these same three program categories.

Table Q-3 also shows selected pollutants for which pollution abatement expenditures are made. Of the pollutants shown, radiation will receive the most funding in 1978. ERDA will spend most of these funds for research on the health effects of radiation and for preventing radiation at ERDA facilities. Not shown as a selected pollutant in table Q-3 are expenditures for toxic substances. EPA will receive \$23 million in budget authority in 1978 to implement the Toxic Substances Control Act. These funds will be used for various regulatory actions against toxic substances. Other agencies, such as the National Institutes of Health, also make expenditures related to toxic substances.

Pollution control and abatement by agency.—Federal budget authority and outlays for pollution control and abatement are presented by agency in table Q-4. This table summarizes the spending of 21 Federal departments and agencies.

Table Q-4. POLLUTION CONTROL AND ABATEMENT ACTIVITIES—BY AGENCY (in millions of dollars)

Agency	1976 actual	TQ actual	1977 estimate	1978 estimate
BUDGET AUTHORITY				
Environmental Protection Agency.....	771.5	189.0	1,853.4	5,302.4
Defense—Military.....	466.6	62.7	484.2	486.2
Energy Research and Development Administration.....	245.8	81.4	313.9	362.6
Agriculture.....	139.1	38.5	139.0	136.0
Housing and Urban Development.....	102.2	-----	133.8	139.9
Transportation.....	96.1	14.0	91.9	104.2
Interior.....	81.3	20.7	113.5	95.3
National Aeronautics and Space Administration.....	62.6	21.8	72.2	76.8
Health, Education, and Welfare.....	40.2	11.1	51.4	50.2
Commerce.....	82.0	18.1	455.3	33.8
Defense—Civil.....	40.8	9.5	38.2	37.3
Other agencies.....	40.8	6.6	52.7	51.8
Total.....	2,169.0	473.4	3,799.5	6,876.5
OUTLAYS				
Environmental Protection Agency.....	3,118.0	1,108.4	5,295.0	6,006.0
Defense—Military.....	514.3	66.5	452.4	447.4
Energy Research and Development Administration.....	253.3	76.2	298.2	337.3
Agriculture.....	146.9	48.7	191.9	191.5
Housing and Urban Development.....	115.1	28.8	176.6	160.7
Transportation.....	75.3	17.4	91.4	98.0
Interior.....	68.5	20.5	97.7	80.9
National Aeronautics and Space Administration.....	66.7	19.9	72.3	76.7
Health, Education, and Welfare.....	43.7	12.5	55.6	49.5
Commerce.....	61.4	16.4	248.0	236.3
Defense—Civil.....	40.8	9.5	38.2	37.3
Other agencies.....	31.9	9.0	51.5	50.7
Total.....	4,535.9	1,433.8	7,068.8	7,772.3

Main agency activities.—Outlays by the *Environmental Protection Agency* represent 77% (\$6,006.0 million) of the total expected outlays for pollution control and abatement in 1978. Of these outlays \$5,160 million will be for sewage treatment facility grants. Research and development will account for 33% (\$277.4 million) of the estimated outlays for EPA's operating programs in 1978. (Construction grants are excluded from operating programs.) EPA supports both intramural and extramural research to determine the sources and effects of pollution and to develop and test pollution control technologies. The overall objective is to provide a strong scientific basis to develop standards and effective control strategies and to identify and evaluate long-range environmental problems.

In 1978, EPA is consolidating existing categorical grants for air and water control, water supply, solid waste and toxic substances. The consolidated grants program will insure that States have maximum flexibility to allocate funds to State and local pollution control agencies in accordance with State priorities.

EPA's abatement and control programs are estimated to spend \$288.5 million in 1978. These funds support a wide variety of programs, ranging from the establishment and enforcement of standards to the issuance of permits. EPA also offers technical assistance to State and local agencies to assist them in their pollution control efforts.

