25. Introduction to Alternative Budget Presentations

25. INTRODUCTION TO ALTERNATIVE BUDGET PRESENTATIONS

The budget presentation and concepts used in most of this document are the traditional ones used in presenting a President's budget. In many respects, the concepts and presentation are legally required and are effective tools for Federal budgeting.

There is, however, no single "right" way of looking at Federal receipts and outlays and therefore no single "right" structure for the Federal budget.

- The dividing line between the Federal Government and the private sector cannot be delineated unequivocally.
- Some Federal activities may not be quantifiable or at least not quantifiable in a way that is commensurate with budget receipts and expenditures.
- Federal finances may be presented according to alternative conceptual structures for specialized purposes other than budgeting.
- Budget data may be organized in alternative ways to view spending or receipts from complementary perspectives.
- As the Government, the economy, the political process, and the technical capability of budgeting change over time, the appropriate scope and organization of the budget may also change.

The form of the budget is therefore continually being adjusted to the needs of the President and the Congress for establishing priorities and controlling Federal receipts, expenditures, and borrowing; the needs of the Federal agencies for a workable system of effective program management based on legal requirements and policy guidelines; and the needs of the public, including the press and independent researchers, for information with which to judge Federal operations. The change in budgeting for credit that is effective this year, and the change in budgeting for insurance that is proposed in the present budget, are major examples of such development.

The current budget concept, known as the "unified budget" or "consolidated budget," was developed in conformance with the recommendations of the President's Commission on Budget Concepts (1967). While various adaptations have occurred over the years, the Commission's report continues to provide the basic framework for Federal budget concepts and presentations. The consolidated budget is intended to be comprehensive, encompassing the full scope of Federal programs. It includes a diverse array of activities—most unique to government and others similar to business operations—and must accommodate extensive and sometimes inconsistent legal requirements. It is based primarily on the Government's cash receipts and outlays.

The Comptroller General and some Members of Congress, accountants, economists, corporate leaders, and others have criticized the current budget presentation. Some, notably the General Accounting Office, believe the budget's primary focus on obligation controls and cash flows distorts decisionmaking, prejudicing investment and understating liabilities. Others decry the artificiality, even gimmickry, of certain distinctions between on-budget and off-budget, and the practice of classifying certain Federal entities (such as REFCORP) as non-budgetary Government-sponsored enterprises. On the other hand, some argue that the budget should be more like State budgets that separate activities financed by general funds from those financed by earmarked funds; some argue that the current practice of including business-type income as an offset to outlays should be replaced by including such income in receipts and showing outlays on a gross basis; and others argue that the retirement trust funds and the debt and interest portions of the budget should be separately displayed.

There is no dispute that receipts and spending should be viewed in more than one way. Some standard alternatives have been used longer than the consolidated budget and were taken for granted or strongly endorsed by the President's Commission on Budget Concepts. And there is a degree of merit in many of the criticisms of the present budget. Accordingly, this part of the budget document provides a selection of alternative budget presentations—in order to view Federal finances in different ways, display alternatives to those who have not previously considered them, allow those who criticize the conventional approach to examine the effects of alternatives, and encourage further discussion.

The alternative budget presentations are considered in the next seven chapters. The first of these chapters discusses generational accounts, which is a new method being developed by academic economists to compare the fiscal treatment of different generations over the very long-term. It is still being developed, and a number of the assumptions used to estimate the accounts are controversial. This chapter explains the concept and presents some illustrative results.

The second chapter in this part describes the Federal sector as measured in the national income and product accounts, which are an integrated set of measures of aggregate economic activity, including the gross domestic product, prepared for many years by the Department of Commerce. The following two chapters present long-standing alternative ways of dividing up the budget totals that complement the normal presentation. One divides the budget between trust funds and Federal funds; the other focuses on physical capital.

The final three chapters in this part of the budget document show alternative presentations that could replace the consolidated budget, rather than complement it. These presentations and the consolidated budget all contain similar information but are arranged differently. The principal difference is in their focus—that which is highlighted for decision makers and the public. The focus, in turn, may affect the incentive to make

one budgetary decision rather than another. The alternative presentations are not exact but rather are approximations of each approach that illustrate the general concepts and some of the key considerations. These three presentations are:

- The proposal made by the General Accounting Office, which focuses separately on operating and capital uses, on Federal, trust, and enterprise funds, and on aggregate totals.
- A budget cast in the form of the State of California's budget, which, like most State budgets, focuses on individual funds rather than consolidated totals.
- A budget divided threefold among an operating fund, a retirement fund, and a debt and interest fund.

The three presentations are compared with each other and the consolidated budget at the end of the chapter discussing the last of these presentations, Chapter 32.

The chapters in this part of the document do not reflect the proposed Defense savings to the adjusted Defense baseline or the proposed extension of unemployment benefits. Furthermore, the details of the President's Comprehensive Health Reform Plan—which will meet the pay-as-you-go requirements of the Budget Enforcement Act—are not included in this document and therefore also are not reflected in these chapters. Detailed tables showing the budgetary effects of both proposals will be provided in February 1992.

26. Generational Accounts Presentation

26. GENERATIONAL ACCOUNTS PRESENTATION

Government deficits and the composition of government receipts and expenditures affect the distribution of income and wealth among different generations. Generational accounting is a new method for comparing the fiscal treatment of different generations.[1] It is still being developed, and a number of the assumptions used to estimate the accounts are controversial. This chapter explains the concept and presents some illustrative results, which should encourage further development of generational accounting and other analyses of the intergenerational effects of the budget.

- Future generations are estimated to pay 79 percent more in taxes, net of social security and other transfers they receive, than the generation of people who have just been born. This result is the combined effect of Federal, State, and local government budgets, not the Federal budget alone.
- The Omnibus Budget Reconciliation Act of 1990 (OBRA) significantly reduced the imbalance between generations. If OBRA had not been enacted, future generations would be estimated to pay an additional 18 percent more in taxes, net of the transfers they receive, than the generation of people just born.
- The effect of OBRA depends crucially on whether it permanently affects budget outlays and receipts, as the above comparison assumes. If taxes and expenditures return to their previous path after 1995, future generations would be estimated to pay an additional 14 percent more in taxes net of transfers than the generation of people just born—almost as much as if OBRA had never been enacted.
- Returning to pay-as-you-go finance of social security would significantly increase the fiscal burden on children, people just born, and future generations compared to those who are now adults and earning income.
- A large part of the heavy net tax payment by future generations, compared to those just born, is because medicare and medicaid transfers are projected to grow faster than the economy well beyond the turn of the century. Suppose, instead, that this health care spending was stabilized as a percentage of GNP after the year 2000 (except for the effects of demographic change). The payment of taxes (net of transfers) by future generations, compared to those just born, would fall from 79 percent to 41 percent.

[1] Generational accounting was developed by Alan J. Auerbach, Jagadeesh Gokhale, and Laurence J. Kotlikoff. See Auerbach, Gokhale,and Kotlikoff, "Generational Accounts: A Meaningful Alternative to Deficit Accounting," in David Bradford, ed., *Tax Policy and the Economy*, vol. 5 (MIT Press for the National Bureau of Economic Research, 1991), pp. 55–110, and Laurence J. Kotlikoff, *Generational Accounting—Knowing Who Pays, and When, for What We Spend* (New York: The Free Press, forthcoming March 1992).

The Nature of Generational Accounts

The budget normally measures receipts and outlays for one year at a time. It usually shows these estimates for only a few years into the future, and even the long-range projections displayed in Chapter 2 extend only to 2001. The standard budget presentation, moreover, while it divides up receipts and outlays in a number of complementary classifications, does not organize the results in a way that compares the effects of policy on different generations.

Generational accounts, in contrast, are forward looking over a period of many years; and they classify taxes paid and transfers received—social security, medicare, food stamps, and so forth—according to the generation that pays or receives the money. For an existing generation, they estimate the taxes and transfers year-by-year over its entire remaining lifespan; and they summarize these amounts for a generation in terms of one number, the present value of its entire annual series of average future payments and receipts.[2] For future generations, generational accounts estimate the net payments based on the proposition that the government's bills will have to be paid either by people who are now alive or by future generations. They calculate how much future generations will have to pay to the government, above the amounts they will receive in transfers, if the government's total spending is not reduced from the projected path and if the people now alive do not pay more than projected.

Defined more precisely, generational accounts measure, as of a particular base year, the present value of the future taxes that the average member of each given generation is estimated to pay to the government minus the present value of the future transfers that the average member is estimated to receive. This difference is called the "net payment" in the following discussion. A generation is defined as all the males or all the females who are born in one given year.

Generational accounts can be used to make two types of comparison. First, they can be used to compare the net payment by future generations and the generation of people just born. These groups are comparable because their generational accounts cover all the taxes they will pay and all the transfers they will receive during their entire lifetimes.

The net payments of generations born in past years, however, cannot be compared at the present stage of development of the accounts. This is because their future taxes and transfers are only part of the taxes

[2] The "present value" is the value to someone at the present time of amounts of money that he will pay or receive in the future. The value of $1.00 to be paid or received today is simply $1.00. Future amounts, however, are discounted for the fact that they are not yet available. The disadvantage of not having money available until the future is the loss of interest that could otherwise be earned on the money in the meanwhile. Therefore, the discounted value is based on the interest rate. The discounted value is smaller for years farther into the future, because the loss of interest earnings is greater as interest is lost for more years.

and transfers over their entire lifetimes. The portion remaining in the future differs depending on whether a generation is 10, 40, or 80 years old. Generational accounts therefore cannot be used to judge whether the government is treating a generation born in the past well or poorly compared to any other existing generation or future generations. Comparison of the lifetime net payment of existing generations is a goal for future research.

Secondly, generational accounts can be used to compare the effects of actual or proposed policy changes. These effects can be compared for all generations, including those born in past years, because the changes in lifetime taxes and transfers will all be in the future and thus are included in the comparison. This comparison can be made equally well for policies that change the totals of receipts or expenditures and those that change the composition of the budget without affecting the deficit.

When using generational accounts, their scope needs to be kept in mind. These accounts, unlike almost every other table in this budget, include the taxes and transfers of all levels of government alike—Federal, State, and local. The baseline generational accounts thus do not show the separate effect of the Federal budget as a whole. Since the difference in generational accounts due to a policy change can be confined to the Federal Government alone, this limitation does not affect the ability to use generational accounts in assessing the effects of a change in Federal policy.

Generational accounts reflect only taxes paid to the government and transfers received. They do not impute to particular generations the value of the government purchases of goods and services made to provide them with education, highways, national defense, and other services. Therefore, they do not show the full net benefit or burden that any generation receives from government policy as a whole, although they can show a generation's net benefit or burden from a particular policy change that affects only taxes and transfers. Imputations appear feasible for certain types of government purchases, such as for primary school education, and they could be included in future improvements of generational accounts.

Generational accounting also does not, as yet, incorporate any feedback effects of policy on the economy's growth and interest rates. Feedback effects can be significant, but they generally occur slowly, so their impact on the discounted values used in the generational accounts may be small. Moreover, there is reason to believe they would reinforce the conclusions derived here. For example, policies that decrease the net payment by current generations and increase the net payment by future generations are likely to reduce investment over time. This, in turn, will lower real wage growth and raise real interest rates, which on balance will harm future generations in absolute terms.

Even within the scope of generational accounts as now constructed, the results in this chapter should be viewed as illustrative. They are necessarily based on a number of simplifying assumptions, about which reasonable people may disagree, concerning the pattern of future taxes and transfers, the interest rate used to discount future taxes and transfers to form present values, mortality rates, birth rates, and so forth. The absolute amounts of the generational accounts are sensitive to these assumptions. However, the generational accounts can be illuminating when considered in the light of their assumptions, as has been the case for the 75-year projections made every year by the social security trustees. Moreover, the most fundamental result holds for a wide range of reasonable changes in the assumptions: the net payment by future generations is relatively much larger than the net payment by the generation just born.

The following sections illustrate the results of generational accounting. An appendix explains the concepts, calculations, and other assumptions more fully.

The Remaining Net Payments by Existing Generations

Tables 26–1 and 26–2 show the generational accounts as of calendar year 1990 for every fifth generation of males and females alive in that year. The first column, "net payment," is the difference between the present value of taxes that an average member of each generation will pay over his remaining life and the present value of the transfers he will receive. The other columns show the average present values of the different taxes and transfers. All Federal, State, and local taxes and transfers are included in these calculations. Because of the time needed to prepare these estimates, Federal spending and receipts are based on the baseline in the *Mid-Session Review of the 1992 Budget* rather than the policy in the present budget.

The young and middle aged generations will pay much more in future taxes in present value than they will receive in future transfers. For males who were age 40 in 1990, for example, the present value of future taxes is $177,000 more than the present value of future transfers. These amounts are large because these generations are nearing their peak tax paying years. For newborn males, on the other hand, the present value net payment is much smaller, $76,000. They will not pay much in taxes for a number of years. The older generations, who are largely retired, have negative net payments. They will receive more social security, medicare, and other future benefits than they will pay in future taxes. Females have smaller net payments than males, mostly because they earn less income and therefore pay less income and social security taxes.

As emphasized previously, the net payment by a generation does not include the taxes paid or the transfers received in the past. This needs to be kept in mind in considering the net payments by those now alive. The fact that 40 year-old males can expect to pay more in the future than they receive, in present value terms, while the reverse is true for 65 year-old males, does not mean that the Federal, State, and local governments are treating 40 year-old males unfairly. Males who are now 65 years old paid considerable taxes when they were younger, and these past taxes are not included in the accounts. Therefore, as noted above, the net payment by one existing generation cannot be directly compared with another.

Table 26–1. **GENERATIONAL ACCOUNTS FOR MALES: PRESENT VALUE OF TAXES AND TRANSFERS AS OF 1990**

(In thousands of dollars)

Generation's age in 1990	Net payment	Taxes paid				Transfers received		
		Labor income taxes	Capital income taxes	Payroll taxes	Excise taxes	Social security	Health	Welfare
0	76.4	28.6	10.9	30.3	26.3	5.5	10.9	3.3
5	98.1	36.7	14.1	38.9	30.5	6.8	11.1	4.2
10	123.6	46.9	17.9	49.7	34.8	8.2	12.1	5.4
15	154.8	59.9	23.0	63.5	38.9	10.0	13.7	6.9
20	182.2	71.3	28.7	75.9	41.4	11.9	15.1	8.1
25	196.8	76.5	35.5	81.5	42.5	14.1	16.6	8.5
30	201.1	77.1	42.7	82.3	42.8	17.1	18.5	8.1
35	195.2	74.0	49.8	79.1	42.3	21.2	21.3	7.5
40	177.4	67.5	55.3	72.3	40.7	26.6	24.9	6.9
45	146.3	58.1	58.2	62.3	37.8	34.5	29.3	6.4
50	103.9	46.7	57.8	50.2	34.0	44.9	34.2	5.8
55	52.2	34.5	54.2	37.1	29.9	58.5	39.8	5.2
60	−6.4	21.5	47.9	23.3	25.6	74.5	45.7	4.6
65	−58.3	9.7	40.0	10.5	21.4	83.0	52.9	4.0
70	−65.1	4.3	31.6	4.6	17.5	71.7	47.9	3.5
75	−58.2	1.9	23.9	2.1	14.0	55.7	41.6	2.8
80	−47.5	0.6	18.2	0.6	11.0	41.8	34.3	1.9
85	−35.8	—	15.1	—	8.9	31.6	27.3	0.8
90	−2.0	—	6.9	—	1.8	5.8	4.9	*
Future generations	136.9	—	—	—	—	—	—	—
Percentage difference: future generations and age zero ..	79.2	—	—	—	—	—	—	—

*$0.05 thousand or less.

Table 26–2. **GENERATIONAL ACCOUNTS FOR FEMALES: PRESENT VALUE OF TAXES AND TRANSFERS AS OF 1990**

(In thousands of dollars)

Generation's age in 1990	Net payment	Taxes paid				Transfers received		
		Labor income taxes	Capital income taxes	Payroll taxes	Excise taxes	Social security	Health	Welfare
0	29.7	16.1	4.1	17.0	24.0	6.1	18.7	6.6
5	41.0	20.6	5.2	21.8	27.9	7.5	18.6	8.5
10	53.5	26.3	6.7	27.9	32.5	8.9	20.1	10.9
15	67.8	33.5	8.6	35.6	37.2	11.0	22.3	13.8
20	79.4	39.4	10.7	42.0	40.6	13.2	24.3	15.7
25	83.4	40.5	13.3	43.3	42.5	15.8	26.2	14.1
30	81.4	39.0	16.7	41.6	43.1	18.7	28.7	11.6
35	74.8	36.4	20.4	38.9	42.6	22.1	32.2	9.3
40	62.5	32.7	23.7	35.0	41.1	26.0	36.7	7.3
45	42.6	27.9	26.2	29.9	38.5	31.9	42.4	5.6
50	15.4	22.3	27.4	23.9	35.1	40.1	48.9	4.3
55	−19.4	16.1	27.2	17.3	31.2	51.5	56.1	3.5
60	−58.0	10.0	25.4	10.8	27.1	64.8	63.4	3.0
65	−88.4	5.1	22.4	5.5	23.1	70.9	70.9	2.7
70	−90.0	2.2	18.5	2.3	19.4	64.9	65.0	2.4
75	−81.0	0.7	14.0	0.7	16.0	54.0	56.3	2.1
80	−67.5	*	9.3	*	13.0	42.5	45.7	1.7
85	−53.0	—	4.7	—	10.5	32.3	34.6	1.3
90	−8.1	—	0.5	—	1.8	5.0	5.2	0.2
Future generations	53.2	—	—	—	—	—	—	—
Percentage difference: future generations and age zero ..	79.2	—	—	—	—	—	—	—

*$0.05 thousand or less.

The Net Payments by Future Generations

Future generations—those born in 1991 and later—are estimated to make a 79 percent larger net payment to the government, on average, than those born in 1990. The $137,000 net payment by the average future male and the $53,000 net payment by the average future female assume that the ratio of net payments by males to that of females is the same for future generations as for those born in 1990. They also assume that all those of a particular sex born in the future will make the same net payment over their lifetimes after adjusting for economic growth.

A growth adjustment is needed because future generations can be expected to pay more in taxes, net of the transfers they receive, simply because their incomes will be higher. To properly assess the relative net payment by future generations, it is necessary to calculate the net payment they would make above and beyond the amount that would arise due to economic growth. Assuming that all future generations pay the

same amount after the adjustment for growth, one number in the table stands for all future generations of the same sex.

The size of the imbalance between future generations and the newly born is sensitive to the assumptions about the interest rate used for discounting and the growth rate of the economy. Table 26–3 shows the percentage differential under alternative assumptions. It considers interest rates of 3, 6, and 9 percent and productivity growth rates of 0.25, 0.75, and 1.25 percent. The central assumptions used in this chapter were an interest rate of 6 percent and a growth rate of 0.75 percent. This led to a 79 percent larger net payment by future generations than the newly born. Under the alternatives in table 26-3, the difference ranges from 51 percent to 146 percent. While this differential is large, the basic conclusion is unchanged. Future generations are estimated to make a much larger payment of taxes to the government, net of transfers received, than those just born.

Table 26–3. **PERCENTAGE DIFFERENCE IN NET PAYMENTS OF FUTURE GENERATIONS AND AGE ZERO FOR ALTERNATIVE ASSUMPTIONS**

Interest rate	Growth rate		
	0.25	0.75	1.25
3.0	90	68	51
6.0	107	79	58
9.0	146	108	77

The generational imbalance also depends on the policy assumption that all future generations of the same sex have the same net payment (after adjusting for growth). Alternatively, suppose that the future generations born during 1991–2000 pay only the same amount as the generation born in 1990. Because these future generations pay less than previously assumed, those future generations born after 2000 will have to make a net payment that is 133 percent larger, rather than 79 percent larger, than the net payment of the 1990 generation. The longer the delay in changing policy, the larger the net payment by generations after the change in made.

The 1990 Budget Agreement

The Omnibus Budget Reconciliation Act of 1990 (OBRA) enacted an agreement between the President and the Congress to reduce the Federal deficit by about half a trillion dollars compared to what it would otherwise have been over the period from fiscal year 1991 through fiscal year 1995.

The first column of tables 26–4 and 26–5 shows the impact of OBRA on the generational accounts. It equals the difference between the 1990 baseline generational accounts (column one of tables 26–1 and 26–2), which include OBRA, and the 1990 generational accounts that would have prevailed in the absence of OBRA. OBRA is assumed to permanently change the projected paths of spending and receipts. Had OBRA not been enacted, future generations of males would have had to pay $10,700 more on average (on a growth-adjusted basis). Their net payment would have been 97 percent higher, instead of 79 percent higher, than the net payment by people born in 1990. The reduction of net payments by future generations under OBRA came at the cost of higher net payments by existing generations. For males alive in 1990, the increased net payment ranged from $1,500 for those born in 1990, to $2,900 for 30 year-olds, to $200 for 85 year-olds. In effect, OBRA imposed a relatively small sacrifice on living generations to achieve a significant reduction of the burden on future generations.

The effects of OBRA depend crucially on whether it permanently affects the budget. Column two shows the result if taxes and transfers return to their previous paths after 1995. Future generations would pay 93 percent more in taxes, net of the transfers they receive, than the generation of people just born. Except for older generations, most of the effect of OBRA on generational accounts depends on budget policy after 1995.

Illustrative Policy Changes

The other columns of tables 26–4 and 26–5 further illustrate the use of generational accounts in analyzing policy changes. Column three shows the effect of returning social security to pay-as-you-go finance. Under this policy, social security taxes are adjusted each year so that the social security trust fund receipts from taxes, interest, and other sources are just enough to meet benefit payments. While this would reduce social security payroll taxes in the near-term and thus lower the net payments made by those who were in their twenties or older in 1990, their benefit would be at the expense of younger and future generations. For example, 40 year-old males would have a $4,500 decrease in their remaining lifetime net payments to the government, whereas newly born males would have a $4,000 increase. The absolute increase in net payment by future generations would be larger still, $4,600, but in relative terms future generations and the newly born would remain nearly the same.

A large part of the heavy net payments by future generations in the baseline, compared to people just born, is because government spending for medicare and medicaid is growing exceptionally fast. The baseline generational accounts use the middle scenario through 2030 that was recently published by actuaries at HCFA (Health Care Financing Administration) in the Department of Health and Human Services.[3] After 2030 health care transfers are assumed to stabilize as a percentage of GNP, apart from the effect of changes in the composition of the population by age and sex.

The fourth and fifth columns of tables 26–4 and 26–5 show the impact on the generational accounts that would result from stabilizing health care spending (apart from demographic change) as a percentage of GNP after 1995 and after 2000, respectively, rather than after 2030. Existing generations would receive less transfers than under the HCFA projections used for the baseline and so would make a larger net payment to the government. This, in turn, would mean a smaller net payment by future generations. Early stabilization of health care spending can have quite significant effects. If it is stabilized as a percentage of GNP (apart

[3] For a discussion of this scenario and projections to 2000, see Sally Sonnefeld and others, "Projections of National Health Expenditures through the Year 2000," *Health Care Financing Review* (volume 13, Fall 1991).

Table 26–4. **CHANGES IN GENERATIONAL ACCOUNTS FOR MALES DUE TO ALTERNATIVE POLICIES AS OF 1990**

(In thousands of dollars)

Generation's age in 1990	OBRA not enacted	OBRA effects end in 1995	Pay-as-you-go social security	Stabilizing health care spending after—	
				1995	2000
0	−1.5	−1.4	4.0	3.1	1.9
5	−1.8	−1.6	3.4	3.6	2.2
10	−2.1	−1.9	2.3	4.0	2.5
15	−2.5	−2.1	0.7	4.7	2.9
20	−2.8	−2.2	−1.2	5.2	3.3
25	−2.9	−2.2	−2.7	5.9	3.8
30	−2.9	−2.1	−3.7	6.8	4.4
35	−2.8	−1.9	−4.3	8.0	5.3
40	−2.6	−1.7	−4.5	9.5	6.3
45	−2.3	−1.4	−4.2	11.1	7.2
50	−2.0	−1.1	−3.5	12.3	7.4
55	−1.6	−0.8	−2.7	12.7	6.5
60	−1.2	−0.6	−1.7	11.2	4.9
65	−0.8	−0.4	−0.8	8.6	3.2
70	−0.6	−0.3	−0.3	6.0	1.8
75	−0.4	−0.2	−0.2	3.5	0.7
80	−0.3	−0.1	−0.1	1.7	—
85	−0.2	—	—	—	—
90	0.1	—	—	—	—
Future generations	10.7	8.0	4.6	−45.0	−26.6
Percentage difference in net payment: future generations and age zero	97.1	93.2	76.0	15.5	40.8

Table 26–5. **CHANGES IN GENERATIONAL ACCOUNTS FOR FEMALES DUE TO ALTERNATIVE POLICIES AS OF 1990**

(In thousands of dollars)

Generation's age in 1990	OBRA not enacted	OBRA effects end in 1995	Pay-as-you-go social security	Stabilizing health care spending after—	
				1995	2000
0	−1.1	−1.0	2.0	5.1	3.1
5	−1.3	−1.2	1.6	5.7	3.5
10	−1.5	−1.4	0.9	6.4	3.9
15	−1.8	−1.6	*	7.2	4.4
20	−2.0	−1.6	−0.9	8.0	5.0
25	−2.1	−1.6	−1.6	8.8	5.6
30	−2.1	−1.5	−1.9	10.0	6.4
35	−2.0	−1.4	−2.1	11.5	7.4
40	−1.9	−1.2	−2.2	13.4	8.7
45	−1.7	−1.1	−2.0	15.5	9.9
50	−1.4	−0.9	−1.7	17.2	10.4
55	−1.2	−0.7	−1.2	18.0	9.6
60	−0.9	−0.5	−0.8	16.5	7.8
65	−0.7	−0.4	−0.4	13.3	5.5
70	−0.5	−0.3	−0.2	9.8	3.3
75	−0.4	−0.2	−0.1	6.1	1.4
80	−0.3	−0.1	−*	2.9	—
85	−0.2	—	—	—	—
90	*	—	—	—	—
Future generations	3.1	2.2	2.6	−13.0	−7.1
Percentage difference in net payment: future generations and age zero	97.1	93.2	76.0	15.5	40.8

*$0.05 thousand or less.

from demographic change) after 2000, the net payment by future generations of males is reduced by $26,600; and the net payment is 41 percent more than the net payment of those just born, instead of 79 percent as in the baseline. If health care spending is stabilized after 1995, the net payment by future generations of males is reduced by $45,000; and relative to those just born the net payment would be only 16 percent higher.

APPENDIX: CONSTRUCTION OF THE GENERATIONAL ACCOUNTS

The Present Value Constraint

Generational accounting is based on the present value budget constraint of the government sector. In simple terms it says that the government must ultimately pay for its purchases of goods and services with resources it obtains from current and future generations or with its current assets (net of debt). If current generations pay less in taxes (net of transfers received) to cover government purchases, future generations will have to pay more. For illustration, suppose that through borrowing the payments for the government's bills were repeatedly shifted to future generations by each successive current generation. Then this debt would grow, with interest. Eventually the interest would exceed the lifetime income of future generations, which would result in default.

More precisely, the government's present value constraint says that, at any point in time, the present value of the government's future purchases of goods and services cannot exceed the sum of three items: (1) the present value of future taxes to be paid (net of transfers received) by existing generations (i.e., the sum of their generational accounts multiplied by the number of people in each generation), (2) the present value of taxes to be paid (net of transfers received) by future generations, and (3) the value of government assets that yield income, less the government debt. Generational accounting estimates the present value of the government's purchases of goods and services and the amounts (1) and (3). Amount (2), the present value of taxes to be paid by all future generations (net of transfers received), is calculated as the present value of future government purchases minus amounts (1) and (3).

The generational accounts for future generations are derived from the aggregate amount (2). For most of the illustrations in this chapter, different net payments (after adjusting for economic growth) are not estimated for different future generations. Rather, the aggregate present value net payment by future generations is divided on an even basis among all the future generations in such a way that the net payment by the average member of each generation keeps pace with the economy's growth in productivity. Thus, as shown in tables 26–1 and 26–2, one single (growth adjusted) average figure stands as the generational account for all future generations of a given sex. Because the generational account is calculated indirectly from the above aggregates, rather than from specific taxes and transfers, it can only be shown as a total amount.

The Underlying Calculations

The calculation of the generational accounts is a three-step process. The first step entails projecting each currently living generation's average taxes and transfers to each future year in which at least some member of the generation will be alive. The second step converts these projected average taxes and transfers into a present value, using assumptions for the discount rate and the probability that the generation's members will be alive in each of the future years. The sum of these present values, with transfers subtracted from taxes, is the generational account or "net payment" for existing generations shown in the first column of tables 26–1 and 26–2. The third step is to estimate the other terms of the present value constraint explained in the previous section so as to derive the average net payment by future generations. The calculations are based on projections to 2200.

Projection of taxes and transfers.—The projection of average future taxes and transfers begins with the national totals of all Federal, State, and local taxes and transfers as reported by the national income and product accounts (NIPAs) for calendar year 1990. (All years in this chapter are calendar years unless otherwise stated.) The relationship of the NIPA data to the Federal budget is described in Chapter 27. Employee retirement and veterans benefits paid by government are considered a form of employee compensation and classified as the purchase of a service rather than a transfer payment.

The base year NIPA totals are distributed to all existing generations, as defined by age and sex, based on the corresponding distributions in cross-section survey data. These surveys include the Survey of Income and Program Participation by the Bureau of the Census and the Survey of Consumer Expenditures by the Bureau of Labor Statistics. Those taxes not directly paid by persons and so not appearing in these surveys, such as the corporation income tax, are allocated. Since generational accounting attributes taxes and transfers to individuals, household taxes and transfers are attributed to the individuals in the household. The attribution rules affect the values of the baseline accounts but are not likely to alter the generational implications of policy changes.

The distribution of average taxes and transfers by age and sex in the future is assumed to equal the base year average amounts after adjustments for growth and projected policy. In the case of Federal taxes and transfers for 1991-95, the amounts correspond to the estimated tax and transfer totals in the *Mid-Session Review of the 1992 Budget* (July 1991), updated for the actual fiscal year 1991 results. These estimates take into account the provisions of OBRA. In the case of State and local taxes and transfers for 1991–95, the amounts are based on the GNP assumptions in this budget and the assumption that the ratios of State and local tax and transfer aggregates to GNP remain constant at the 1990 levels. After 1995 the average taxes and transfers by age and sex are assumed, with two exceptions, to increase at the assumed rate of productivity growth. Productivity (both labor and multi-factor productivity) is assumed to increase at 0.75 percent a year, which is close to the average annual rate of multi-factor productivity growth since 1970.

Social security and health care transfers are the two exceptions. The projected social security transfers take account of the provision in current law that gradually raises the age at which full retirement benefits are available beginning in 2000. The projected medicare

and medicaid transfers through 2030 are the HCFA middle scenario estimates, as explained above. They are assumed to increase subsequently at the rate of productivity growth with an adjustment for demographic change.

Assumptions for present value.—The appropriate discount rate for calculating the present value of future amounts depends on whether or not these amounts are known with certainty. Future government receipts and expenditures are risky, which suggests that they be discounted by a rate higher than the real rate of interest on government securities. On the other hand, government receipts and expenditures appear to be less volatile than the real return on capital, which suggests that they be discounted by a lower rate than that. The baseline calculations assume a 6 percent real discount rate, which is intermediate between the roughly 2 percent average real return available in recent years on short-term Federal securities and the roughly 10 percent real return available in recent years on capital.

The present values of future average taxes and transfers are also discounted for mortality probabilities. The probabilities through 2066 are those embedded in the social security trustees' intermediate projection (alternative II) in 1991 of the population by age and sex. The mortality probabilities in 2066 were used for later years.

Other projections.—Federal purchases of goods and services through 1995, like Federal taxes and transfers, are from the latest *Mid-Session Review* updated for the actual fiscal year 1991 results. State and local purchases through 1995 are kept at the same ratio to GNP as in 1990. Federal, State, and local purchases after 1995 were divided between (1) those made on behalf of specific age groups—the young, middle aged, and elderly—such as educational expenditures; and (2) those that are more nearly pure public goods, such as defense and public safety. Purchases per person in each of the three age groups, and purchases of public goods per capita, increase at the assumed rate of productivity growth.

The economic value of the government's assets that yield income, less the government debt, was estimated by capitalizing the government's net interest in the NIPAs (with some minor adjustments, including one for the current surplus of government enterprises). Net interest was divided by a nominal interest rate calculated as the sum of the assumed real interest rate (6 percent) and the 4.1 percent rate of inflation in 1990 as measured by the GNP deflator.

The average growth-adjusted net payment to be made by future generations was determined by the aggregate present value of the net payment (as derived through the present value budget constraint), by the assumed productivity growth, and by the projected size of future generations. The size of future generations was estimated using the social security alternative II projection through 2066 and the demographic assumptions for 2066 applied to later years.

27. National Income and Product Account Presentation

27. NATIONAL INCOME AND PRODUCT ACCOUNT PRESENTATION

The National Income and Product Accounts (NIPAs) are an integrated set of measures of aggregate economic activity that are prepared by the Department of Commerce. One of the many purposes of the NIPAs is to measure the Nation's total current production of goods and services, known as gross domestic product (GDP) and the incomes generated in its production.[1] Because the NIPAs are widely used in economic analysis, it is important to show the NIPA presentation of Federal transactions.

GDP is the sum of the net products of the household, business, government, and foreign sectors. Federal transactions are included in the NIPAs as part of the government sector. The concepts for the Federal sector have been designed to measure certain important economic effects of Federal transactions in a way that is consistent with the conceptual structure of the entire set of integrated accounts. The NIPA Federal sector is not itself a budget, for it is not a financial plan for proposing, determining, and controlling the fiscal activities of the Government. Rather, it is an accounting translation of the budget to meet specialized and important needs, chiefly the measurement of the impact of Federal receipts, outlays, and the deficit on the national economy. NIPA concepts differ in many ways from budget concepts, and therefore the NIPA presentation of Federal finances is significantly different from that of the budget.

GDP is a measure of final output which excludes intermediate product to avoid double counting. Government purchases of goods and services are included in GDP as part of final output, together with personal consumption expenditures, gross private domestic investment, and net exports of goods and services. Other Federal expenditures—transfer payments, grants to State and local governments, subsidies, and net interest payments—are not part of final output. Rather, they are transfers of income to others, whose consumption, investment, purchases, or transactions with foreigners are part of final output. An entire set of receipt and expenditure transactions of the Federal Government is prepared as one sector of the NIPAs; however, when the accounts for all the sectors are consolidated into a summary account for the Nation as a whole, transfer payments, grants, subsidies, and net interest expenditures are canceled out by receipt of those payments as income in other sectors. This leaves only purchases to be included in final output.

[1] Until last year, the most widely used measure of national production was gross national product (GNP). When the Department of Commerce released its benchmark revisions of the NIPAs in December, it began to feature gross domestic product (GDP) as the preferred measure of national production. This is the concept that most countries in the world also emphasize. Accordingly, the budget has adopted GDP as its preferred measure of total national production. For the United States, GDP is very nearly as large as GNP (99.8 percent of GNP in 1990, for example). The distinctions between GNP and GDP are discussed at length in the August 1991 issue of the Department of Commerce publication *Survey of Current Business*.

Differences Between the NIPAs and the Budget

Federal transactions in the NIPAs are measured according to NIPA accounting rules in order to be compatible with the purposes of the NIPAs and other transactions recorded in the NIPAs. As a result they differ from the budget in netting, timing, and coverage. These differences cause total receipts and expenditures in the NIPAs to differ from total receipts and outlays in the budget. Differences in timing and coverage also cause the deficit to differ. Netting differences have the same effect on both receipts and expenditures and thus have no effect on the deficit. Besides these differences, the NIPAs combine transactions into different categories from those used in the budget.

Netting differences arise when the budget records certain transactions as offsets to outlays while they are recorded as receipts in the NIPAs (or vice versa). The budget treats all income that comes to the Government due to its sovereign powers—mainly, but not exclusively, taxes—as Governmental receipts. However, any intragovernmental income from one account to another is offset against outlays rather than being recorded as a receipt. Government contributions for employee retirement is one example. The budget offsets these payments against outlays while the NIPAs treat the Federal Government as any other employer and show contributions for employee social insurance as expenditures by the employing agencies and receipts to the appropriate social insurance funds. The NIPAs also include certain imputations which the budget does not. For example, unemployment benefits for Federal employees are financed by direct appropriations rather than social insurance contributions. The NIPAs impute social insurance contributions by employing agencies to finance these benefits.

The budget also offsets against outlays any income that arises from voluntary business-type transactions with the public. The budget classifies Medicare Part B premiums as business-type transactions, whereas the NIPAs record them as receipts.

Timing differences occur for receipts because the NIPAs generally record personal taxes and social insurance contributions when they are paid and business taxes when they are accrued, while the budget records all receipts when they are received. The principal timing difference between NIPA expenditures and budget outlays occurs because purchases are recorded on a delivery basis in the NIPAs, but when cash is disbursed in the budget. This difference can be large for major defense purchases because progress payments are recorded as outlays in the budget, while the NIPAs do not record expenditures until delivery is made. The NIPAs count work in progress as part of business inventories until delivery is made to the Government.

The budget and the NIPAs also have coverage differences. The NIPAs include off-budget Federal entities and exclude transactions with U.S. territories. The NIPAs also exclude the proceeds from the sales of assets such as land. Bonuses paid on Outer Continental Shelf oil leases are shown as offsetting receipts in the budget and are deducted from budget outlays. In the NIPAs these transactions are excluded as an exchange of assets.

Financial transactions such as loans, loan repayments, loan asset sales, and loan guarantees are excluded from the NIPAs on the grounds that such transactions involve an exchange of assets with no production involved. Through 1991, in contrast, the budget recorded loans as outlays when disbursed and as offsets to outlays when repaid or sold. With the enactment of the Federal Credit Reform Act of 1990, the budget has made a fundamental change in the way that it records lending transactions. For direct loan obligations and loan guarantee commitments made after 1991, the budget records the estimated subsidy cost of the direct loan or loan guarantee when the direct loan or guaranteed loan is disbursed. The nonsubsidized cash flows are recorded in nonbudgetary accounts as a means of financing the budget deficit rather than as budgetary transactions themselves. This treatment recognizes that part of a Federal direct loan is an exchange of assets with equal value but that part is normally a subsidy to the borrower. It also recognizes the subsidy normally granted by loan guarantees. In the NIPAs, neither the subsidies nor the loan transactions are included; however, the NIPAs will continue to include all interest transactions with the public, including interest paid to the new financing accounts.