The *Department of Defense—Military* is planning to spend \$447.4 million in 1978 for pollution abatement and control programs. Funds are expended by the three services and the Defense Supply Agency primarily for pollution abatement at Federal facilities. Other expenditures are for research and development and abatement and control. Outlays are included for such activities as monitoring air quality and noise levels at Army installations, altering Navy ships to minimize oil spills, and controlling noise and air pollution emitted from Air Force aircraft and facilities.

The *Energy Research and Development Administration (ERDA)* will be spending \$337.3 million in outlays during 1978 for research and development, monitoring, and for abating pollution from its facilities. In 1978 research relating to identification of pollution sources, pollutant transport, and effects will be expanded to assure that developing energy technologies have a minimal impact on the environment. Research is continuing on the pilot plant programs to convert coal to oil or gas which are less polluting fuels. ERDA is also conducting research to determine safe limits of human exposure to energy related hazardous agents. Particular emphasis in the health studies will focus on the newer coal technologies.

The *Department of Agriculture* conducts a variety of environmental programs. The major areas are researching the problems of agriculture-related pollution (\$85.0 million), and making grants and loans for wastewater management facilities (\$68.7 million). The Animal and Plant Health Inspection Service's programs include inspection of laboratory animal facilities to control water pollution from animal wastes. The Economic Research Service performs such activities as estimating the economic costs of new technology and management practices to reduce pollution from farm and food processing activities. The Agricultural Research Service (ARS) conducts various agriculture-related research. Recent progress made by ARS includes development of a nonpolluting method for reprocessing the waste from soybean oil processing. The Forest Service is also conducting research and has developed less persistent, safer chemical control methods for several insect pests.

In cooperation with the EPA, the Department of Agriculture will undertake a new applied research program to analyze the economic benefits of pesticides that appear to pose unreasonable hazards to public health, as required by the Federal Insecticide, Fungicide, and Rodenticide Act. Outlays of \$5.3 million will be expended for this program in both 1977 and 1978.

The *Department of Transportation* conducts a wide variety of environmental programs designed to enhance compatibility between transportation systems and the environment, and to alleviate the adverse impacts of transportation facilities while promoting the more efficient use of energy resources. Outlays of \$98.0 million are planned for 1978. The Coast Guard's activities include development of all-

weather means of identifying and quantifying discharges of oil and hazardous substances, while the Urban Mass Transportation Administration is developing devices for buses to cut hydrocarbon emissions by 80% to 90%, and carbon monoxide emissions by 40% to 60%. The environmental programs of the Federal Highway Administration include the examination of highway air quality problems as a function of traffic, time, geometry, and wind flows on or near highways. The Federal Aviation Administration's environmental activities include the development of standards to minimize generation of aircraft pollution and noise.

Most of the *National Aeronautics and Space Administration's* pollution control outlays are used for environmental research and development. For example, NASA conducts a continuing research program to improve the technology for the reduction and control of aircraft noise and emission pollutants. NASA has two pollution monitoring satellites which are collecting data on atmospheric pollution. NASA also has demonstration projects such as the use of water hyacinths to clean wastewater in municipal and industrial wastewater treatment lagoons, and an air pollution detection system for identifying and locating air pollution sources.

The Bureau of Land Management (BLM) in the *Department of Interior* will spend \$34.6 million on pollution abatement and control programs in 1978. BLM conducts environmental baseline monitoring studies of marine environments on the Outer Continental Shelf (OCS) in order to assess the environmental impacts of OCS development. Activities include toxicity studies, faunal succession on oil rigs, and investigation on drilling and production sites. Other activities include preparing environmental impact statements for large oil and gas pipeline projects. The Geological Survey will spend \$14.3 million for various studies including water resources research to determine the sources and effects of pollution. The Bureau of Mines will expend \$20.2 million in 1978 for such programs as researching and developing methods for removing pollutants from off-gas streams and liquid effluents of mineral processing plants, and from the burning of fossil fuels. The remaining outlays will be made by the National Park Service, the Bureau of Indian Affairs, the Bureau of Reclamation, the Office of Territorial Affairs, the Southwestern Power Administration, and the Fish and Wildlife Service.