Deposit insurance outlays for resolving failed banks and thrift institutions are similarly excluded from the NIPAs on the grounds that there are no offsetting current income flows from these transactions. For 1991, this exclusion is the largest difference between the NIPAs and the budget.

Federal Sector Receipts

Table 27–1 shows Federal receipts in the four major categories used in the NIPAs, which are similar to the budget categories but with significant differences.

Personal tax and non-tax receipts is the largest category. It is composed primarily of personal income taxes, but also includes estate and gift taxes, fees, fines, and other receipts.

Corporate profits tax accruals differ in classification from the corresponding budget category primarily because the NIPAs include the deposit of earnings of the Federal Reserve System as corporate profits taxes, while the budget treats these collections as miscellaneous receipts. The timing difference between the NIPAs and the budget, as discussed above, is especially large for this category of receipts.

Indirect business tax and nontax accruals are composed of excise taxes, customs duties, royalties, fines, and other receipts.

Contributions for social insurance differ from the corresponding budget category primarily because: (1) the NIPAs include Federal employer contributions for employee retirement in this category as a Government receipt, while the budget offsets the contributions against outlays as undistributed offsetting receipts; (2) the NIPAs include premiums for social insurance programs including Part B of medicare as Government receipts, which the budget also nets against outlays; and (3) the NIPAs include imputations for Federal employees' unemployment insurance and workers' compensation.

Table 27–1. **FEDERAL TRANSACTIONS IN THE NATIONAL INCOME AND PRODUCT ACCOUNTS, 1982–1991**

(In billions of dollars)

Description	Actual									
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
RECEIPTS										
Personal tax and nontax receipts	308.4	290.7	300.4	337.0	353.1	396.3	403.8	455.7	472.2	474.5
Corporate profits tax accruals	51.6	56.4	75.1	75.0	80.4	99.4	107.6	116.7	113.1	103.2
Indirect business tax and nontax accruals	51.5	52.0	57.0	59.1	53.8	57.9	59.6	62.2	63.7	75.6
Contributions for social insurance	231.2	247.3	279.3	305.9	326.5	345.5	384.1	412.5	438.9	462.9
Total receipts	**642.7**	**646.4**	**711.7**	**777.0**	**813.8**	**899.1**	**955.1**	**1,047.1**	**1,087.9**	**1,116.2**
EXPENDITURES										
Purchases of goods and services	259.5	289.8	302.2	335.2	363.7	379.9	386.3	399.0	416.4	445.8
Defense	(187.3)	(210.2)	(228.2)	(251.7)	(274.3)	(287.6)	(295.1)	(299.2)	(308.4)	(325.9)
Nondefense	(72.2)	(79.6)	(74.0)	(83.5)	(89.3)	(92.2)	(91.2)	(99.8)	(108.1)	(119.9)
Transfer payments	311.4	346.3	351.1	372.2	393.1	409.3	430.9	459.4	502.0	505.3
Domestic ("to persons")	(305.6)	(339.8)	(342.4)	(360.7)	(380.6)	(399.4)	(420.7)	(448.5)	(488.9)	(534.2)
Foreign	(5.8)	(6.5)	(8.7)	(11.5)	(12.5)	(9.9)	(10.2)	(10.9)	(13.0)	(−28.9)
Grants-in-aid to State and local governments	83.4	86.2	91.5	98.6	108.3	103.4	108.4	115.8	128.3	146.3
Net interest paid	81.8	89.6	107.5	125.2	130.5	133.6	143.8	160.3	175.3	185.2
Subsidies less current surplus of Government enterprises	11.5	16.8	23.0	21.6	22.1	24.9	28.9	27.6	23.7	22.8
Wage disbursements less accruals	*	0.4	−0.1	0.1	.....	−0.1	0.1	.....	−*	−*
Total expenditures	**747.6**	**829.2**	**875.3**	**952.9**	**1,017.6**	**1,051.1**	**1,098.5**	**1,162.1**	**1,245.6**	**1,305.4**
Deficit (−)	**−105.0**	**−182.8**	**−163.6**	**−175.9**	**−203.9**	**−151.9**	**−143.3**	**−115.0**	**−157.8**	**−189.2**

*$50 million or less.

Table 27–2. RELATIONSHIP OF THE BUDGET TO THE FEDERAL SECTOR, NIPA

(In billions of dollars)

	1983	1984	1985	1986	1987	1988	1989	1990	1991
Receipts									
Unified budget receipts	600.6	666.5	734.1	769.1	854.1	909.0	990.7	1,031.3	1,054.3
Government contributions for employee retirement (grossing)	28.3	29.7	32.3	33.7	35.4	38.7	41.2	44.2	47.2
Other netting and grossing	9.5	11.6	13.0	10.6	11.1	14.1	14.7	17.8	21.3
Timing adjustments	9.2	5.2	−1.2	2.7	*	−5.1	1.5	−3.9	−5.0
Geographic exclusions	−1.3	−1.4	−1.5	−1.6	−1.8	−1.4	−1.5	−1.6	−1.7
Other	0.2	0.2	0.3	−0.6	0.1	*	0.6	0.1	0.1
NIPA receipts	646.4	711.7	777.0	813.8	899.1	955.1	1,047.1	1,087.9	1,116.2
Expenditures									
Unified budget outlays	808.4	851.8	946.4	990.3	1,003.9	1,064.1	1,144.2	1,251.8	1,323.0
Government contributions for employee retirement (grossing)	28.3	29.7	32.3	33.7	35.4	38.7	41.2	44.2	47.2
Other netting and grossing	9.5	11.6	13.0	10.6	11.1	14.1	14.7	17.8	21.3
Lending transactions	−16.0	−11.7	−31.9	−14.3	−0.5	−3.5	−2.1	−14.2	−14.0
Deposit insurance and other financial transactions	−2.3	−3.6	−0.9	−3.2	−2.9	−12.5	−22.8	−56.7	−66.7
Defense timing adjustment	*	0.3	−0.2	2.8	4.0	3.2	−7.3	4.4	3.1
Other timing adjustments	−0.8	−0.8	−1.4	−0.7	4.1	−0.3	0.5	3.8	−2.0
Geographic exclusions	−4.8	−5.1	−5.3	−5.4	−5.4	−5.6	−6.0	−6.5	−6.8
Bonuses on outer continental shelf land leases	7.5	3.4	1.9	2.1	1.6	1.3	0.9	1.1	0.9
Other	−0.4	−0.4	−1.1	1.8	−0.4	−1.0	−1.1	−0.2	−0.6
NIPA expenditures	829.2	875.3	952.9	1,017.6	1,051.0	1,098.5	1,162.1	1,245.6	1,305.4

Federal Sector Expenditures

Table 27–1 shows expenditures in the six major NIPA categories, which are very different from the budget categories.

Purchases of goods and services include the goods and services purchased by the Federal Government, including employee compensation. This category is divided into defense and non-defense components.

Transfer payments is the largest expenditure category. Domestic transfer payments are mainly for income security programs, such as social security and medicare. Foreign transfer payments include grants to foreign governments and payments under social security and other similar programs to individuals living abroad.

Grants-in-aid to State and local governments are designed to help finance a range of programs. Grants are for income security, capital expenditures for infrastructure, and other purposes.

Net interest paid is the interest paid by the Government on its borrowing, less interest received on its lending.

Subsidies less current surplus of Government enterprises consists of two elements: (1) subsidy payments for resident businesses (including farms); and (2) the current surplus (or deficit) of "Government enterprises", such as the Postal Service, which are business-type operations of Government that usually appear in the budget as public enterprise revolving funds. NIPA subsidies do not include the imputed credit subsidies estimated as part of credit reform in the budget. Rather, they are categorized as financial transactions and are excluded from the NIPAs.

Wage disbursements less accruals is an adjustment that is necessary when wages are earned in a different period than they are paid.

Benchmark Revisions

The benchmark revisions of the NIPAs, released in December, included a number of conceptual changes that affect the Government sector. Six Federal Government agencies were reclassified from their former designations as government enterprises to general government agencies, which added their operating expenses to Federal purchases (and GDP). Two agencies were shifted the other way.

The Panama Canal Commission was reclassified from a government enterprise to a foreign entity.

Receipts for providing certain services—including health and hospital charges, tuition, and park and recreation charges—are now offset against expenditures instead of being recorded as personal nontaxes, reducing both receipts and expenditures. This change has a substantially larger effect on State and local governments than on the Federal government.

Other changes that affect Federal government receipts and expenditures include recognition of court-mandated escrow accounts, reclassification of Commodity Credit Corporation commodity loans, and recording of non-resident tax payments as transfer payments. The changes are fully described in the September, 1991 issue of the *Survey of Current Business.*

Taken together, these changes lower the NIPA Federal deficit. Between 1980 and 1990, the deficit was lowered an average of 1.6 billion due to conceptual changes.

Differences in the Estimates.

Since the introduction of the unified budget in January 1968, NIPA receipts have exceeded budget receipts in each year, due principally to the imputed employer contributions for employee retirement. NIPA expenditures have usually been higher than budget outlays for the same reason. However there are two components of budget outlays that are sometimes sufficiently large

to overwhelm the grossing adjustments. These are financial transactions and payments to U.S. territories. Budget outlays were greater in 1980 and 1991. With the enactment of credit reform, effective in 1992, lending activity with the public as recorded in the budget has been treated in a way that is closer to the NIPA treatment. Disbursement and repayment of loans now occur outside the budget as in the NIPAs, and only imputed credit subsidies will remain as budget outlays. However, this narrowing of differences in lending activity is likely to be overwhelmed, at least in the short run, by large increases in other financial transactions, principally outlays for the resolution of failed financial institutions.

Since 1968, the consolidated on-budget plus off-budget surplus or deficit has exceeded the Federal surplus or deficit as measured in the NIPAs in all but three years. In 1991, the consolidated budget deficit was $268.7 billion, while the NIPA deficit was $189.2 billion.

Table 27–1 displays Federal transactions using NIPA concepts with actual data for the years 1982–1991. These estimates reflect the effects of the comprehensive revisions of the NIPAs released in December 1991. Table 27–2 displays the reasons for differences between the data using budget concepts and NIPA concepts.

In previous years, a NIPA translation of the President's proposed budget has been published in the *Budget*. This year, these estimates will be published in a forthcoming issue of the *Survey of Current Business*. Next year, the NIPA translation of the President's Budget will return to the 1994 *Budget*.

28. Trust Funds and Federal Funds Presentation

28. TRUST FUNDS AND FEDERAL FUNDS PRESENTATION

The budget consists of two major groups of funds: Federal funds and trust funds.

The Federal funds group, which comprises the larger part of the budget, includes all transactions not classified by law as being in trust funds. The main component of the Federal funds group is the general fund, which is used for the general purposes of Government rather than being restricted by law to a specific program. It consists of all receipts not earmarked by law to finance other funds, including virtually all income taxes and many excise taxes, and all outlays financed by these receipts and by general Treasury borrowing.

The Federal funds group also includes special funds and revolving funds. Special funds are financed by earmarked receipts. Where the law requires that Federal fund receipts from a specified source be earmarked to finance a particular program, such as the license fees deposited into the land and water conservation fund, the receipts and associated outlays are recorded in special fund receipt and expenditure accounts. As a general rule, special fund receipts must be appropriated before they can be obligated and payments made.

Revolving funds, such as the Postal Service fund, conduct continuing cycles of business-type activity. They charge for the sale of products or services and use the proceeds to finance their spending. The proceeds are recorded as offsets (reductions) to spending within the fund that makes the expenditure. These collections generally are available automatically for obligation. Intragovernmental funds are a special class of revolving funds that conduct business-like operations within and between Government agencies.

Trust funds consist primarily of funds that are designated by law as trust funds, but they also include funds established to carry out the stipulations of trust agreements where the Government is the fiduciary. Trust funds are financed by earmarked receipts. Most trust funds finance social insurance and other payments for individuals, such as social security, medicare, Federal employees retirement, and unemployment compensation. Other major trust funds finance highway construction and airport and airway development. These programs are not trust funds in the private sector meaning of assets held in a fiduciary capacity for the beneficiary of the trust. Instead, the Federal Government owns the "trust's" assets, and it can raise or lower future trust fund collections and payments by enacting changes to existing law.

Although trust fund receipts must be used for the purposes designated by law, a trust fund may accumulate some of its receipts for future use rather than spending them all as soon as they are collected. A surplus of receipts over outlays adds to the trust fund's balances of assets that are available for future use. Any net cash inflow to the trust fund from the public decreases the Treasury's need to borrow from the public in order to finance the Federal fund deficit.

Much attention has focused recently on the trust fund surpluses, the Federal fund deficits, and the contribution of each to the consolidated deficit. Over the past three decades, growing trust fund surpluses have offset a major part of the large and growing Federal fund deficits. As shown in the bottom of table 28–1, this pattern is expected to continue for several years. However, these estimates of the Federal fund deficits and the trust fund surpluses overstate the impact of each on the consolidated budget deficit. This is because the consolidated budget deficit measures the Government's net transactions with the public, while the surplus or deficit for each fund group includes the effect of transactions between the fund groups as well as with the public.

In 1991, for example, the trust fund surplus amounted to $112 billion, and the Federal fund deficit was $381 billion, but both included $175 billion of net payments from Federal funds to trust funds. On the basis of transactions with the public, the trust fund group experienced a $63 billion deficit, and the Federal fund deficit was $206 billion. These converge over time. By 1997 payments to the public by each fund group are estimated to exceed their collections from the public by $106 billion.

A particularly large component of the trust fund income from Federal funds is interest on trust fund holdings of Treasury securities. Trust fund interest income was $71 billion in 1991, and it will grow to $115 billion

Table 28–1. **SURPLUS OR DEFICIT BY FUND GROUP**

(In billions of dollars)

	1991 actual	1992 estimate	1993 estimate	1994 estimate	1995 estimate	1996 estimate	1997 estimate
Surplus or deficit (−) excluding interest:							
Federal funds	−310.3	−386.5	−374.2	−291.9	−275.8	−258.3	−272.3
Trust funds	41.6	21.3	36.9	43.8	52.9	58.5	60.5
Net interfund interest receipts/payments (−):							
Federal funds	−70.7	−77.2	−82.4	−89.3	−96.8	−105.6	−115.2
Trust funds	70.7	77.2	82.4	89.3	96.8	105.6	115.2
Surplus or deficit (−) including interest:							
Federal funds	−381.0	−463.8	−456.5	−381.1	−372.6	−363.8	−387.5
Trust funds	112.3	98.5	119.3	133.1	149.7	164.1	175.7

by 1997. These Treasury payments to trust funds add to the trust fund surplus and the Federal fund deficit by equal amounts. As shown in the top of table 28–1, the trust fund surplus is reduced by about two-thirds if interfund interest transactions are excluded, and the Federal fund deficit is reduced substantially.

Trust fund interest income has risen rapidly in the past decade, largely because trust fund balances have built up substantially during this period. The size of the balance anticipated for many trust funds in the future is unprecedented, and it results mainly from a change in the way trust funds are financed.

Until the 1980s, most trust funds operated on a pay-as-you-go basis. Taxes and user fees were set at levels high enough to finance benefits and administrative expenses and to maintain a prudent reserve, generally defined as being equal to one year's expenditures. As a result, trust fund balances tended to grow at about the same rate as their annual expenditures.

Pay-as-you-go financing was replaced in the 1980s by full or partial accrual funding for some of the larger trust funds. In order to partially prefund the "baby-boomers" social security benefits, the Social Security Amendments of 1983 raised FICA taxes above the levels necessary to finance current expenditures. In 1985 a new system was set up to finance military retirement benefits on a full accrual basis. In 1986 full accrual funding of retirement benefits was mandated for Federal civilian employees hired after December 31, 1983.

Because of these changes and the impact of inflation, trust fund balances grew from $205 billion at the end of 1982 to $897 billion at the end of 1991, and it is estimated that they will rise to $1.7 trillion by the end of 1997. Almost all of these balances are invested in Treasury debt. Since they earn interest, these balances effectively represent the value, in current dollars, of taxes and user fees that have been paid in advance for future benefits and services.

Table 28–2 shows income, outgo, and surplus or deficit by fund group. In addition to governmental receipts, income includes both proprietary receipts and interfund collections (receipts by one fund of payments from a fund in the other fund group) that are deposited in receipt accounts. Interfund collections include the interest on trust fund holdings of Treasury debt. Outgo consists of payments made to the public and interfund payments.

Collections that are offset, by law, against the outlays of an expenditure account, such as agency payments to the Federal Employees Health Benefits Fund, are classified as outgo, not as income. In addition, income and outgo exclude transactions between funds within the same fund group. These intrafund transactions must be subtracted when the income and outgo for all funds within a fund group are added, so that the totals for each fund group record only transactions with the public or with the other fund group.

Table 28–2 also shows the amount of offsetting receipts that must be deducted from the sum of Federal fund and trust fund income and outgo in order to derive consolidated budget receipts and outlays. Receipts resulting from voluntary business-like transactions with the public are income for a fund group, but they are recorded as offsets to the outlays that generate the receipts in the consolidated budget. In this way, consolidated budget receipts and outlays measure, respectively, the amount of collections raised by the Government in its sovereign capacity and the amount of re-

Table 28–2. **RECEIPTS, OUTLAYS, AND SURPLUS OR DEFICIT BY FUND GROUP**

(In billions of dollars)

	1991 actual	1992 estimate	1993 estimate	1994 estimate	1995 estimate	1996 estimate	1997 estimate
Receipts:							
Federal funds income:							
From the public	692.1	659.2	709.9	775.8	826.0	879.5	921.8
From trust funds:							
Interest	0.5	–*					
Other	7.5	3.7	3.8	4.0	4.1	4.3	4.5
Total, Federal funds income	700.1	662.8	713.8	779.8	830.1	883.8	926.3
Trust funds income:							
From the public	448.0	463.4	502.7	538.6	570.8	604.6	635.3
From Federal funds:							
Interest	71.2	77.2	82.4	89.3	96.8	105.6	115.2
Other	111.8	118.2	123.4	129.3	142.9	156.1	170.5
Total, Trust funds income	631.1	658.9	708.4	757.2	810.6	866.2	921.1
Offsetting receipts	–276.9	–246.1	–258.1	–273.7	–296.4	–321.7	–344.3
Total, consolidated budget receipts	1,054.3	1,075.6	1,164.1	1,263.4	1,344.3	1,428.4	1,503.0
Outlays:							
Federal funds outgo	1,081.1	1,126.6	1,170.3	1,161.0	1,202.7	1,224.3	1,313.8
Trust funds outgo	518.8	560.3	589.1	624.1	660.8	702.1	745.4
Offsetting receipts	–276.9	–246.1	–258.1	–273.7	–296.4	–321.7	–344.3
Total, consolidated budget outlays	1,323.0	1,440.9	1,501.3	1,511.4	1,567.1	1,604.8	1,714.8
Surplus or deficit (–):							
Federal funds	–381.0	–463.8	–456.5	–381.1	–372.6	–340.5	–387.5
Trust funds	112.3	98.5	119.3	133.1	149.7	164.1	175.7
Total, consolidated surplus/deficit (–)	–268.7	–365.2	–337.2	–248.0	–222.9	–176.4	–211.8

Receipts includes governmental, interfund, and proprietary receipts. Excludes intrafund receipts, which are offset against intrafund payments so that income and outgo are not overstated.
*$50 million or less.

sources allocated by the Government in a non-market capacity. Interfund offsetting receipts also constitute income for a fund group, but they are offset against interfund payments in the consolidated budget, so that the consolidated totals record only transactions with the public.

Table 28–3 shows the income, outgo, and balances of each of the major trust funds and the trust funds as a group. Transactions with the public and with other Government accounts are separately identified. Receipts from Federal funds are further divided between interest and other interfund receipts. The definitions of income and outgo for individual funds are the same as for the fund groups, with one exception. In the data for individual funds, but not the data for the fund groups, intrafund transactions are recorded as outgo of the fund making the payment and as income of the fund collecting the payment. In this way, the income and outgo for each fund measure its total transactions with the public and with other funds.

The trust funds vary considerably in size, their sources of income, annual surpluses or deficits, and end-of-year balances. The social security trust funds in combination (OASI and DI) have the largest income and outgo by far. In 1991 they accounted for slightly more than half of income and outgo for the trust funds as a group. The second largest, in terms of income and outgo, are the medicare trust funds (HI and SMI), which are less than half as large as social security. The various Federal employee retirement funds and the unemployment trust fund also have relatively large income and outgo.

The trust fund finances are alike in that each earns interest on its balances. Beyond that, their sources of income are very different. This can be seen by comparing the social security, Federal employee retirement (military and civilian), and the medicare trust funds.

Almost all of social security's non-interest income is taxes paid by the public. A small portion comes from the Government's payments for its employees. In contrast, the bulk of the non-interest income of the Federal employees retirement trust funds consists of the Government's payments as an employer for the retirement benefits accrued by its employees. Payments by Federal employees represent a much smaller share. The medicare trust funds derive their non-interest income from a combination of HI taxes paid by the public, premiums charged to individuals for coverage under the Medicare Part B program, a large general fund subsidy payment for the 75 percent of the costs of the Medicare Part B program not covered by premiums, and the Government's payments as an employer for its portion of the HI tax.

Most of the trust funds have substantial balances when compared in absolute levels or in relation to their income or outgo. The balances of the social security, Federal employee retirement, and medicare trust funds are the largest in absolute dollars. Due to the partial prefunding of social security benefits for the "baby-boom" generation and the full accrual of retirement benefits for almost two-thirds of Federal employee, the balances of the social security and the Federal employees retirement trust funds are expected to continue to grow rapidly in the future. In contrast, the balances of the medicare trust funds are expected to be depleted by the turn of the century unless policy is changed. Increased utilization of health care services by an aging population and escalating medical prices are expected to cause medicare payments to increase much faster than its income under current law. The balances of the highway trust fund, which have grown in recent years, are expected to decline as a result of planned increases in spending.

Table 28–3. INCOME, OUTGO, AND BALANCES OF TRUST FUNDS

(In billions of dollars)

	1991 actual	1992 estimate	1993 estimate	1994 estimate	1995 estimate	1996 estimate	1997 estimate
Airport and airway trust funds							
Balance, start of year	14.4	15.3	16.0	15.6	15.1	14.9	15.1
Income:							
Governmental receipts	4.9	5.2	5.7	6.2	6.7	7.3	7.9
Interfund receipts:							
Interest	1.3	1.3	1.2	1.1	1.0	0.9	0.9
Subtotal, income	6.2	6.5	6.9	7.2	7.7	8.2	8.9
Outgo:							
To the public	5.3	5.8	7.4	7.7	7.9	8.0	8.1
Subtotal, outgo	5.3	5.8	7.4	7.7	7.9	8.0	8.1
Change in fund balance:							
Surplus or deficit (–):							
Excluding interest	–0.4	–0.6	–1.7	–1.5	–1.2	–0.8	–0.2
Interest	1.3	1.3	1.2	1.1	1.0	0.9	0.9
Subtotal, surplus or deficit (–)	0.9	0.7	–0.5	–0.5	–0.2	0.2	0.7
Adjustments:							
Transfers/lapses (net)	–*	.....	.....	.....	.....	.....	.....
Other adjustments	*	*	*	.....	.....	.....	.....
Total, change in fund balance	0.9	0.8	–0.5	–0.5	–0.2	0.2	0.7
Balance, end of year	15.3	16.0	15.6	15.1	14.9	15.1	15.8
Federal employees retirement funds							
Balance, start of year	245.6	269.0	294.7	322.5	352.3	383.8	416.1
Income:							
Governmental receipts	4.6	4.6	5.1	5.7	6.0	6.1	6.1
Interfund receipts:							
Interest	22.7	24.0	25.3	26.6	27.8	29.2	30.5
Other	29.9	31.5	33.1	34.8	36.8	37.9	39.6
Intrafund receipts	*	*	*	*	*	*	*
Subtotal, income	57.2	60.1	63.4	67.1	70.6	73.2	76.2
Outgo:							
To the public	33.7	34.5	35.6	37.3	39.1	40.9	42.7
Intrabudgetary payments	*	*	*	*	*	*	*
Subtotal, outgo	33.7	34.5	35.6	37.3	39.1	40.9	42.7
Change in fund balance:							
Surplus or deficit (–):							
Excluding interest	0.8	1.7	2.5	3.2	3.7	3.1	3.0
Interest	22.7	24.0	25.3	26.6	27.8	29.2	30.5
Subtotal, surplus or deficit (–)	23.5	25.6	27.8	29.8	31.6	32.3	33.5
Adjustments:							
Other adjustments	–*	.....	.....	.....	.....	.....	.....
Total, change in fund balance	23.5	25.6	27.8	29.8	31.6	32.3	33.5
Balance, end of year	269.0	294.7	322.5	352.3	383.8	416.1	449.6

Table 28–3. INCOME, OUTGO, AND BALANCES OF TRUST FUNDS—Continued

(In billions of dollars)

	1991 actual	1992 estimate	1993 estimate	1994 estimate	1995 estimate	1996 estimate	1997 estimate
Foreign military sales trust fund							
Balance, start of year	5.7	6.8	6.9	6.8	6.2	5.7	5.1
Income:							
Proprietary receipts	12.5	11.4	11.2	10.4	9.9	9.4	9.0
Subtotal, income	12.5	11.4	11.2	10.4	9.9	9.4	9.0
Outgo:							
To the public	11.5	11.3	11.3	11.0	10.5	10.0	9.6
Subtotal, outgo	11.5	11.3	11.3	11.0	10.5	10.0	9.6
Change in fund balance:							
Surplus or deficit (–):							
Excluding interest	1.1	0.1	–0.1	–0.6	–0.6	–0.6	–0.5
Subtotal, surplus or deficit (–)	1.1	0.1	–0.1	–0.6	–0.6	–0.6	–0.5
Total, change in fund balance	1.1	0.1	–0.1	–0.6	–0.6	–0.6	–0.5
Balance, end of year	6.8	6.9	6.8	6.2	5.7	5.1	4.6
Federal old-age, survivors and disability insurance trust funds							
Balance, start of year	214.9	268.4	318.6	382.1	457.9	544.8	645.9
Income:							
Governmental receipts	293.9	300.9	325.8	348.8	369.9	394.3	418.3
Proprietary receipts	*	.....	.....	.....	.....	.....	.....
Interfund receipts:							
Interest	20.2	23.9	27.0	31.1	35.7	41.1	47.4
Other	11.8	12.2	12.9	13.8	14.7	15.7	16.7
Subtotal, income	325.9	336.9	365.7	393.6	420.3	451.1	482.4
Outgo:							
To the public	265.2	283.0	298.4	313.7	329.3	345.8	363.0
Intrabudgetary payments	7.1	3.7	3.9	4.0	4.1	4.3	4.4
Subtotal, outgo	272.4	286.7	302.3	317.7	333.5	350.0	367.4
Change in fund balance:							
Surplus or deficit (–):							
Excluding interest	33.3	26.4	36.4	44.8	51.1	59.9	67.6
Interest	20.2	23.9	27.0	31.1	35.7	41.1	47.4
Subtotal, surplus or deficit (–)	53.5	50.2	63.4	75.9	86.9	101.1	115.0
Adjustments:							
Other adjustments	*	.....	.....	.....	.....	.....	.....
Total, change in fund balance	53.5	50.2	63.4	75.9	86.9	101.1	115.0
Balance, end of year	268.4	318.6	382.1	457.9	544.8	645.9	760.9

Table 28–3. INCOME, OUTGO, AND BALANCES OF TRUST FUNDS—Continued

(In billions of dollars)

	1991 actual	1992 estimate	1993 estimate	1994 estimate	1995 estimate	1996 estimate	1997 estimate
Health insurance: HI trust fund							
Balance, start of year	95.6	109.9	124.9	143.8	160.0	173.2	182.0
Income:							
Governmental receipts	72.8	79.0	86.5	92.6	98.1	104.4	110.6
Proprietary receipts	0.4	0.5	0.5	0.6	0.7	0.8	0.8
Interfund receipts:							
Interest	9.0	10.1	11.0	11.9	12.7	13.3	13.6
Other	2.8	3.0	2.9	2.9	3.0	3.1	3.2
Subtotal, income	85.0	92.6	100.9	108.1	114.4	121.5	128.1
Outgo:							
To the public	69.6	77.6	83.6	91.8	101.3	112.7	124.0
Intrabudgetary payments	1.1	.....	.....	.....	.....	.....	.....
Subtotal, outgo	70.7	77.6	83.6	91.8	101.3	112.7	124.0
Change in fund balance:							
Surplus or deficit (–):							
Excluding interest	5.3	4.9	6.4	4.3	0.4	–4.5	–9.4
Interest	9.0	10.1	11.0	11.9	12.7	13.3	13.6
Subtotal, surplus or deficit (–)	14.3	15.1	17.4	16.2	13.1	8.8	4.2
Adjustments:							
Transfers/lapses (net)	.....	.....	1.6	.....	.....	.....	.....
Other adjustments	*	–0.1	–0.1	.....	.....	.....	.....
Total, change in fund balance	14.3	15.0	18.9	16.2	13.1	8.8	4.2
Balance, end of year	109.9	124.9	143.8	160.0	173.2	182.0	186.1
Health insurance: SMI trust fund							
Balance, start of year	14.5	15.7	15.1	10.6	8.1	8.8	10.5
Income:							
Governmental receipts	*	.....	.....	.....	.....	.....	.....
Proprietary receipts	11.8	12.7	14.8	17.0	19.4	20.9	21.9
Interfund receipts:							
Interest	1.6	1.6	1.3	0.9	0.7	0.7	0.8
Other	34.7	39.5	42.1	48.2	58.1	68.0	78.4
Subtotal, income	48.2	53.7	58.2	66.2	78.2	89.6	101.2
Outgo:							
To the public	47.0	54.2	61.1	68.6	77.5	87.9	99.2
Subtotal, outgo	47.0	54.2	61.1	68.6	77.5	87.9	99.2
Change in fund balance:							
Surplus or deficit (–):							
Excluding interest	–0.5	–2.1	–4.2	–3.4	–*	1.0	1.2
Interest	1.6	1.6	1.3	0.9	0.7	0.7	0.8
Subtotal, surplus or deficit (–)	1.1	–0.6	–2.9	–2.5	0.7	1.8	2.0
Adjustments:							
Transfers/lapses (net)	.....	.....	–1.6	.....	.....	.....	.....
Total, change in fund balance	1.1	–0.6	–4.5	–2.5	0.7	1.8	2.0
Balance, end of year	15.7	15.1	10.6	8.1	8.8	10.5	12.5

Table 28–3. INCOME, OUTGO, AND BALANCES OF TRUST FUNDS—Continued

(In billions of dollars)

	1991 actual	1992 estimate	1993 estimate	1994 estimate	1995 estimate	1996 estimate	1997 estimate
Highway trust funds							
Balance, start of year	17.9	20.7	22.2	22.0	20.5	19.0	17.6
Income:							
Governmental receipts	17.0	17.4	17.7	18.1	18.5	18.9	19.3
Interfund receipts:							
Interest	1.5	1.6	1.5	1.4	1.2	1.0	0.9
Subtotal, Income	18.5	19.0	19.2	19.5	19.7	19.9	20.2
Outgo:							
To the public	15.7	17.4	19.9	21.0	21.2	21.3	21.2
Subtotal, Outgo	15.7	17.4	19.9	21.0	21.2	21.3	21.2
Change in fund balance:							
Surplus or deficit:							
Excluding interest	1.3	–*	–2.2	–2.9	–2.7	–2.4	–1.9
Interest	1.5	1.6	1.5	1.4	1.2	1.0	0.9
Subtotal, surplus or deficit	2.8	1.6	–0.7	–1.5	–1.6	–1.4	–1
Adjustments:							
Transfers/lapses (net)	*	–0.5	.....	.....	.....	.....	.....
Other adjustments	–*	0.5	0.5	.....	.....	.....	.....
Total, Change in fund balance	2.7	1.6	–0.2	–1.5	–1.6	–1.4	–1
Balance, End of Year	20.7	22.2	22.0	20.5	19.0	17.6	16.6
Military retirement fund							
Balance, start of year	77.7	90.5	102.7	114.9	124.5	134.6	145.4
Income:							
Interfund receipts:							
Interest	8.0	9.1	10.2	11.3	12.5	13.7	15.0
Other	28.0	27.4	27.6	25.3	25.9	26.8	27.9
Subtotal, income	36.0	36.5	37.7	36.6	38.4	40.5	42.9
Outgo:							
To the public	23.1	24.3	25.6	26.9	28.3	29.7	31.2
Intrabudgetary payments	.....	*	*	*	*	*	*
Subtotal, outgo	23.1	24.3	25.6	26.9	28.3	29.7	31.2
Change in fund balance:							
Surplus or deficit (–):							
Excluding interest	4.9	3.1	2.0	–1.7	–2.4	–3.0	–3.3
Interest	8.0	9.1	10.2	11.3	12.5	13.7	15.0
Subtotal, surplus or deficit (–)	12.9	12.2	12.2	9.7	10.1	10.8	11.7
Total, change in fund balance	12.9	12.2	12.2	9.7	10.1	10.8	11.7
Balance, end of year	90.5	102.7	114.9	124.5	134.6	145.4	157.1

Table 28–3. INCOME, OUTGO, AND BALANCES OF TRUST FUNDS—Continued

(In billions of dollars)

	1991 actual	1992 estimate	1993 estimate	1994 estimate	1995 estimate	1996 estimate	1997 estimate
Railroad retirement trust funds							
Balance, start of year	9.7	10.4	11.2	11.8	12.3	12.7	13.0
Income:							
Governmental receipts	3.9	3.8	3.8	3.9	3.7	3.7	3.7
Interfund receipts:							
Interest	1.0	0.8	0.8	0.9	0.9	0.9	0.9
Other	2.9	3.2	3.1	3.2	3.4	3.5	3.6
Intrafund receipts	3.5	3.4	3.6	3.7	3.8	4.0	4.1
Subtotal, income	11.3	11.2	11.4	11.7	11.8	12.0	12.3
Outgo:							
To the public	7.2	7.5	7.7	7.9	8.0	8.1	8.3
Intrabudgetary payments	2.9	3.0	3.2	3.3	3.4	3.6	3.7
Subtotal, outgo	10.1	10.5	10.9	11.2	11.4	11.7	12.0
Change in fund balance:							
Surplus or deficit (–):							
Excluding interest	0.2	–0.1	–0.4	–0.4	–0.5	–0.6	–0.6
Interest	1.0	0.8	0.8	0.9	0.9	0.9	0.9
Subtotal, surplus or deficit (–)	1.2	0.7	0.5	0.5	0.4	0.3	0.3
Adjustments:							
Other adjustments	–0.4	0.1	0.1	.....	.....	.....	.....
Total, change in fund balance	0.8	0.8	0.6	0.5	0.4	0.3	0.3
Balance, end of year	10.4	11.2	11.8	12.3	12.7	13.0	13.3
Unemployment trust fund							
Balance, start of year	50.7	47.8	38.4	38.3	42.1	48.6	57.2
Income:							
Governmental receipts	20.8	22.4	25.5	28.9	31.0	32.2	31.2
Proprietary receipts	*	0.1	0.2	0.4	0.5	0.5	0.6
Interfund receipts:							
Interest	4.3	3.3	2.5	2.4	2.6	3.0	3.5
Other	0.4	0.5	0.8	0.5	0.5	0.6	0.6
Subtotal, income	25.5	26.3	29.0	32.2	34.6	36.3	35.9
Outgo:							
To the public	28.4	35.7	29.1	28.4	28.1	27.7	28.0
Subtotal, outgo	28.4	35.7	29.1	28.4	28.1	27.7	28.0
Change in fund balance:							
Surplus or deficit (–):							
Excluding interest	–7.2	–12.7	–2.6	1.4	3.9	5.6	4.4
Interest	4.3	3.3	2.5	2.4	2.6	3.0	3.5
Subtotal, surplus or deficit (–)	–2.9	–9.4	–0.1	3.8	6.5	8.6	7.9
Adjustments:							
Other adjustments	–*	.....	.....	.....	.....	.....	.....
Total, change in fund balance	–2.9	–9.4	–0.1	3.8	6.5	8.6	7.9
Balance, end of year	47.8	38.4	38.3	42.1	48.6	57.2	65.1

Table 28–3. INCOME, OUTGO, AND BALANCES OF TRUST FUNDS—Continued

(In billions of dollars)

	1991 actual	1992 estimate	1993 estimate	1994 estimate	1995 estimate	1996 estimate	1997 estimate
Veterans life insurance trust funds							
Balance, start of year	12.4	12.7	12.9	13.0	13.1	13.1	13.1
Income:							
Proprietary receipts	0.4	0.4	0.3	0.3	0.3	0.3	0.3
Interfund receipts:							
Interest	1.1	1.1	1.1	1.1	1.1	1.1	1.0
Other	*	*	*	*	*	*	*
Subtotal, income	1.5	1.5	1.4	1.4	1.4	1.4	1.3
Outgo:							
To the public	1.2	1.3	1.3	1.3	1.4	1.4	1.4
Subtotal, outgo	1.2	1.3	1.3	1.3	1.4	1.4	1.4
Change in fund balance:							
Surplus or deficit (–):							
Excluding interest	–0.8	–0.9	–0.9	–1.0	–1.1	–1.1	–1.1
Interest	1.1	1.1	1.1	1.1	1.1	1.1	1.0
Subtotal, surplus or deficit (–)	0.3	0.2	0.1	0.1	*	–*	–0.1
Adjustments:							
Other adjustments	.....	–*	.....	.....	.....	.....	.....
Total, change in fund balance	0.3	0.2	0.1	0.1	*	–*	–0.1
Balance, end of year	12.7	12.9	13.0	13.1	13.1	13.1	13.0
Other trust funds							
Balance, start of year	25.7	29.6	31.6	33.8	35.9	38.8	41.1
Income:							
Governmental receipts	3.5	3.5	3.7	3.8	4.1	3.8	3.6
Proprietary receipts	1.5	1.5	1.8	1.9	2.1	2.2	1.9
Interfund receipts:							
Interest	0.5	0.5	0.5	0.6	0.6	0.5	0.6
Other	1.3	1.0	0.9	0.7	0.6	0.6	0.6
Intrafund receipts	*	.....	.....	.....	.....	.....	.....
Subtotal, income	6.8	6.5	7.0	7.0	7.4	7.1	6.7
Outgo:							
To the public	2.8	4.1	4.4	4.5	4.2	4.4	4.2
Intrabudgetary payments	0.3	0.3	0.4	0.4	0.4	0.4	0.5
Subtotal, outgo	3.1	4.5	4.8	4.9	4.6	4.8	4.7
Change in fund balance:							
Surplus or deficit (–):							
Excluding interest	3.2	1.5	1.7	1.5	2.2	1.8	1.4
Interest	0.5	0.5	0.5	0.6	0.6	0.5	0.6
Subtotal, surplus or deficit (–)	3.7	2.0	2.2	2.1	2.9	2.3	2.0
Adjustments:							
Transfers/lapses (net)	*	–*	–*	.....	.....	.....	.....
Other adjustments	0.2	–0.1	*	.....	.....	.....	.....
Total, change in fund balance	3.9	1.9	2.2	2.1	2.9	2.3	2.0
Balance, end of year	29.6	31.6	33.8	35.9	38.8	41.1	43.1

Table 28–3. INCOME, OUTGO, AND BALANCES OF TRUST FUNDS—Continued

(In billions of dollars)

	1991 actual	1992 estimate	1993 estimate	1994 estimate	1995 estimate	1996 estimate	1997 estimate
Total Trust Funds							
Balance, start of year	784.7	896.8	995.3	1,115.0	1,248.1	1,397.9	1,562.0
Income:							
Governmental receipts	421.4	436.9	473.8	508.0	537.9	570.5	600.8
Proprietary receipts	26.6	26.5	28.9	30.6	32.9	34.0	34.5
Interfund receipts:							
Interest	71.2	77.2	82.4	89.3	96.8	105.6	115.2
Other	111.8	118.2	123.4	129.3	142.9	156.1	170.5
Subtotal, income	631.1	658.9	708.4	757.2	810.6	866.2	921.1
Outgo:							
To the public	510.8	556.7	585.3	620.1	656.7	697.8	740.9
Intrabudgetary payments	7.9	3.7	3.8	4.0	4.1	4.3	4.5
Subtotal, outgo	518.8	560.3	589.1	624.1	660.8	702.1	745.4
Change in fund balance:							
Surplus or deficit (–):							
Excluding interest	41.6	21.3	36.9	43.8	52.9	58.5	60.5
Interest	70.7	77.2	82.4	89.3	96.8	105.6	115.2
Subtotal, surplus or deficit (–)	112.3	98.5	119.3	133.1	149.7	164.1	175.7
Adjustments:							
Transfers/lapses (net)	*	–0.5	–*	.....	.....	.....	.....
Other adjustments	–0.2	0.4	0.5	.....	.....	.....	.....
Total, change in fund balance	112.1	98.5	119.8	133.1	149.7	164.1	175.7
Balance, end of year	896.8	995.3	1,115.0	1,248.1	1,397.9	1,562.0	1,737.7

*$50 million or less.