The Health Services Administration in the *Department of Health, Education, and Welfare* will spend \$49.5 million in 1978 primarily on construction of sanitation facilities for Indian homes, communities, and lands. As a result of this direct Federal operation, 8,674 Indian housing units were served in 1976. Approximately 11,000 will be served in 1977, and 9,500 will be served in 1978.

The *Federal Energy Administration* will spend \$5.5 million in 1978 for such activities as developing environmental policies, complying with the National Environmental Policy Act (NEPA), and evaluating the environmental implications of energy resource policies. For example, FEA evaluates the environmental impacts associated with conversion orders requiring utility powerplants and major industrial installations to convert from oil or natural gas to use of coal. In addition, FEA is largely responsible for evaluating Federal environmental policy impacts as they relate to energy development.

Other agencies with outlays not listed separately in table Q-4 are the Department of Labor, Appalachian Regional Commission, TVA, Veterans Administration, Nuclear Regulatory Commission, National Science Foundation, Department of Justice, Department of State, and the Smithsonian Institution.

UNDERSTANDING, DESCRIBING, AND PREDICTING THE ENVIRONMENT

Thirteen Federal departments and agencies will spend \$1,859.7 million in 1978 to describe the physical characteristics of the environment, to increase understanding of the environment, and to predict environmental conditions. This is a 7% increase over estimated 1977 outlays of \$1,736.9 million. Although these activities may lead to the reduction of pollution, they are not specifically intended for that purpose. Instead, their purpose is to gain a broad understanding of ecological systems and environmental interactions.

As indicated in table Q-5, 38% of these outlays in 1978 will support environmental observation and measurement efforts that help describe and predict weather, ocean conditions, and earthquakes. Locating and describing natural resources will account for \$504.1 million in 1978 expenditures—an increase of 10% from 1977 levels. These expenditures include such activities as soil mapping and snow and river basin surveys.

Other expenditures will be for further ecological research, for physical environmental survey activities, and for aerial reconnaissance of tropical cyclone and winter storms. There are also expenditures for research on environmental factors which cause cancer.

Table Q-5. UNDERSTANDING, DESCRIBING, AND PREDICTING THE ENVIRONMENT—BY FUNCTION (in millions of dollars)

Activity	1976 actual	TQ actual	1977 estimate	1978 estimate
BUDGET AUTHORITY				
Observe and predict weather, ocean conditions, and disturbances:				
Research and development.....	218.6	66.8	225.1	248.2
Operations.....	464.6	111.5	466.7	473.4
Locating and describing natural resources:				
Research and development.....	209.9	52.3	223.6	241.4
Operations.....	207.7	57.3	246.1	288.8
Physical environmental surveys:				
Research and development.....	14.0	4.2	18.4	24.9
Operations.....	161.8	42.5	178.8	186.0
Weather modification activities.....	17.2	7.7	18.1	16.6
Research on environmental impact on man.....	226.1	58.4	252.3	270.6
Ecological and other basic environmental research.....	181.4	42.7	195.6	208.7
Total.....	1,701.3	443.4	1,824.7	1,958.6
OUTLAYS				
Observe and predict weather, ocean conditions, and disturbances:				
Research and development.....	213.6	76.4	229.2	245.8
Operations.....	447.0	111.2	445.5	457.5
Locating and describing natural resources:				
Research and development.....	215.0	46.8	220.0	225.5
Operations.....	207.7	57.2	238.7	278.6
Physical environmental surveys:				
Research and development.....	15.3	3.8	17.8	24.5
Operations.....	139.9	33.1	152.0	156.3
Weather modification activities.....	17.2	7.9	18.0	16.5
Research on environmental impact on man.....	226.5	74.6	227.0	249.6
Ecological and other basic environmental research.....	169.1	48.5	188.7	205.4
Total.....	1,651.3	459.5	1,736.9	1,859.7

Table Q-6 shows the distribution of total budget authority and outlays by the major agencies involved.