29. Physical and Other Capital Presentation

29. PHYSICAL AND OTHER CAPITAL PRESENTATION

FEDERAL PHYSICAL CAPITAL AND OTHER CAPITAL OUTLAYS

The importance and role of Federal investment for the future of the Nation are discussed broadly in several chapters in Part One. In contrast this section classifies Federal outlays into several more technically defined categories of physical and other capital. As noted in the introduction to Part Three, this presentation is an alternative way of dividing the consolidated budget totals, as opposed to a replacement of the existing structure. This presentation has been a part of the budget for many years.

The major categories for physical and other capital are: major public physical capital, conduct of research and development, conduct of education and training, financial capital outlays, and other capital. The technical presentation in this section provides continuity with previously published analyses, is consistent with outlays for physical capital, conduct of research and development, and conduct of education and training that appear in the *Historical Tables* (to be published subsequently), and presents detailed data by program. For the first time, this section includes estimates of the stock of federally financed physical capital and the stock of research and development.

The section that follows this one, "Supplemental Physical Capital Information," is provided in accordance with the requirements of the Federal Capital Investment Program Information Act of 1984. It projects outlays for ten years on a current services basis and presents other data according to categories specified in the Act. For consistency, the totals match the category "major public physical capital" used in this section.

Capital outlays are outlays that yield long-term benefits. They take several forms and are made for many purposes. They are in the form of grants to State and local governments and direct Federal outlays. They can be for physical capital, which yields a stream of services over a period of years; or for research, development, education, and training, which are less tangible but also provide long-term benefits. They can also be for loans, which yield monetary returns, although the loans usually provide subsidies to the borrowers as well and therefore the face amount of the loans overstates the value of these assets.

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

- For some grants to State and local governments, the recipient jurisdiction, not the Federal Government, ultimately determines whether the money is used to finance capital or current programs. This analysis classifies all of the outlays in the category where the recipient jurisdictions are expected to spend most of the money. Hence, shared revenues are classified as current spending, although some may be spent by recipient jurisdictions on physical capital. Community development block grants are classified as physical capital, although some may be spent for current purposes.
- Some spending could be classified into more than one category. For example, grants for construction of education facilities finance the acquisition of physical assets, but they also contribute to the provision of education and training. To avoid double counting, the outlays are classified in the category that is most commonly recognized as capital. Consequently the conduct of education and training does not include the cost of education facilities, because these facilities are included in the category of construction and rehabilitation of physical assets. Similarly, the purchase of equipment for research and development is included as acquisition of equipment, not conduct of research and development.

This section has three parts:

- the composition of Federal capital outlays;
- federally financed capital stocks; and
- detailed tables.

Composition of Federal Capital Outlays

The composition of Federal capital outlays consistent with the Administration's budget is shown in Table 29–1. These outlays are estimated to be $256.1 billion in 1993, $8.3 billion or 3 percent more than the 1992 estimate. This section initially discusses physical capital, such as construction, rehabilitation, and the acquisition of major equipment, and discusses the more marginal categories (in terms of classification) at the end, such as purchases of agricultural commodities and international development activities. These data are shown in more detail in tables 29–5 and 29–6.

Outlays for major public physical capital (hereafter referred to as physical capital in the text) are estimated to be $126.9 billion in 1993, $0.8 billion less than the 1992 estimate of $127.8 billion. This capital includes primarily outlays for construction, rehabilitation, and major equipment. Direct physical capital outlays by the Federal Government are estimated to be $97.3 billion in 1993, and grants to State and local governments for physical capital are estimated to be $29.6 billion.

Direct physical capital outlays by the Federal Government are primarily for national defense, estimated to be $76.5 billion in 1993. Almost all of this, or an estimated $69.5 billion, is for the procurement of weapons and other military equipment, and the remainder, $7.0 billion, is primarily for construction of military bases and family housing for military personnel.

Table 29–1. **COMPOSITION OF FEDERAL CAPITAL OUTLAYS**

(In billions of dollars)

	1991 actual	1992 estimate	1993 estimate
Major public physical capital:			
Direct:			
National defense	87.2	80.4	76.5
Nondefense	16.3	19.2	20.8
Subtotal, major public direct physical capital	103.5	99.6	97.3
Grants to State and local governments	26.5	28.1	29.6
Subtotal, major public physical capital	**130.1**	**127.8**	**126.9**
Other physical capital (nondefense, direct)	4.9	6.0	6.2
Conduct of research and development:			
National defense	41.7	44.6	46.2
Nondefense	24.3	26.8	28.8
Subtotal, conduct of research and development	66.0	71.4	75.1
Conduct of education and training:			
Direct	17.8	17.3	20.7
Grants to State and local governments	18.1	20.7	21.8
Subtotal, conduct of education and training	35.8	38.0	42.5
Loans and other financial capital	−9.6	−1.8	−2.1
Commodity inventories	0.3	−1.1	−0.2
Other	6.4	7.5	7.7
Total, Federal capital outlays	**233.8**	**247.8**	**256.1**
MEMORANDUM			
National defense	129.5	125.6	123.0
Nondefense	104.3	122.3	133.2

Outlays for direct physical capital for nondefense purposes are estimated to be $20.8 billion in 1993, $1.6 billion more than the 1992 estimate. The 1993 outlays include $13.7 billion for construction and rehabilitation. These outlays are largely for water, power, and natural resources projects of the Corps of Engineers, the Department of Interior, the Tennessee Valley Authority, the power administrations in the Department of Energy, and the construction and rehabilitation of veterans hospitals and Postal Service facilities. Outlays for the acquisition of major equipment are estimated to be $7.1 billion in 1993. The largest items are for the space program and the air traffic control system.

Grants to State and local governments for physical capital are estimated to be $29.6 billion in 1993, $1.5 billion more than the 1992 estimate. More than half of these outlays, or $16.9 billion in 1993, are to assist with construction of the Interstate Highway System and other major highways. Other major grants for physical capital are for sewage treatment plants, community development, airports, and mass transit. Information on total grants to State and local governments, both for capital and for other purposes, is available in this volume in Chapter 21, "Providing Federal Aid to State and Local Governments."

Outlays for other physical capital (nondefense, direct) are estimated to be $6.2 billion in 1993. This category includes conservation programs for the improvement of land, the purchase and sale of assets, and other activities.

Outlays for the conduct of research and development are estimated to be $75.1 billion in 1993, $3.6 billion more than the 1992 estimate. These outlays are devoted to increasing our basic scientific knowledge and promoting related research and development activities. They increase our national security, improve the marginal productivity of capital and labor for both public and private purposes, and enhance the quality of life. More than three-fifths of the outlays for the conduct of research and development, an estimated $46.2 billion in 1993, are for national defense. Physical capital for research and development is included in the physical capital category.

Nondefense outlays for the conduct of research and development are estimated to be $28.8 billion in 1993, $2.0 billion or 8 percent more than the 1992 estimate. This is almost entirely direct spending by the Federal Government, and is largely for the space programs, the National Science Foundation, health research, and research for nuclear and non-nuclear energy facilities. These programs as well as others are discussed in Chapter 6, "Enhancing Research and Development and Expanding the Human Frontier."

Outlays for the conduct of education and training are estimated to be $42.5 billion in 1993, $4.5 billion more than the 1992 estimate. These outlays add to the stock of human capital by developing a more skilled and productive labor force. Grants to State and local governments for this category are estimated to be $21.8 billion in 1993, more than half of the total. They are primarily for the disadvantaged and the handicapped, and for vocational and adult education. Direct education and training outlays by the Federal Government are estimated to be $20.7 billion in 1993, $3.4 billion more than the 1992 estimate. Programs in this category are primarily aid for higher education through student financial assistance, loan subsidies, the veterans GI bill, and health training programs.

This category does not include outlays for education and training of Federal civilian and military employees. Outlays for education and training that are for physical capital, conduct of research and development, and loans are included in those categories.

Loans[1] and other financial capital were -$9.6 billion in 1991. These include direct loan disbursements for new loans, repayments of previous loans, the sale of loan assets, and related activities, largely contributions to international development banks. Because of credit reform legislation enacted in 1990, loan data in this category include activity only for loans obligated in 1991 or earlier. For loans, repayments, sales, and other adjustments are expected to exceed disbursements by $11.2 billion in 1991. The major loan activities are for the sale of military equipment to foreign countries, promotion of exports and housing, and assistance to farmers and college students. The Federal Credit Reform Act of 1990 has changed the treatment of loans obligated or guarantees committed in 1992 or later. For these direct and guaranteed loans, only the estimated subsidy value of the assistance is included as budget outlays. The subsidies are not classified in this loan category but are classified according to their program purpose, such as for construction, education and training, or non-capital outlays. The unsubsidized cash flows are not included in the budget. More information on the new credit reform concepts is available in Chapter 13, "Identifying Long-Term Obligations and Reducing Underwriting Risks", and Appendix One, Chapter 3, "Federal Credit Programs."

Sales of commodity inventories are estimated to exceed purchases by $0.2 billion in 1993. These are entirely for direct Federal nondefense purposes. Outlays in this category are for the purchase or sale of agricultural products pursuant to farm price support programs, purchases of oil for the strategic petroleum reserve, and for other purposes.

Other capital outlays are for the collection of information, such as by the Bureau of the Census, and for foreign economic assistance grants for general economic development or humanitarian needs. These outlays are estimated to be $7.7 billion in 1993.

Federally Financed Capital Stocks

Capital stocks are the amount of capital available for productive use. This section presents very rough measures of two different kinds of Federal capital stocks: the stock of public physical capital financed by the Federal Government and the stock of research and development (R&D) financed by the Federal Government.

Federal outlays for physical assets are an investment that adds to the Nation's capital stock of tangible assets, such as roads, bridges, buildings, missiles, and aircraft carriers. These assets deliver a flow of services over their lifetime. The capital depreciates as the asset is used, wears out, or becomes obsolete.

Federal outlays for the conduct of research and development are an investment that adds to an "intangible" asset, the Nation's stock of knowledge. Although financed by the Federal Government, the research and development can be performed by Federal or State government laboratories, universities and other nonprofit organizations, or private industry. The research and development can cover a wide range of endeavors from the investigation of subatomic particles to the exploration of outer space; it can be "basic" research without specific applications in mind, or it can have a highly specific practical use. Like physical assets, the capital stock of R&D provides services over a number of years and depreciates as it becomes outdated.

Both capital stocks were estimated in constant fiscal year 1987 dollars using the perpetual inventory method. In this method, the estimates are based on the sum of net investment in prior years, rather than, for example, a survey of the current market worth of the asset. Each year's Federal outlays are treated as gross investment, adding to the capital stock; depreciation and discards reduce the capital stock. Gross investment less depreciation and discards is net investment.

The capital stock estimates are only rough approximations. There are substantial margins for estimating differences, and the estimates provide a basis only for broad generalization. The sources of error include:

- *The historical outlay series.*—The historical outlay series for physical capital was extended back from 1940 to 1915 using data from selected sources. There are no consistent outlay data on physical capital for this earlier period, and the estimates are approximations. In addition, the historical outlay series for physical capital extending back to 1940 may be incomplete. The historical outlay series for the conduct of research and development began in the early 1950s and required selected sources to be extended back to 1940. In addition, separate outlay data for basic research and applied R&D were not available for any years and had to be estimated according to obligations and budget authority data.
- *Price adjustments.*—The replacement cost of the Federal stock of physical and R&D capital has increased through time, but the rate of increase is not known exactly. An estimate of costs in fiscal year 1987 prices was made through the application of the National Income and Product Accounts deflator series, but these estimates should be considered only approximations of the costs of replacing these assets in 1987.
- *Depreciation estimates.*—The useful lives of physical and R&D capital, as well as the rate at which they depreciate, are very uncertain. This is compounded by using estimated lives for broad classes of assets, which do not apply uniformly to all the components of each group. As a result, the depreciation estimates should also be considered approximations.

Research continues on the best methods to estimate physical capital stocks and research and development stocks. The estimates in the following tables could change as better information becomes available on the underlying investment data and as improved methods

[1] Includes offsets for writeoffs of defaulted loans, which do not directly affect outlays. In such cases, there is an offsetting adjustment in the category that is not for capital outlays.

are developed for estimating the stocks based on those data.

The Stock of Physical Capital

This section presents data on physical capital assets and estimates of the depreciation on these assets, which is the reduction in value due to wear and tear, obsolescence, and other factors.

For many years, current and constant-dollar data on the value of most forms of both public and private physical capital—e.g., roads, factories, and housing—have been estimated by the Department of Commerce, Bureau of Economic Analysis, and published in the *Survey of Current Business*. (See pp. 31–32 of the October 1990 issue and the references therein.) However, the Commerce data are not directly linked to the Federal budget and do not include estimates for the years covered by the budget. For budgetary purposes, OMB prepared separate estimates.

Data sources.—The estimates were developed from the OMB historical data base for physical capital outlays and grants to State and local governments for physical capital. These are the same major public physical capital outlays presented in the previous section. This data base extends back to 1940 and was supplemented by rough estimates for 1915–1939.

Deflators.—The deflators for Federal, State, and local purchases of durables and structures were used going back to 1940. There are no specific price indices for public purchases of durables and structures for 1915 through 1939, and estimates were made on the basis of Census Bureau historical statistics on constant price public capital formation. Using these deflators, the outlays were converted to constant fiscal year 1987 dollars.

Depreciation.—The resulting series was adjusted for depreciation. The data were depreciated on a straight-line basis over the following assumed useful lives: 46 years for water and power projects; 40 years for other direct Federal construction and capital financed by grants (primarily highways); 16 years for major nondefense equipment; and 14 years for defense procurement.

Trends.—Table 29–2 shows the value of the total net federally financed physical capital stock in constant fiscal year 1987 dollars. In 1991, that stock was estimated to be $1,272 billion. National defense capital stock accounted for $608 billion or 48 percent of the total, and nondefense stocks accounted for $664 billion, or 52 percent of the total. Based on proposed outlays in this budget, the stock is estimated to increase to $1,292 billion in 1993.

For national defense, the stocks declined steadily from 1970 to 1982, as depreciation from earlier years exceeded new capital investment in military construction and procurement. Since 1982 the stock of defense capital has grown steadily, although the rate of growth is declining. From 1982 to 1990 the stock grew at an average annual rate of 5.0 percent, but in 1991 it grew only 2.0 percent.

For nondefense, 41 percent of the stock in 1970 was capital owned by the Federal Government, and 59 percent was capital owned by State and local governments but financed by Federal grants to these governments. By 1991 this ratio had changed, with 32 percent of the stock for direct Federal capital and 68 percent for capital owned by State and local governments.

The nondefense stocks grew steadily from 1970 to 1991, increasing at an average annual rate of growth

Table 29–2. **NET STOCK OF FEDERALLY FINANCED PHYSICAL CAPITAL**

(In billions of constant FY 1987 dollars)

	Total	National Defense	Total Non-Defense	Direct Federal Capital			Capital Financed by Federal Grants				
				Total	Water and Power	Other	Total	Transportation	Community and Regional	Natural Resources	Other
1970	989	625	364	149	90	59	215	164	26	11	15
1971	992	613	380	150	92	59	229	172	30	12	16
1972	987	592	396	153	94	59	243	179	35	13	16
1973	974	563	411	155	95	60	256	186	39	15	17
1974	958	533	425	158	97	61	268	191	42	18	17
1975	945	507	438	160	99	61	278	195	45	21	17
1976	938	484	454	162	101	61	292	201	48	25	18
1977	934	456	478	165	104	61	313	208	55	32	18
1978	936	437	499	168	107	61	330	213	63	37	18
1979	941	423	518	172	110	62	346	218	69	42	17
1980	946	410	536	175	112	63	362	224	74	46	17
1981	954	402	551	177	113	64	374	230	78	50	16
1982	964	402	562	179	113	66	383	233	81	53	16
1983	983	412	571	180	114	66	391	237	84	55	15
1984	1,014	431	583	182	113	69	401	243	86	57	15
1985	1,055	458	597	186	113	72	412	250	89	59	14
1986	1,099	488	611	189	113	76	422	257	90	61	14
1987	1,145	523	622	193	113	79	430	263	91	62	13
1988	1,185	551	634	198	114	84	436	268	92	64	13
1989	1,221	577	644	202	113	89	442	273	92	64	13
1990	1,250	596	654	207	114	93	447	278	92	65	12
1991	1,272	608	664	211	114	98	452	283	92	66	12
1992 est.	1,286	610	676	218	113	105	458	288	92	66	11
1993 est.	1,292	604	688	225	114	111	463	294	92	67	11

of 3.0 percent from 1970 to 1990. The value of the direct Federal stock grew at an average annual rate of 1.7 percent during these 20 years, while the value of the capital stock financed by grants grew at more than twice this rate, at 3.7 percent per year on the average.