Table Q-6. UNDERSTANDING, DESCRIBING, AND PREDICTING THE ENVIRONMENT—BY AGENCY (in millions of dollars)

Agency	1976 actual	TQ actual	1977 estimate	1978 estimate
BUDGET AUTHORITY				
Commerce.....	429.2	107.6	421.5	431.6
Interior.....	306.6	85.2	332.4	374.3
Defense—Military.....	199.6	51.3	217.9	228.1
Health, Education, and Welfare.....	172.4	43.7	195.6	204.1
National Aeronautics and Space Administration....	168.1	43.0	182.4	182.8
National Science Foundation.....	139.0	38.4	153.2	169.4
Energy Research and Development Administra- tion.....	97.6	26.8	112.8	152.4
Agriculture.....	147.6	36.9	163.0	165.6
Transportation.....	14.5	3.4	15.1	15.9
Smithsonian Institution.....	12.5	3.1	13.4	14.1
Defense—Civil.....	9.5	2.3	10.6	11.0
Other.....	4.7	1.7	6.8	9.3
Total.....	1,701.3	443.4	1,824.7	1,958.6
OUTLAYS				
Commerce.....	409.4	107.6	399.4	413.1
Interior.....	296.1	67.4	309.5	350.9
Defense—Military.....	194.8	52.3	211.5	219.7
Health, Education, and Welfare.....	177.7	58.8	171.7	186.6
National Aeronautics and Space Administration....	158.2	47.7	185.4	171.4
National Science Foundation.....	141.1	45.9	149.6	164.6
Energy Research and Development Administra- tion.....	83.8	30.6	105.3	140.9
Agriculture.....	150.5	38.7	159.3	163.4
Transportation.....	13.9	3.4	15.1	15.9
Smithsonian Institution.....	12.4	3.2	13.3	14.1
Defense—Civil.....	9.5	2.3	10.6	11.0
Other.....	3.9	1.6	6.2	8.1
Total.....	1,651.3	459.5	1,736.9	1,859.7

Agencies involved.—The *Department of Interior* plans to spend \$350.9 million in 1978 in its efforts to understand, describe, and predict the environment. Most of this money (78%) will be spent by the Geological Survey to continue programs such as topographic mapping, earthquake studies and surveys designed to locate and describe water resources. In 1978, outlays for earthquake research will increase by \$16.7 million.

The Bureau of Land Management will spend \$33.1 million in 1978 for conducting resource inventories, environmental baseline and other related studies of public lands and the Outer Continental Shelf. Outlays of \$5.7 million will be spent by the Bureau of Reclamation for its weather modification research program. This program is aimed at resolving any uncertainties of the physical processes involved and evaluation of actual water supply increase from cloud seeding.

The National Oceanic and Atmospheric Administration (NOAA) in the *Department of Commerce* conducts a wide range of environmental monitoring and prediction activities, weather modification experiments, surveys for mapping and charting, and data archiving and dissemination services. NOAA will spend \$413.1 million in 1978 for

these activities. Continued emphasis will be given to improving weather monitoring, predicting and warning to help reduce loss of life and property from natural disasters.

The *National Aeronautics and Space Administration* (NASA) plans to spend \$63.7 million in 1978 on research and development in environmental observation and measurement. These activities include developing the capacity to make accurate 2-week weather predictions and improving atmospheric temperature sounding and wind measurements through the all-weather atmospheric sounding satellites. NASA will also spend \$87.1 million on research and development to locate and describe natural resources. Various satellites are being used to inventory resources and the environment on a worldwide basis, and to monitor changes over time.

The *National Science Foundation* plans to spend \$164.6 million in 1978 to fund a broad range of long-term research projects to increase the stock of fundamental knowledge about the natural environment. Most of these projects are in atmospheric, earth, ocean, and biological sciences. Major programs (some jointly funded with other Federal agencies and with other countries) include deep sea drilling efforts, the International Decade of Ocean Exploration, the global atmospheric research program, and funding of the major research on the Antarctic and Arctic environments. Other, more applied programs include support of research into ways to reduce damage from earthquakes, to understand the nature and distribution of chemical threats to man, to develop better techniques of managing environmental programs on a regional basis, and to evaluate the scientific and technical basis of wastewater treatment and sludge management planning under the municipal construction grants program.

In the *Department of Health, Education, and Welfare*, the National Cancer Institute and the National Institute of Environmental Health Sciences conduct environmental programs directed to the identification of chemical, physical, and biological environmental factors which affect human health. The Institutes determine the mode of action of such factors and develop a scientific basis for control measures. The program areas of special emphasis are epidemiologic research on environmental determinants of cancer, screening of chemicals and substances for cancer-causing effects, and development of more effective methods to detect toxic and mutagenic substances. The Institutes are spending \$186.6 million on these efforts in 1978.

The *Smithsonian Institution* will spend \$14.1 million in 1978 on various studies to determine the impact of the environment on man and to perform basic environmental research. Such projects include (1) research on the effects of climatic changes on man, (2) support of anthropological and archeological research projects, focusing on interrelationships between cultural and environmental change, and (3) the scientific event alert network which provides immediate scientific information on environmental events, including volcanic eruptions, meteorite falls, and marine mammal strandings.

The *Nuclear Regulatory Commission* will spend \$7.2 million in 1978 on research activities to insure the safety of power reactors and other nuclear plants as affected by environmental conditions. This program provides information to: (1) Improve capability to characterize sites with regard to earthquakes, tornadoes, floods, and other

natural phenomena; (2) to evaluate the structural response of facilities and systems to extreme environmental loads; and (3) to improve and confirm engineering design methods for mitigating effects from natural phenomena.

The *Corps of Engineers* investigates terrestrial and marine ecosystems to determine the impact of engineering works and to develop technology for minimizing the impact on the ecosystem and environment. The Corps field offices and laboratories collect and study wind-wave relationships, wave activities, storms, streamflow, and rainfall data as they affect design criteria, and construction technology in coastal zones. The Corps also conducts research in support of its aquatic plant control program. The Corps will spend \$11.0 million for these efforts in 1978.

ENVIRONMENTAL PROTECTION AND ENHANCEMENT

In 1978, eight Federal agencies are expected to spend \$1,869.8 million to protect and enhance the environment. This is an 11% increase over 1977 outlays. As table Q-7 shows, 70% of 1978 outlays are direct Federal activities and the balance is for Federal grants to State and local governments.

Table Q-7. ENVIRONMENTAL PROTECTION AND ENHANCEMENT
ACTIVITIES—BY FUNCTION (in millions of dollars)

Activities	1976 actual	TQ actual	1977 estimate	1978 estimate
BUDGET AUTHORITY				
Financial aid to State and local government: Purchase, development, and operations:				
City recreation.....	161.5	4.4	183.2	203.4
Preserve unique areas.....	4.0	0.3	4.0	3.7
Noncity general recreation.....	155.3	20.7	170.3	289.9
Sport fish and wildlife.....	102.0	4.0	108.2	131.2
Historic preservation and rehabilitation.....	20.0	4.7	17.5	35.0
Other State and local aid.....	44.0	0.9	56.1	54.1
Subtotal.....	486.8	35.0	539.3	717.3
Direct Federal activities: Purchase, development, and operations:				
City recreation.....	122.3	32.1	249.2	132.0
Preserve unique areas.....	240.9	67.7	726.8	374.4
Noncity general recreation.....	262.4	90.8	403.9	327.6
Sport fish and wildlife.....	173.5	39.5	197.7	207.8
Historic preservation and rehabilitation.....	44.0	12.0	217.7	63.1
Other direct activities.....	119.8	12.3	88.4	78.7
Subtotal.....	962.9	254.4	1,883.7	1,183.6
Total.....	1,449.7	289.4	2,423.0	1,900.9
OUTLAYS				
Financial aid to State and local government: Purchase, development, and operations:				
City recreation.....	98.5	48.6	172.5	189.0
Preserve unique areas.....	2.0	0.8	4.5	3.7
Noncity general recreation.....	142.5	34.9	170.7	174.9
Sport fish and wildlife.....	84.8	22.9	97.0	110.7
Historic preservation and rehabilitation.....	14.1	4.7	21.5	33.1
Other State and local aid.....	50.3	9.8	56.8	59.6
Subtotal.....	392.2	121.7	523.0	571.0
Direct Federal activities: Purchase, development, and operations:				
City recreation.....	138.9	36.1	126.5	146.4
Preserve unique areas.....	245.2	84.7	385.6	456.3
Noncity general recreation.....	263.8	93.6	325.4	343.7
Sport fish and wildlife.....	160.4	40.6	186.2	214.8
Historic preservation and rehabilitation.....	38.6	14.2	75.2	84.2
Other direct activities.....	55.3	14.1	65.5	53.4
Subtotal.....	902.2	283.3	1,164.4	1,298.8
Total.....	1,294.4	405.0	1,687.4	1,869.8