The growth in the stock of physical capital financed by grants has come in several areas. The growth in the physical stock for transportation is largely grants for highways, including grants for the Interstate Highway System. The growth in community and regional development occurred largely with the enactment of the community development block grant in the early 1970s. The value of this capital stock has been unchanged in the past few years. The growth in the capital stock in the natural resources area occurred primarily because of construction grants for sewage treatment facilities, a program that is being phased out. The value of this federally financed stock is also relatively stable, as responsibility for this area shifts back to State and local governments.

Table 29–3 shows nondefense capital outlays both gross and net of depreciation for selected years from 1960 to 1985 and annually from 1985 to 1993. The net capital outlays in this table are the change in the net nondefense physical capital stock displayed in Table 29–2.

The Stock of Research and Development

This section presents data on the stock of research and development, taking into account adjustments for its depreciation or obsolescence.

Data sources.—The estimates were developed first of all from a data base for the conduct of research and development largely consistent with the data in *Historical Tables,* to be published subsequently. Although there is not a consistent time series on basic and applied R&D for defense and nondefense outlays back to 1940, it was possible to estimate the data using obligations and budget authority. The data are for the conduct of R&D and exclude outlays for physical capital for research and development, because they are included in the section on physical capital.

Deflators.—Nominal outlays were deflated by the implicit price deflator for gross domestic product (GDP) in 1987 dollars to obtain estimates of constant dollar R&D spending. This is virtually the same as the gross national product implicit price deflator used by the National Science Foundation to deflate R&D spending.

Depreciation.—The appropriate depreciation rate of intangible R&D capital is even more uncertain than that of physical capital. Empirical evidence on the issue is inconclusive. It was assumed that basic research capital does not depreciate while applied research and development capital has a ten percent geometric depreciation. These are the same assumptions used in a study published by the Bureau of Labor Statistics estimating the R&D stock financed by private industry. (See U.S. Department of Labor, Bureau of Labor Statistics, *The Impact of Research and Development on Productivity Growth,* Bulletin 2331, September 1989.)

Trends.—As shown in Table 29–4, the R&D capital stock created by Federal outlays is estimated to be $592 billion in 1991 in constant 1987 dollars. About one-third of the R&D stock is the stock of basic research knowledge; about two-thirds is the stock of applied research and development.

Based on proposed outlays in this Budget, the constant dollar stock of federally financed R&D is projected to rise to $624 billion by 1993. The basic and applied shares in 1993 are projected to be about the same as those in 1991.

The total federally financed R&D stock in 1991 was roughly evenly divided between the defense and nondefense stocks. Although investment in defense R&D has exceeded that of nondefense R&D in almost every year, the two stocks are about the same because of the different emphasis between basic research and

Table 29–3. **COMPOSITION OF GROSS AND NET FEDERAL AND FEDERALLY FINANCED NONDEFENSE PUBLIC PHYSICAL CAPITAL IN CONSTANT PRICES**

(Outlays in billions of constant FY 1987 dollars)

Year	Total nondefense capital			Direct Federal capital					Capital financed by Federal grants						
							Composition of net capital					Composition of net capital			
	Gross	Depreciation	Net	Gross	Depreciation	Net	Water and power	Other	Gross	Depreciation	Net	Transportation (mainly highways)	Community and regional development	Natural resources and environment	Other
Five year intervals:															
1960	21.0	8.1	12.9	7.3	4.4	2.9	1.5	1.4	13.7	3.7	10.0	10.2	−0.3	−0.2	0.3
1965	29.9	10.9	19.1	10.5	5.4	5.1	2.2	2.9	19.5	5.5	14.0	12.4	1.4	−*	0.3
1970	29.2	14.3	14.9	7.3	6.4	0.9	1.1	−0.2	21.9	7.9	14.0	8.6	3.8	0.4	1.2
1975	29.9	17.4	12.5	9.3	7.2	2.2	2.2	*	20.6	10.3	10.3	3.8	2.9	3.3	0.3
1980	37.7	19.9	17.7	10.0	7.5	2.6	1.5	1.0	27.6	12.4	15.2	6.1	4.8	4.8	−0.5
Annual data:															
1985	37.8	23.4	14.3	12.1	8.2	3.9	0.2	3.7	25.7	15.2	10.5	6.7	2.3	1.9	−0.4
1986	37.8	24.3	13.6	11.4	8.4	3.0	−0.2	3.2	26.4	15.9	10.6	7.5	1.6	1.9	−0.5
1987	36.3	25.0	11.3	12.5	8.6	3.9	0.1	3.8	23.7	16.4	7.3	5.4	0.9	1.5	−0.5
1988	38.0	25.8	12.2	14.3	8.9	5.4	0.3	5.1	23.7	16.9	6.8	5.4	0.7	1.0	−0.4
1989	36.1	26.7	9.4	13.3	9.3	4.0	−0.2	4.3	22.8	17.5	5.3	4.6	0.4	0.7	−0.4
1990	37.6	27.6	10.0	14.1	9.6	4.4	0.3	4.2	23.5	18.0	5.5	5.2	*	0.7	−0.4
1991	38.7	28.6	10.1	14.9	10.1	4.8	−0.3	5.1	23.8	18.5	5.3	5.0	−0.1	0.8	−0.5
1992 estimate	41.4	29.6	11.9	17.0	10.5	6.5	−0.1	6.6	24.5	19.0	5.4	5.4	−0.1	0.5	−0.4
1993 estimate	42.7	30.6	12.1	17.8	11.0	6.8	0.3	6.5	24.9	19.6	5.3	5.3	−0.2	0.3	−0.1

*$50 million or less.

Table 29–4. NET STOCK OF FEDERALLY FINANCED RESEARCH AND DEVELOPMENT[1]

(In billions of constant FY 1987 dollars)

Fiscal Year	National Defense			Nondefense			Total Federal		
	Total	Basic Research	Applied Research and Development	Total	Basic Research	Applied Research and Development	Total	Basic Research	Applied Research and Development
1970	211	14	197	162	45	118	373	59	315
1971	214	15	199	170	49	122	384	64	320
1972	216	16	201	178	54	124	394	69	325
1973	219	16	202	195	58	127	404	74	329
1974	220	17	203	191	63	129	411	80	332
1975	221	18	203	197	66	130	418	84	333
1976	220	18	202	204	71	133	424	89	334
1977	220	19	201	210	76	135	430	95	336
1978	220	20	200	217	81	137	437	100	336
1979	219	20	199	224	86	138	443	106	337
1980	220	21	199	231	92	139	451	113	338
1981	222	22	200	237	98	139	459	119	339
1982	226	22	203	240	103	137	466	126	340
1983	232	23	208	243	110	133	474	133	341
1984	238	24	214	246	117	129	484	141	343
1985	247	25	222	249	124	126	496	148	348
1986	260	26	235	253	131	122	514	157	357
1987	272	27	246	257	138	119	530	165	365
1988	283	27	256	263	146	116	546	174	372
1989	294	28	266	270	155	115	564	183	381
1990	301	29	272	278	163	115	579	192	387
1991	305	30	275	287	172	115	592	202	390
1992 est.	310	31	280	298	182	116	608	212	396
1993 est.	316	32	284	309	191	117	624	223	401

[1] Excludes outlays for physical capital for research and development, which are included in Tables 29–2 and 29–3.

applied R&D. Defense R&D outlays are heavily concentrated in applied research and development, which is assumed to depreciate at a 10 percent geometric rate. In contrast, a greater share of nondefense R&D is for basic research, which is assumed not to depreciate. Therefore, the total defense stock depreciates much more quickly than the total nondefense stock.

The defense R&D stock rose slowly during the 1970s, as gross outlays for R&D trended down in constant dollars and the stock created in the 1960s depreciated. A renewed emphasis on defense R&D spending from 1980 through 1989 contributed to a more rapid growth of the R&D stock. Since then, gross defense R&D outlays have tapered off, depreciation has grown and, as a result, net defense R&D stock has grown more slowly.

The growth of the nondefense R&D stock slowed from the 1970s to the late 1980s. Investment trended down during much of the 1980s, and about three-fourths of new outlays went to replacing depreciated R&D. Since 1987, however, gross nondefense R&D outlays have been on an upward trend while depreciation has edged down. As a result, the net nondefense R&D capital stock has grown more rapidly.

Detailed Tables

Tables 29–5 and 29–6 provide detail on the composition of physical and other capital outlays. They provide two basic displays. Table 29–5 shows data on national defense and nondefense capital outlays, and Table 29–6 shows data on capital grants for State and local governments and for direct Federal capital outlays.

Table 29–5. **DETAIL OF FEDERAL CAPITAL OUTLAYS BY DEFENSE AND NONDEFENSE**

(In millions of dollars)

	1991 actual	1992 estimate	1993 estimate
CAPITAL OUTLAYS:			
NATIONAL DEFENSE:			
Major public physical capital:			
Construction and rehabilitation:			
Military construction	2,972	3,666	5,064
Family housing	402	505	702
Atomic energy defense activities and other	1,282	1,231	1,284
Subtotal, construction and rehabilitation	4,656	5,402	7,050
Acquisition of major equipment:			
Procurement	82,058	74,356	68,898
Atomic energy defense activities and other	617	741	617
Subtotal, acquisition of major equipment	82,676	75,097	69,514
Subtotal, major public physical capital	87,331	80,499	76,565
Other capital outlays:			
Conduct of research and development			
Defense military	35,330	37,525	39,529
Atomic energy and other	6,339	7,097	6,698
Subtotal, defense research and development	41,669	44,622	46,228
Other outlays	517	443	160
Subtotal, other capital outlays	42,186	45,065	46,388
Subtotal, national defense capital outlays	**129,517**	**125,563**	**122,953**
NONDEFENSE:			
Major public physical capital:			
Construction and rehabilitation:			
Highways	14,214	15,752	16,894
Mass transportation	3,218	3,150	2,878
Rail transportation	46	141	201
Air transportation	1,598	1,629	1,854
Water transportation	135	136	122
Community development block grants	2,976	3,125	3,339
Other community and regional development	939	1,060	1,002
Pollution control and abatement	3,494	3,384	3,401
Water resources	2,540	2,567	2,322
Other natural resources and environment	1,008	1,241	1,359
Energy	2,304	2,658	3,562
Veterans hospitals and other health	916	1,195	1,292
Postal Service	1,277	1,777	780
Federal buildings fund	600	874	1,345
Other programs	1,397	1,866	2,309
Subtotal, construction and rehabilitation	36,664	40,555	42,659
Acquisition of major equipment:			
Air transportation	1,579	1,838	2,099
Other transportation	486	411	320
Space flight, research, and supporting activities	1,841	1,680	1,431
General science and basic research	170	204	279
Veterans medical care	449	541	550
Postal Service	85	519	1,266
General supply fund	346	418	401
Other	523	527	735
Subtotal, acquisition of major equipment	5,479	6,136	7,080
Other physical assets (grants)	603	591	641
Subtotal, major public physical capital	42,745	47,282	50,379
Other capital outlays:			
Other physical assets (direct)	4,855	6,005	6,161
Conduct of research and development:			
General science, space, and technology:			
NASA	6,277	6,363	6,751
National Science Foundation	1,631	1,840	2,056
Other general science	834	952	1,250
Subtotal, general science, space, technology	8,741	9,154	10,057
Energy	2,501	3,072	3,231
Transportation:			
Department of Transportation	333	407	455

Table 29–5. **DETAIL OF FEDERAL CAPITAL OUTLAYS BY DEFENSE AND NONDEFENSE—Continued**

(In millions of dollars)

	1991 actual	1992 estimate	1993 estimate
NASA	795	909	959
Subtotal,transportation	1,127	1,316	1,414
Health:			
National Institutes of Health	7,257	7,929	8,542
All other health	1,272	1,489	1,613
Subtotal, health	8,528	9,418	10,155
Agriculture	990	1,069	1,116
Natural resources and environment	1,323	1,538	1,523
All other research and development	1,085	1,256	1,350
Subtotal, conduct of research and development	24,296	26,824	28,847
Conduct of education and training:			
Education, training, employment and social services:			
Elementary, secondary, and vocational education	11,301	12,975	13,761
Higher education	12,337	11,213	14,178
Research and general education aids	1,546	1,677	1,780
Training and employment	3,863	4,138	4,238
Social services	3,146	3,502	3,731
Subtotal, education, training, and social services	32,193	33,505	37,689
Income security	655	948	1,036
Veterans education, training, and rehabilitation	803	1,068	1,231
Veterans and other healthtraining	1,327	1,496	1,474
Other education and training	753	867	935
Subtotal, conduct of education and training	35,730	37,883	42,364
Loans and other financial capital:			
Loans:			
International affairs	−10,814	−2,337	−2,545
Agriculture	−3,697	−2,183	−960
Mortgage credit	3,381	1,004	−304
Deposit insurance	−868	41	31
Other advancement of commerce	−98	−190	−260
Transportation	−64	91	91
Disaster relief	50	−149	93
Other community and regional development	331	201	352
Education	−396	−100	−102
Other	972	195	*
Subtotal, loans	−11,203	−3,426	−3,604
Other financial capital:			
International development	1,430	1,571	1,487
Other	136	72	87
Subtotal, other financial capital	1,566	1,642	1,574
Subtotal, loans and other financial capital	−9,637	−1,784	−2,031
Commodity inventories:			
Agriculture	647	−1,201	−171
Strategic petroleum reserve	−420	137	188
Subtotal, commodity inventories	227	−1,064	17
Other outlays:			
Collection of information	2,096	2,429	2,444
International development	3,983	4,687	5,001
Subtotal, other outlays	6,079	7,116	7,445
Subtotal, other capital outlays	61,550	74,980	82,802
Subtotal, nondefense capital outlays	**104,295**	**122,262**	**133,181**
Total, capital outlays	**233,812**	**247,825**	**256,135**

*$500 thousand or less.

Table 29–6. **DETAIL OF FEDERAL CAPITAL OUTLAYS BY GRANTS AND DIRECT FEDERAL PROGRAMS**

(In millions of dollars)

	1991 actual	1992 estimate	1993 estimate
CAPITAL OUTLAYS:			
GRANTS:			
Major public physical capital:			
Construction and rehabilitation:			
Highways	14,197	15,695	16,867
Mass transportation	3,218	3,150	2,878
Rail transportation	8	14	30
Air transportation	1,541	1,556	1,759
Pollution control and abatement	2,714	2,540	2,509
Other natural resources and environment	178	231	170
Community development block grants	2,976	3,125	3,339
Other community and regional development	759	862	775
Other construction	336	382	634
Subtotal, construction and rehabilitation	25,927	27,555	28,961
Other physical assets	603	591	641
Subtotal, major public physical capital	26,529	28,145	29,602
Other capital outlays:			
Conduct of research and development	401	434	459
Conduct of education and training:			
Elementary, secondary, and vocational education	10,444	12,138	12,914
Higher education	79	106	99
Research and general education aids	478	524	508
Training and employment	2,985	3,145	3,191
Social services	3,045	3,384	3,615
Other	1,033	1,372	1,458
Subtotal, conduct of education and training	18,063	20,670	21,785
Collection of information	83	81	58
Subtotal, other capital outlays	18,548	21,185	22,302
Subtotal, grants for capital outlays	**45,077**	**49,330**	**51,903**
DIRECT FEDERAL PROGRAMS:			
Major public physical capital:			
Construction and rehabilitation:			
National defense	4,546	5,316	7,028
Water resource projects	2,408	2,401	2,231
Other natural resources and environment	1,744	2,020	2,171
Energy	2,304	2,658	3,562
Transportation	248	392	415
Veterans hospitals and other health facilities	877	1,149	1,232
Postal Service	1,277	1,777	780
Federal Prison System	268	250	442
Federal buildings fund	600	874	1,345
Other construction	1,123	1,565	1,543
Subtotal, construction and rehabilitation	15,393	18,402	20,748
Acquisition of major equipment:			
National defense	82,676	75,097	69,514
General science and basic research	170	204	279
Space flight, research, and supporting activities	1,841	1,680	1,431
Energy	269	337	369
Postal Service	85	519	1,266
Air transportation	1,579	1,838	2,099
Water transportation (Coast Guard)	294	283	266
Hospital and medical care for veterans	449	541	550
General supply fund	346	418	401
Other	446	319	419
Subtotal, acquisition of major equipment	88,155	81,233	76,595
Subtotal, major public physical capital	103,548	99,635	97,343
Other capital outlays:			
Other physical assets	4,855	5,999	6,155
Conduct of research and development	65,563	71,011	74,616
Conduct of education and training:			
Elementary, secondary, and vocational education	857	837	847
Higher education	12,258	11,107	14,079
Research and general education aids	1,068	1,153	1,272

Table 29–6. **DETAIL OF FEDERAL CAPITAL OUTLAYS BY GRANTS AND DIRECT FEDERAL PROGRAMS—Continued**

(In millions of dollars)

	1991 actual	1992 estimate	1993 estimate
Training and employment	879	993	1,047
Health	608	739	675
Hospital and medical care for veterans	719	756	799
Veterans education, training, and rehabilitaion	803	1,068	1,231
Other	578	672	758
Subtotal, conduct of education and training	17,768	17,325	20,707
Loans and other financial capital:			
Loans:			
International affairs	−10,814	−2,337	−2,545
Energy supply	2,080	421	−397
Agriculture	−3,697	−2,183	−960
Mortgage credit	3,381	1,004	−304
Deposit insurance	−868	41	31
Other advancement of commerce	−98	−190	−260
Transportation	−64	91	91
Disaster relief and insurance	50	−149	93
Higher education	−396	−100	−102
Veterans benefits and services	−226	−501	−245
Housing assistance	−34	69	13
Other	−517	407	932
Subtotal, loans	−11,203	−3,426	−3,652
Other financial capital	1,566	1,642	1,574
Subtotal, loans and other financial capital	−9,637	−1,784	−2,079
Commodity inventories:			
Strategic petroleum reserve	−420	137	190
Commodity Credit Corporation	647	−1,201	−171
Other	82	3	−212
Subtotal, commodity inventories	309	−1,061	−193
Collection of information	2,013	2,348	2,386
International development	4,317	5,022	5,296
Subtotal, other capital outlays	85,187	98,859	106,889
Subtotal, direct Federal capital outlays	**188,735**	**198,495**	**204,231**
Total, capital outlays	**233,812**	**247,825**	**256,135**

SUPPLEMENTAL PHYSICAL CAPITAL INFORMATION

Introduction

The Federal Capital Investment Program Information Act of 1984 (Title II of Public Law 98–501; hereafter referred to as the Act) requires that the budget include projections of Federal physical capital spending and information regarding recent assessments of public civilian physical capital needs. This section is submitted to fulfill that requirement.

Data on historical trends going back to 1940 for Federal major public physical capital spending, using the definitions in the previous section in this chapter, can be found in the *Historical Tables,* to be published subsequently.

This section is organized in two major parts. The first part projects Federal outlays for public physical capital and the second part presents information regarding public civilian physical capital needs.

Projections of Federal Outlays For Public Physical Capital

Summary of projections.—Federal public physical capital spending was $130.1 billion in 1991 and, for current services estimates,[2] is projected to increase to $154.8 billion by 2001. The largest components are for national defense and for roads and bridges, which together accounted for about four-fifths of Federal public physical capital spending in 1991.

Definitions.—Federal public physical capital spending is defined here to be the same as the "major public physical capital investment" category in the previous section. It covers spending for construction and rehabilitation, acquisition of major equipment, and other physical assets.

This section excludes financial capital, such as loans, and outlays for human capital, such as the conduct of education, training, and research. The data in this section generally exclude offsetting collections that finance the spending, such as collections from the sale of energy.