The major activities in this category are:

- City recreation projects to develop parks and recreational facilities in urban areas.
- Preservation of unique natural areas, including national parks, monuments, scenic rivers, trails, wildernesses, seashores, and refuges for endangered species.
- General recreation projects outside of cities—including expenditures for national recreation areas, recreation programs in national forests, and recreation sites at Federal water projects.
- Management of sport fish and wildlife at national wildlife refuges, national fish hatcheries, and other similar projects.
- Historic preservation and rehabilitation, including national historic sites, military parks, and other federally assisted historic preservation and rehabilitation projects.

These enhancement and protection activities are categorized in table Q-7 as direct Federal spending or as grants to State and local governments for these activities. Table Q-8 lists the departments and agencies making these expenditures.

**Table Q-8. ENVIRONMENTAL PROTECTION AND ENHANCEMENT—
BY AGENCY (in millions of dollars)**

Agency	1976 actual	TQ actual	1977 estimate	1978 estimate
BUDGET AUTHORITY				
Interior.....	949.2	200.4	1,917.2	1,378.8
Defense—Civil.....	134.8	41.9	150.9	184.2
Housing and Urban Development.....	137.5	-----	151.3	146.5
Agriculture.....	101.2	38.5	104.2	104.6
Commerce.....	96.2	6.8	69.4	79.6
Tennessee Valley Authority.....	4.7	1.6	4.8	5.0
Other agencies.....	26.1	0.2	25.2	2.2
Total.....	1,449.7	289.4	2,423.0	1,900.9
OUTLAYS				
Interior.....	881.7	264.6	1,162.9	1,320.4
Defense—Civil.....	134.8	41.9	150.9	184.2
Housing and Urban Development.....	90.7	31.4	163.2	177.7
Agriculture.....	94.9	37.2	100.8	101.1
Commerce.....	65.1	11.8	76.6	76.7
Tennessee Valley Authority.....	4.1	1.4	4.3	5.0
Other agencies.....	23.1	16.7	28.7	4.7
Total.....	1,294.4	405.0	1,687.4	1,869.8

Agencies involved.—The *Department of Interior* through the National Park Service will spend \$451.8 million in 1978 for activities of the National Park System, except for land acquisition. These funds will be for operation, maintenance, general administration, planning, and construction of facilities within the National Park System. States will receive approximately \$33.1 million in matching funds for projects involving historic properties to help preserve them for future generations.

The Bureau of Outdoor Recreation (BOR) promotes the coordination of outdoor recreation programs, and administers the land and water conservation fund which provides grants for planning, acquisition and development of State and local recreation areas. The fund also provides for Federal purchases of important recreation and conservation land. BOR will spend \$529.9 million in 1978 for these activities.

The Fish and Wildlife Service (FWS) administers 93 hatcheries, which help support fishery resources in coastal and inland water and 379 units in the National Wildlife Refuge System containing 33.5 million acres. Presently, 44 endangered and threatened species of fish and wildlife are protected on 139 of the national wildlife refuges. FWS manages 9.8 million acres on 353 refuges for migratory birds.