Projections.—Table 29–7 shows projected current services outlays for Federal physical capital by the major categories specified in the Act. Total Federal outlays for transportation-related physical capital were $21.2 billion in 1991, and current services outlays are estimated to increase to $30.8 billion by 2001. Outlays for nondefense housing and buildings were $3.0 billion in 1991 and are estimated to increase to $7.9 billion by 2001. Physical capital outlays for other nondefense categories were $18.5 billion in 1991 and are projected to be $25.9 billion by 2001. For national defense, this spending was $87.3 billion in 1991 and is estimated to increase to $90.3 billion in 2001.

Table 29–8 shows current services projections adjusted for inflation on a constant dollar basis to 1997, using fiscal year 1987 as the base year.

Table 29–9 compares the current services and Presidential policy projections from 1991 to 1997 in current and constant dollars.

[2] In this chapter, current services estimates are consistent with the caps enacted as part of the Budget Enforcement Act of 1990. For a discussion of current services estimates, see Appendix Two, Chapter 37, "Current Services Estimates."

Table 29–7. **CURRENT SERVICES OUTLAY PROJECTIONS FOR FEDERAL PHYSICAL CAPITAL SPENDING**

(In billions of dollars)

	1991 actual	Estimate									
		1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Nondefense:											
Transportation-related categories:											
Roadways and bridges	14.6	16.1	17.0	17.6	18.0	18.6	19.2	19.8	20.4	21.1	21.7
Airports and airway facilities	3.2	3.5	3.8	4.0	4.2	4.3	4.4	4.6	4.7	4.9	5.0
Mass transportation systems	3.2	3.1	3.2	3.1	2.9	3.0	3.1	3.2	3.3	3.4	3.6
Railroads	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Subtotal, transportation	21.2	23.0	24.5	25.2	25.5	26.3	27.1	28.0	28.9	29.8	30.8
Housing and buildings categories:											
Federally assisted housing	0.1	0.1	0.4	1.1	1.6	1.6	1.7	1.8	1.8	1.9	1.9
Hospitals	1.3	1.4	1.6	1.6	1.6	1.7	1.7	1.8	1.8	1.9	2.0
Public buildings[1]	1.6	2.4	3.2	3.7	3.3	3.4	3.5	3.6	3.8	3.9	4.0
Subtotal, housing and buildings	3.0	3.9	5.2	6.5	6.5	6.7	6.9	7.2	7.4	7.6	7.9
Other nondefense categories:											
Wastewater treatment and related facilities	2.5	2.4	2.4	2.4	2.4	2.5	2.6	2.7	2.8	2.8	2.9
Water resources projects	3.2	3.1	3.1	3.2	3.4	3.5	3.6	3.7	3.8	3.9	4.1
Space and communications facilities	3.7	4.6	4.3	4.4	4.4	4.5	4.7	4.8	5.0	5.1	5.3
Energy programs	2.6	3.0	3.9	4.2	3.9	4.0	4.1	4.3	4.4	4.5	4.7
Community development programs	3.2	3.5	3.5	3.6	3.3	3.4	3.5	3.7	3.8	3.9	4.0
Other nondefense	3.4	3.8	3.9	4.0	4.0	4.2	4.3	4.4	4.6	4.7	4.9
Subtotal, other nondefense	18.5	20.4	21.1	21.9	21.4	22.1	22.8	23.6	24.3	25.1	25.9
Subtotal, nondefense	42.7	47.2	50.7	53.6	53.4	55.1	56.9	58.7	60.6	62.5	64.5
National defense	87.3	80.5	77.0	74.1	74.8	77.2	79.6	82.2	84.8	87.5	90.3
Total	130.1	127.7	127.7	127.7	128.2	132.3	136.5	140.9	145.4	150.0	154.8

[1] Excludes outlays for public buildings that are included in other categories in this table.

Table 29–8. **CURRENT SERVICES OUTLAY PROJECTIONS FOR FEDERAL PHYSICAL CAPITAL SPENDING (IN CONSTANT (1987) DOLLARS)**

(In billions of dollars)

	Actual 1991	Estimate					
		1992	1993	1994	1995	1996	1997
Nondefense:							
Transportation-related categories:							
Roadways and bridges	13.1	14.0	14.4	14.4	14.1	14.1	14.1
Airports and airway facilities	2.9	3.0	3.3	3.3	3.3	3.3	3.3
Mass transportation systems	2.9	2.7	2.7	2.5	2.3	2.3	2.3
Railroads	0.2	0.2	0.3	0.4	0.3	0.3	0.3
Subtotal, transportation	19.1	20.1	20.6	20.5	20.1	20.1	20.1
Housing and buildings categories:							
Federally assisted housing	0.1	0.1	0.4	0.9	1.3	1.3	1.3
Hospitals	1.1	1.3	1.4	1.4	1.3	1.3	1.3
Public buildings [1]	1.5	2.1	2.7	3.1	2.7	2.7	2.7
Subtotal, housing and buildings	2.7	3.4	4.4	5.3	5.2	5.2	5.2
Other nondefense categories:							
Wastewater treatment and related facilities	2.3	2.1	2.0	2.0	1.9	1.9	1.9
Water resources projects	2.9	2.8	2.7	2.7	2.7	2.7	2.7
Space and communications facilities	3.3	4.0	3.7	3.6	3.5	3.5	3.5
Energy programs	2.3	2.6	3.3	3.5	3.1	3.1	3.1
Community development programs	2.9	3.1	2.9	3.0	2.6	2.6	2.6
Other nondefense	3.1	3.3	3.3	3.3	3.2	3.2	3.2
Subtotal, other nondefense	16.8	17.9	17.9	18.1	17.1	17.1	17.1
Subtotal, nondefense	38.7	41.4	42.0	43.9	42.3	42.3	42.3
National defense	80.5	72.0	66.6	62.1	59.9	59.9	59.9
Total	119.2	113.4	108.6	106.0	102.3	102.3	102.3

[1] Excludes outlays for public buildings that are included in other categories in this table.

Table 29–9. **PROJECTIONS OF FEDERAL OUTLAYS FOR PHYSICAL CAPITAL: CURRENT SERVICES AND PRESIDENTIAL POLICY**

(In billions of dollars)

	Actual 1991	Estimate					
		1992	1993	1994	1995	1996	1997
In current dollars:							
Current services:							
Federal physical capital:							
Nondefense	42.7	47.2	50.7	53.6	53.4	55.1	56.9
National defense	87.3	80.5	77.0	74.1	74.8	77.2	79.6
Total	130.1	127.7	127.7	127.7	128.2	132.3	136.5
Presidential policy:							
Federal physical capital:							
Nondefense	42.7	47.3	50.4	54.3	53.3	52.4	52.2
National defense	87.3	80.5	76.6	74.7	74.6	75.6	77.0
Total	130.1	127.8	126.9	129.0	127.9	128.0	129.2
In constant 1987 dollars:							
Current services:							
Federal physical capital:							
Nondefense	38.7	41.4	42.0	43.9	42.3	42.3	42.3
National defense	80.5	72.0	66.6	62.1	59.9	59.9	59.9
Total	119.2	113.4	108.6	106.0	102.3	102.3	102.3
Presidential policy:							
Federal physical capital:							
Nondefense	38.7	41.4	42.7	44.5	42.3	40.1	38.7
National defense	80.4	72.0	66.3	62.6	60.5	59.4	58.6
Total	119.1	113.4	109.0	107.1	102.8	99.5	97.3

For outlay details for most programs, see the items included in major public physical capital in tables 29–5 and 29–6. For major programs that are formula grants to States, information on the estimated distributions by State for 1991–1993, consistent with Presidential policy estimates, can be found in a separate publication entitled Budget Information for States, prepared by the Office of Management and Budget.

Public Civilian Capital Needs Assessments

The Act requires information regarding the state of major Federal infrastructure programs, including highways and bridges, airports and airway facilities, mass transit, railroads, federally assisted housing, hospitals, water resources projects, and space and communications investments. Funding levels, long-term projec-

tions, policy issues, needs assessments, and critiques, are required for each category.

Capital needs assessments change little from year to year, in part due to the long-term nature of the facilities themselves, and in part due to the consistency of the analytical techniques used to develop the assessments and the comparatively steady but slow changes in underlying demographics. As a result, the practice has arisen in reports in previous years to refer to earlier discussions, where the relevant information had been carefully presented and changes had been minimal.

The needs assessment material in reports of earlier years is incorporated this year largely by reference to earlier editions and by reference to other needs assessments. The needs analyses, their major components, and their critical evaluations have been fully covered in past Supplements, such as the *1990 Supplement to Special Analysis D.* Supporting tables are presented below, and the reader is referred both to the individual program summaries in Part One of the budget for policy matters and to previous reports for methodological discussions.

Significant Factors Affecting Infrastructure Needs Assessments

Significant Factors	*Amount*
Highways	
1. Projected annual growth in travel to the year 2009	2.5 percent
2. Annual cost to maintain overall 1989 conditions on highways eligible for Federal-aid	$31.2 billion (1989 dollars)
3. Annual cost to maintain overall 1989 conditions on bridges	$4.2 billion (1989 dollars)
Airports and Airway Facilities	
1. Airports in the National Plan of Integrated Airport Systems with scheduled passenger traffic	568
2. Air traffic control towers	403
3. Airport development eligible under airport improvement program for period 1990–1999	$40.5 billion ($28.2 billion for capacity) (1989 dollars)
Mass Transportation Systems	
1. Yearly cost to restore existing rail facilities over a period of 10 years	$1.5 billion–$2.2 billion (1989 dollars)
2. Yearly cost to replace and maintain the urban, rural, and special services bus fleet	$1,505 million (1989 dollars)
Wastewater Treatment	
1. Total needs of sewage treatment facilities	$80.5 billion (1990 dollars)
2. Total Federal expenditures under the Clean Water Act of 1972	$60 billion
3. Percent of population served by centralized treatment facilities that benefits from at least secondary sewage treatment systems	95 percent
4. States and territories served by State Revolving Funds	51
Housing	
1. Total unsubsidized very low income renter families:	
A. In severely substandard units	0.4 million
B. With a rent burden greater than 50 percent	3.4 million

Significant Factors Affecting Infrastructure Needs Assessments—Continued

Significant Factors	*Amount*
Indian Health (IHS) Care Facilities	
1. IHS hospital occupancy rates (1991)	47 percent
2. Average length of stay, IHS hospitals (days) (1991)	4.5
3. Hospital admissions (1989)	102,793
4. Outpatient visits (1990)	4,634,945
5. Population (1990)	1,102,001
Department of Veterans Affairs (VA) Hospitals	
1. Hospitals	171
2. Outpatient clinics	358
3. Domiciliaries	35
4. Outreach centers	196
5. VA owned nursing home beds	16,746
Water Resources	
1. Navigation (deepwater ports and inland waterway) 2. Flood control and storm damage protection. 3. Irrigation. 4. Hydropower. 5. Municipal and industrial water supply. 6. Recreation. 7. Fish and wildlife mitigation and enhancement. 8. Soil conservation.	Needs data are not regularly collected by the Federal Government. Most recent estimates of the need for navigation, flood control and shoreline storm damage protection, and municipal and industrial (M&I) water supply are found in the *National Council on Public Works Improvement, 1987.* Meeting M&I needs as well as certain other water resource needs estimated in this report (e.g., urban storm water management and dam safety) is primarily a non-Federal responsibility. Program reforms have emphasized non-Federal cost sharing which encourages reexamination of needs, responding to changing values (instream flows for fish and wildlife versus consumptive use for irrigation and industrial purposes), coping with drought and transfers of existing supplies from one purpose to another.

Investment Needs Assessment References

Highways and Bridges

1. Report of the Secretary of Transportation to the U.S. Congress. *The Status of the Nation's Highways and Bridges: Conditions and Performance and Highway Replacement and Rehabilitation Program 1989.* June, 1989.

Airports and Airways Facilities

1. Federal Aviation Administration. *The National Plan of Integrated Airport Systems Report,* March 4, 1991.

Mass Transportation Systems

1. Federal Transit Administration. *Public Transportation in the United States: Performance and Conditions.* February 1991.

Indian Health Care Facilities

1. Indian Health Service. *Priority System for Health Facility Construction (Document Number 0820B or 2046T).* September 19, 1981.

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2. Office of Audit, Office of Inspector General, U.S. Department of Health and Human Services. *Review of Health Facilities Construction Program. Indian Health Service Proposed Replacement Hospital at Shiprock, New Mexico (CIN A–06–88–00008).* June, 1989.
3. Office of Audit, Office of Inspector General, U.S. Department of Health and Human Services. *Review of Health Facilities Construction Program. Indian Health Service Proposed Construction Project for the Alaska Native Medical Center at Anchorage Alaska (CIN A–09–89–00096).* July, 1989.
4. Office of Technology Assessment. *Indian Health Care (OTA–H–290).* April, 1986.

Wastewater Treatment

1. Environmental Protection Agency, Office of Wastewater Enforcement and Compliance. *Assessment of Needed Publicly Owned Wastewater Treatment Facilities in the United States—Including Federally-Recognized Indian Tribes and Alaska Native Villages (EPA 430/09–91–024).* November 1991.

Water Resources

1. "Water Resources: Increasing Demand and Scarce Supplies," Chapter 2 of *America's Renewable Resources: Historical Trends and Current Challenges,"* Kenneth Frederick and Roger Sedjo editors, Resources for the Future, Washington, DC, 1991.
2. National Council on Public Works Improvement. *The Nation's Public Works,* Washington, D.C., May, 1987. see "Defining the Issues—Needs Studies," Chapter II; *Report on Water Resources,* Shilling et al., and *Report on Water Supply,* Miller Associates.
3. McDonnell, Lawrence J., *et al., Instream Flow Protection in the West,* Natural Resources Law Center, University of Colorado School of Law, Boulder, CO, 1989.
4. Wahl, Richard W., *Markets for Federal Water,* Resources for the Future, Washington, DC, 1989.

30. General Accounting Office Preferred Presentation

30. GENERAL ACCOUNTING OFFICE PREFERRED PRESENTATION

The Comptroller General has in recent years become increasingly concerned that the unified budget's almost exclusive focus on obligation controls and cash transactions prejudices investments and understates liabilities. The General Accounting Office stated in its October 1989 Report (entitled "Managing the Cost of Government: Proposals for Reforming Federal Budgeting Practices") that consolidation into a single unified budget of trust and non-trust receipts and outlays, and of the accounting for operating and capital needs, has permitted financing other parts of the budget through trust fund receipts (especially from Social Security); prevented appropriate budgetary treatment of the special needs of the Government's business-type entities (e.g., the U.S. Postal Service and the Tennessee Valley Authority); biased decisionmaking against capital investment by requiring the recording of the entire cost of an asset in the year of acquisition; and failed to distinguish operating *deficits* from capital *financing requirements.*

To address its concerns with the unified budget, GAO has proposed to divide the budget into three separate fund groups: Federal funds (less enterprise funds), trust funds, and enterprise funds. The fund groups would themselves be aggregated separately in an operating budget and a capital budget. The data in Table 30–1 show an approximation of the 1993 budget totals on a basis consistent with GAO recommendations.

As compared with the unified budget, which focuses primarily on aggregate totals (although it provides details by fund group and separately identifies trust funds and revolving funds), the GAO proposal focuses separately on operating and capital needs; disaggregated Federal, trust and enterprise funds; and aggregate totals.

Capital and Operating Budgets.—GAO's proposed capital budget separates disbursements for physical capital and credit flows (i.e., credit financing excluding credit subsidies) from the operating budget. The cost of newly acquired assets would be recorded in the capital budget and as assets on the balance sheet, with most forms of capital subjected to depreciation charges recorded as operating budget outlays (with concomitant reduction in the value of capital assets on the balance sheet). Aggregate totals of the capital and operating budgets would be provided (as in the unified budget), but the distinctions between the two uses of funds would be set out in all summary presentations.

The GAO proposal includes only physical and loan capital in its capital budget. The failure to treat R&D and human capital on a par with physical and loan capital has been criticized in Congress and elsewhere, and GAO is studying the issue. In Table 30–1, expenditures for R&D and human capital—education, for example—is retained in the operating budget.

The GAO proposal would also include in the capital budget the value (or cost) of State and local physical facilities financed by Federal grants. These would be recorded on Federal balance sheets as Federal assets financed but not owned by the Federal Government. The GAO proposal, like the unified budget, would record Federal highway and airport and airway trust fund collections as receipts, but the GAO proposal would include them as receipts to finance the capital budget. A problem with the GAO proposal is that its allocation of depreciation cannot be charged to the trust funds which finance these investments through earmarked taxes. Recording both earmarked receipts and depreciation would require double counting with respect to assets acquired after the GAO proposal went into effect.

The GAO proposal would tend to reduce the impediments to Government investment and, as a result, could encourage the Government to make those cost-effective purchases required to meet longer term needs. The portion of the Federal budget attributable to investment in physical capital has declined in recent years as a percentage of GDP—from 4.4 percent in 1960 to 2.2 percent in 1992. While most of this decline is attributable to Defense and NASA, there is a question of whether infrastructure needs have been adequately attended to.

On the other hand, GAO's proposal could also reduce the impediments to "pork barrel" spending in that charges to the operating budget would switch from the point at which they can be controlled—the time of acquisition—to the later time at which they cannot be controlled when depreciation charges would be recorded. Additionally, GAO's attempt to reduce the disincentives to physical capital expenditures would favor physical over human capital.

Treatment of Sovereign and Business-Type Income.—The GAO proposal would abolish the distinction between sovereign and business-type income from the public. Most collections from the public would be recorded as Federal fund, trust fund, or public enterprise fund operating budget receipts and outlays, and outlays would be recorded gross rather than net of offsetting collections. The issue here is the degree to which the budget aggregates should focus on receipts arising from the exercise of Government's sovereign power as opposed to total Government revenues and spending (including business-type activities). GAO would focus on the total of Government activity; current budget concepts treat as receipts only those which the Federal Government collects in its role as a government.

Allocations by Function.—Table 30–1 shows most of the GAO adjustments by function. Line 14 (Additional Operating Costs Not Currently Allocated by

Function), however, includes estimates of two items for which a distribution by function is unavailable. Specifically:

- Line 14(a) records a lump sum estimate of $20.4 billion as a non-defense "asset consumption charge" (depreciation) and a corresponding reduction of $20.4 billion in the capital budget net investment. Defense depreciation of $56.9 billion, also offset in the capital budget, is included in the amounts on line B(1).
- Line 14(b) records a lump sum $28.9 billion imputed payment from the general fund to amortize unfunded pension liabilities.

Comparison with Other Alternatives.—The GAO proposal is compared with the alternatives discussed in Chapters 31 and 32, and with the unified budget, at the end of Chapter 32.