The 1978 budget for these three agencies reflects two major initiatives. First is the Bicentennial land heritage program, a 10-year \$1.5 billion program to upgrade our parks and refuges. This program will provide funding for increased staffing, added facilities, and accelerated land acquisition at Federal parks and refuges, and funding for cities to upgrade their park systems. The second initiative is full funding (\$600 million) of the doubled authorization for the land and water conservation fund.

The *Department of Agriculture* will spend \$101.1 million in 1978 to protect and enhance the environment primarily through the Forest Service and the Soil Conservation Service. Forest Service research activities are responsible for the development and availability of the knowledge and technologies required to maintain and enhance our Nation's forests while meeting expanding demands for timber and various other goods and services from these lands. Examples of major accomplishments are improved planning for recreation purposes and management practices that stabilize or increase big-game populations and endangered species. The Forest Service will spend \$70.2 million for research and other programs which enhance the environment. The Soil Conservation Service will spend \$29.5 million in 1978, primarily for technical assistance to soil and water conservation districts. Outlays are also made for recreation area improvement.

The National Oceanic and Atmospheric Administration in the *Department of Commerce* is continuing efforts to improve management and conservation of the Nation's coastal zones and marine fishery resources. In 1978, NOAA will spend an estimated \$25.2 million directly and provide States and localities an estimated \$46.9 million in financial aid.

The *Department of Housing and Urban Development* estimates outlays of \$177.7 million for financial aid to State and local governments for environmental protection and enhancement activities. One such program is the community development block grant program which will fund, at the grant recipient's discretion, the protection and improvement of properties having scenic, recreation, conservation and/or historic value. The primary objective of the program is the development of viable urban communities, including decent housing and a suitable living environment, and expanding economic opportunities.

In the *Department of Defense—Civil*, the Corps of Engineers will spend \$184.2 million to construct, operate, and maintain recreation facilities at water resources projects, and to protect and enhance lands and shorelines within its jurisdiction. For example, in the forest management program, the forest resources at civil works projects are managed to increase their value for recreation and wildlife habitat and to promote natural ecological conditions by following accepted conservation practices.

The *Tennessee Valley Authority* will spend \$5.0 million on its Land Between The Lakes project in western Kentucky and Tennessee. This project is a demonstration of new ideas in public outdoor recreation and conservation education.

A small amount of funding is made by the *Appalachian Regional Commission* to supplement basic grants provided by the Bureau of Outdoor Recreation.

RESEARCH AND DEVELOPMENT

A description of funding for environmental research and development programs appears elsewhere in this analysis. However, because research and development expenditures occur in more than one category of activity, these expenditures have been summarized in table Q-9. Total Federal funding for research and development programs related to environmental improvement will reach an estimated \$1,757.5 million in 1978. This represents an increase of 3% over 1977 outlays.

Federal funding for environmental research and development are distributed between pollution control and abatement activities and programs relating to understanding, describing, and predicting the environment. Research and development expenditures for environmental protection and enhancement programs, to the extent that they exist, are not included in table Q-9 because these expenditures are not reported separately.

Table Q-9. ENVIRONMENTAL RESEARCH AND DEVELOPMENT ACTIVITIES

(In millions of dollars)

Category	1976 actual	TQ actual	1977 estimate	1978 estimate
BUDGET AUTHORITY				
Pollution control and abatement ¹	723.8	181.3	777.8	800.4
Understanding, describing, and predicting.....	867.2	232.1	933.1	1,010.4
Total	1,591.0	413.4	1,710.9	1,810.8
OUTLAYS				
Pollution control and abatement ¹	683.0	190.3	809.8	790.2
Understanding, describing, and predicting.....	856.7	258.0	900.7	967.3
Total	1,539.7	448.3	1,710.5	1,757.5

¹ Includes both primary and secondary research and development.



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