Table 30–1. **GAO FEDERAL BUDGET PRESENTATION (COMPARED TO UNIFIED BUDGET PRESENTATION)**

(1993, in billions of dollars)

	Unified Budget	GAO Comprehensive Budget				GAO Operating Budget				GAO Capital Budget			
		Total	General	Trust	Enterprise	Total	General	Trust	Enterprise	Total	General	Trust	Enterprise
A. RECEIPTS/REVENUES													
Governmental Receipts:													
(1) Income, Estate, Gift, Customs Duties	648.6	648.6	647.5	1.0	.....	647.5	647.5	.....	.....	1.0	.....	1.0	.....
(2) Social Insurance Taxes and Contributions	446.7	446.7	.....	446.7	.....	446.7	.....	446.7	.....	.....	.....	.....	.....
(3) Excise taxes and miscellaneous receipts	68.8	68.8	42.8	26.1	.....	44.1	42.8	1.3	.....	24.7	.....	24.7	.....
TOTAL RECEIPTS, Federal Budget Basis	**1,164.1**												
Offsetting Collections Converted to Receipts:													
(4) Proprietary Receipts from the Public		48.5	18.7	28.9	0.4	47.6	18.6	28.1	0.4	0.9	0.1	0.8	.....
(5) Reimbursements to Appropriations		116.6	29.7	7.0	79.9	99.9	21.3	7.0	71.6	16.7	8.4	*	8.3
TOTAL GAO REVENUES	**1,164.1**	**1,329.2**	**738.7**	**509.7**	**80.3**	**1,285.8**	**730.2**	**483.0**	**72.0**	**43.4**	**8.5**	**26.6**	**8.3**
B. OUTLAYS, EXPENSES, AND INVESTMENTS													
Outlays by Function:													
(1) Defense/International (050, 150)	314.2	339.7	326.4	12.0	1.3	318.6	306.6	12.0	0.1	21.1	19.8	.....	1.3
(2) Science, Space, Technology (250)	17.0	17.3	17.2	0.1	.....	15.0	14.9	0.1	.....	2.3	2.3	.....	.....
(3) Energy, Natural Resources, Agriculture (270, 300, 350)	40.8	74.2	52.5	3.8	18.0	48.2	32.9	1.6	13.7	26.0	19.6	2.2	4.3
(4) Commerce and Housing Credit (370)	63.6	123.8	27.2	0.3	96.3	117.8	26.5	0.3	91.0	6.0	0.7	.....	5.3
(5) Transportation (400)	35.1	36.2	8.2	27.4	0.6	11.7	5.8	5.4	0.5	24.5	2.4	22.0	0.1
(6) Education, Training, Employment, and Social Services (500)	49.6	50.9	45.3	1.2	4.4	50.7	45.1	1.2	4.4	0.2	0.1	.....	*
(7) Health and Medicare (550,570)	237.5	258.2	109.3	148.9	0.1	257.7	108.8	148.8	*	0.5	0.4	*	0.1
(8) Income Security (600)	197.3	201.9	108.2	93.8	.....	197.7	103.9	93.8	.....	4.3	4.3	.....	.....
(9) Social Security (650)	302.3	302.3	.....	302.3	.....	302.3	.....	302.3	.....	.....	.....	.....	.....
(10) Veterans Benefits and Services (700)	34.3	37.5	34.5	2.4	0.7	35.9	33.0	2.3	0.5	1.7	1.4	*	0.3
(11) Other (450,750,800,870,920)	36.6	43.0	40.4	0.3	2.3	33.5	31.9	0.3	1.4	9.5	8.5	.....	1.0
(12) Net Interest (900)	214.6	218.9	218.8	.....	.....	222.0	221.9	.....	.....	−3.1	−3.1	.....	.....
(13) Undistributed Offsetting Receipts (950)	−41.6	−37.5	−37.5	.....	.....	−37.5	−37.5	.....	.....	.....	.....	.....	.....
TOTAL OUTLAYS	**1,501.3**												
(14) Additional Operating Costs Not Currently Allocated by Function:													
(a) Asset Consumption		.....	.....	.....	.....	20.4	20.4	.....	.....	−20.4	−20.4	.....	.....
(b) Pension liabilities		.....	28.9	−28.9	.....	.....	28.9	−28.9	.....	.....	.....	.....	.....
(15) Total Expenses and Investments Before Transfers		1,666.4	979.2	563.4	123.8	1,593.8	943.1	539.2	111.5	72.6	36.1	24.2	12.3
(16) Interfund Transfers		.....	201.9	−201.9	.....	3.1	201.9	−198.8	.....	−3.1	.....	−3.1	.....
TOTAL OUTLAYS/AMOUNT TO BE FINANCED		**1,666.4**	**1,181.1**	**361.5**	**123.8**	**1,596.9**	**1,145.0**	**340.3**	**111.5**	**69.5**	**36.1**	**21.1**	**12.3**
C. SURPLUS/DEFICIT/FINANCING	**−337.2**	**−337.2**	**−442.4**	**148.2**	**−43.5**	**−311.1**	**−414.8**	**142.7**	**−39.4**	**−26.1**	**−27.6**	**5.5**	**−4.1**

*$50 million or less.

31. State-Type Presentation

31. STATE-TYPE PRESENTATION

California offers a fairly typical example of a State budget presentation. The California budget (Table 31–1) differs significantly from the other alternatives in this Part. It focuses on separate general, special, and capital funds, although it also provides aggregate totals (albeit inflated through double counting) of these funds. The separate State GAAP (Generally Accepted Accounting Principles) presentation includes proprietary and fiduciary funds excluded from the California budget (i.e., public enterprise and working capital revolving funds, self-financing bond funds, employee retirement funds, and certain funds deemed to be held in trust).

When the California approach combines fund groups, it leaves the inter-fund collections in receipts, thereby overstating total collections from, and payments to, the public. Additionally, when capital expenditures are financed by bond funds, they are double counted, because the bond spending and debt amortization are both included in combined total spending. The bottom line is that the California and State GAAP presentations are the least consolidated and most disaggregated of the alternatives discussed in this part of the budget document. In California, the individual funds matter most.

The standard California budget presentation has a two-way distribution of income and a three-way distribution of spending. Receipts go to the general and special funds, whereas outlays/expenses and investments are spent from these funds plus the capital fund. The norm for California's special funds is that they should have cash in hand before they spend (similar to the norm for Federal trust funds). At the same time, both the California general and special funds can spend more in a year than they take in by reducing carry over balances; this is not deemed to create a deficit.

Balanced Budget Requirement.—California's constitutional requirement of balanced budgets, combined with constitutional limitations on taxes and spending, result in procedures different from Federal procedures. These include appropriated allowances for contingencies, with payments charged back to the activity for which the payment is made, and "encumbrances" (similar to obligations in the Federal budget) for which the spending is charged to the year in which the encumbrance occurs.

The California budget document has information tables on total State indebtedness (akin to the Federal display of total Federal debt). In contrast to the Federal Government, however, California's ability to borrow is subject to several restrictions: borrowing can normally occur only for capital projects (whether general or self-liquidating); and debt normally cannot be issued unless approved by both the legislature and the voters.

Capital Projects Fund.—The Capital Projects Fund is displayed only on the spending side, since bond fund spending is financed by borrowing, which is not income. The California capital fund only includes bonds that are to be amortized by the general fund. "Self-liquidating" bonds (such as for toll bridges, the California water plan, and college dormitories) are excluded from the regular budget altogether, but are displayed in the budget documents for information purposes (similar to the way the Federal budget displays GSEs but leaves them out of the totals).

The estimate of the Capital Projects Fund in Table 31–1 (and the associated amortization) was based on several imputations. First, Federal fund (i.e., non-trust) capital outlays (other than those made by the public enterprise funds and other than for grants) are identified as equivalent to the investment that California finances through its Capital Projects Fund. Second, an estimate of amortization of prior debt was made and allocated as expenditures of the general fund. There is currently no solid basis for amortizing total debt, much less for amortizing debt by function. However, Table 31–1 assumes an amortization by function equal to new debt-financed capital investment. It does not provide for a distribution of interest back to the functions charged with the borrowing.

Sovereign Versus Business-Type Operations and Employee Retirement.—The California budget excludes both business operations and employee retirement and related funds from the budget. So, in the reconstruction of the Federal budget in the form of the California budget, most of the public enterprise funds—plus the civil service, military, and foreign service retirement funds—were excluded from the budget totals (although payments to these funds were left in the budget figures). Thus, the general fund coverage in Table 31–1 is less comprehensive than the Federal fund group in the unified budget, and the special fund coverage is less comprehensive than the trust fund coverage in the unified budget.

While the California procedure excludes business operations from the budget, any incidental non-tax income to the State (such as rents, royalties, and interest) is included in budget receipts.

State GAAP Basis.—Table 31–1 also includes a presentation that approaches a State GAAP presentation. While the State is moving toward GAAP, this will take years to accomplish. The GAAP presentation in the California budget is an auxiliary display of spending only. Table 31–1, on the other hand, reconstructs the total budget on a State GAAP equivalent basis. The GAAP display adds "proprietary funds" (i.e., business operations) and "fiduciary funds" (which include the pension funds and the funds the State collects and spends from Federal grants) to the normal California presentation.

Comparison with Other Alternatives.—The California budget is compared with the alternatives discussed in Chapters 30 and 32, and with the unified budget, at the end of Chapter 32.

Table 31–1. **CALIFORNIA PRESENTATION OF THE FEDERAL BUDGET (COMPARED TO UNIFIED BUDGET PRESENTATION)**

(1993, in billions of dollars)

	Unified Budget	Normal California Budget Presentation					Additional Transactions for GAAP Presentation		
		General Revenue Funds	Special Revenue Funds	Budget Total	Capital Projects Funds	Total Including Bond Funds	Proprietary Funds	Fiduciary Funds	Grand Total
A. RECEIPTS									
Governmental Receipts:									
(1) Income, Estate, Gift, Customs Duties	648.6	647.5	1.1	648.6	.....	648.6	.....	.....	648.6
(2) Social Insurance Taxes and Contributions	446.7	.....	441.6	441.6	.....	441.6	.....	5.1	446.7
(3) Other Governmental Receipts	68.8	40.7	28.1	68.8	.....	68.8	.....	.....	68.8
TOTAL RECEIPTS, Federal Budget Basis	**1,164.1**	**688.2**	**470.8**	**1,159.0**	.....	**1,159.0**	.....	**5.1**	**1,164.1**
Offsetting Collections Converted to Receipts:									
(4) Proprietary Receipts from the Public		12.7	24.3	37.0	.....	37.0	11.5	.....	48.5
(5) Reimbursements to Appropriations		45.6	0.2	45.8	.....	45.8	161.9	.....	207.7
(6) Interfund Transfers		3.8	108.6	112.5	.....	112.5	1.1	96.0	209.6
TOTAL RECEIPTS, California basis	**1,164.1**	**750.3**	**603.9**	**1,354.3**	.....	**1,354.3**	**174.5**	**101.1**	**1,629.9**
B. OUTLAYS, EXPENSES, AND INVESTMENTS									
Outlays by Function:									
(1) Defense and International (050, 150)	314.2	415.7	0.3	416.0	76.9	492.9	13.2	.....	506.1
(2) Science, Space, Technology (250)	17.0	19.5	0.1	19.6	2.3	21.9	.....	.....	21.9
(3) Energy, Natural Resources, Agriculture (270, 300, 350)	40.8	62.5	7.5	70.0	4.1	74.2	13.3	.....	87.4
(4) Commerce & Housing Credit (370)	63.6	48.2	0.2	48.5	*	48.5	164.3	.....	212.8
(5) Transportation (400)	35.1	9.0	29.5	38.5	0.8	39.3	0.5	.....	39.8
(6) Education, Training, Employment, and Social Services (500)	49.6	49.7	1.2	50.9	0.1	51.0	0.8	.....	51.8
(7) Health and Medicare (550, 570)	237.5	152.5	144.8	297.2	0.4	297.7	4.1	.....	301.8
(8) Income Security (600)	197.3	112.4	36.4	148.8	*	148.8	1.2	61.2	211.1
(9) Social Security (650)	302.3	6.4	302.3	308.7	.....	308.7	.....	.....	308.7
(10) Veterans Benefits and Services (700)	34.3	37.2	0.5	37.7	1.3	39.0	2.6	.....	41.6
(11) Other (450, 750, 800, 920)	36.6	62.2	3.2	65.4	2.8	68.2	0.7	.....	68.9
(12) Net Interest (900)	214.6	301.8	−0.5	301.3	.....	301.3	.....	.....	301.3
(13) Undistributed Offsetting Receipts (950)	−41.6	.....	.....	.....	.....	.....	.....	.....	.....
TOTAL OUTLAYS	**1,501.3**	**1,277.3**	**525.4**	**1,802.7**	**88.8**	**1,891.5**	**200.6**	**61.2**	**2,153.2**
C. SURPLUS/DEFICIT	**−337.2**	**−527.0**	**78.6**	**−448.4**	**−88.8**	**−537.2**	**−26.1**	**39.9**	**−523.3**

*$50 million or less.

32. Operating, Retirement, and Debt and Interest Presentation

32. OPERATING, RETIREMENT, AND DEBT AND INTEREST PRESENTATION

In 1991, Senator Sanford introduced a bill, the "Honest Budget/Balanced Budget Act" (S. 101), which proposed another budget presentation. As shown in Table 32–1, the unified budget would be subdivided into three budgets—the operating budget, the retirement funds budget, and the debt and interest budget.

The President's budget would present the unified budget totals, as well as totals for the three separate budgets. The social security trust funds and the Postal Service would be included in the unified budget totals and the appropriate component totals. However, the presentation would focus on the deficit or surplus for only the operating budget; this and other requirements are quite different from the unified budget concept.

The operating budget would include the receipts and expenditures not included in the other two budgets. Cost of federal deposit insurance, while included in the receipts and expenditures of the operating budget, would not be counted against the operating budget deficit. The operating budget would have to be balanced in the President's budget; legislation that would cause an operating budget deficit would be subject to a point of order in the Congress. (In Table 32–1, which presents 1993 President's budget numbers, the operating budget is not balanced.) If, in spite of these requirements, the deficit exceeded the maximum deficit amount (defined in the Congressional Budget Act of 1974, as amended by the Budget Enforcement Act of 1990, Public Law 101–508), the next year's operating budget would in-

Table 32–1. **OPERATING, RETIREMENT, AND DEBT AND INTEREST PRESENTATION OF THE FEDERAL BUDGET (COMPARED TO UNIFIED BUDGET PRESENTATION)**

(In billions of dollars)

	Unified Budget	Alternative Presentation			
		Total Budget	Operating Budget	Debt and Interest Budget	Retirement Funds Budget
A. RECEIPTS					
Governmental Receipts:					
(1) Income, Estate, Gift, Customs Duties	648.6	648.6	648.6	.....	.....
(2) Social Insurance Taxes and Contributions	446.7	446.7	25.5	.....	421.2
(3) Other Governmental Receipts	68.8	68.8	68.2	.....	0.7
TOTAL RECEIPTS, Federal Budget Basis	**1,164.1**	**1,164.1**	**742.3**	.....	**421.8**
Proceeds from Borrowing Converted to Receipts:					
(4) Increase in the non-Retirement Funds Debt		473.4	.....	473.4	.....
TOTAL RECEIPTS, Alternative Basis	**1,164.1**	**1,637.5**	**742.3**	**473.4**	**421.8**
B. OUTLAYS, EXPENSES, AND INVESTMENTS					
Outlays by Function:					
(1) Defense and International (050, 150)	314.2	314.2	326.3	.....	−12.1
(2) Science, Space, Technology (250)	17.0	17.0	17.0	.....	.....
(3) Energy, Natural Resources, Agriculture (270, 300, 350)	40.8	40.8	40.8	.....	.....
(4) Commerce and Housing Credit (370)	63.6	63.6	63.6	.....	.....
(5) Transportation (400)	35.1	35.1	35.1	.....	.....
(6) Education, Training, Employment, and Social Services (500)	49.6	49.6	49.6	.....	.....
(7) Health and Medicare (550, 570)	237.5	237.5	150.9	.....	86.7
(8) Income Security (600)	197.3	197.3	131.3	.....	66.0
(9) Social Security (650)	302.3	302.3	6.4	.....	295.8
(10) Veterans Benefits and Services (700)	34.3	34.3	34.3	.....	.....
(11) Other (450, 750, 800, 920)	36.6	36.6	56.4	.....	−19.8
(12) Net Interest (900)	214.6	214.6	−25.7	315.9	−75.5
(13) Undistributed Offsetting Receipts (950)	−41.6	−41.6	−4.1	.....	−37.5
TOTAL OUTLAYS, Federal Budget Basis	**1,501.3**	**1,501.3**	**881.9**	**315.9**	**303.5**
Repayment of Borrowing Converted to Outlays:					
(14) Previous Year Excess Over Maximum Deficit		.....	.....	.....	.....
TOTAL OUTLAYS, Alternative Basis	**1,501.3**	**1,501.3**	**881.9**	**315.9**	**303.5**
Outlays Not Counted Againsdt the Operating Budget Deficit:					
(15) Costs of federal deposit insurance	.....	.....	−55.7	.....	.....
C. SURPLUS/DEFICIT	**−337.2**	**136.2**	**−84.0**	**157.5**	**118.3**

clude an expenditure equal to the previous year's deficit excess. This would result in budgeting for an excess of receipts over current expenditures in the operating budget if the previous year's deficit target is not met.

The retirement funds budget would include the receipts and expenditures of the social security and medicare trust funds, the civilian and military retirement trust funds, the railroad retirement trust funds, and such other funds or accounts that OMB, in cooperation with GAO and the Congress, agree upon. The estimates in Table 32–1 also include the black lung disability trust fund in the retirement funds budget.

The debt and interest budget includes "receipts and expenditures" for reductions or increases in the public debt, and interest on the public debt. During time of declared war or declared recession, Treasury borrowing would be permitted in the debt and interest budget. Borrowed funds would then be transferred to the operating budget as receipts to maintain the operating budget in balance. This definition of "receipts and expenditures" would treat the proceeds of borrowing as receipts and the repayment of borrowing as outlays.

Under current budget concepts, borrowing is treated as a means of financing a deficit, not as a part of the calculation of the deficit; the repayment of borrowing is treated as the use of a surplus. Apart from other, relatively small means of financing the deficit, the treatment of borrowing and repayment of borrowing as receipts and outlays in the alternative proposal would balance the sum of the operating and debt and interest budgets by definition. If transfers to the operating budget are treated as expenditures of the debt and interest budget, it follows that they are to be treated as receipts of the operating budget. The operating budget would also, therefore, be balanced during time of war or a recession, by definition.

In the Sanford proposal, the budget deficit would be redefined to mean the amount by which the combined outlays of the operating and debt and interest budgets exceed their receipts. The retirement funds budget would be completely excluded. The President's budget and budget legislation would have to stay within the maximum deficit amounts, as well as balancing the operating budget. With the operating and debt and interest budgets in balance by definition, the unified budget would have the same surplus or deficit as the retirement funds budget.

The debt and interest budget would also include a new "trust fund for the reduction of the deficit and the public debt." A special tax could be established for this fund.

SOME DIFFERENCES AMONG THE ALTERNATIVE PRESENTATIONS

A comparison of the GAO, California, and Sanford presentations with each other, and with the unified budget, is presented below.

- The GAO and California budget presentations reflect, primarily, the concerns of financial accounting. The Sanford budget proposal is primarily designed to protect the retirement trust funds and to direct attention to controlling the newly defined operating budget.
- Employee retirement funds are included by GAO as part of its trust fund grouping, and by Sanford as part of his retirement funds budget. The California approach moves these funds into the fiduciary funds category outside the normal budget presentation (but inside the GAAP presentation). The unified budget includes these funds in the consolidated budget totals.
- Enterprise funds are included as part of the operating budget in the Sanford proposal. GAO carries the enterprise funds as one of three separate groupings, together with the general funds and trust funds. The California budget excludes enterprise funds from the normal budget displays but includes them in the GAAP presentation. The unified budget includes these funds in the consolidated budget totals.
- GAO, the Sanford proposal, and the unified budget handle interfund transfers as adjustments on the outlay side; they cancel out in deriving the consolidated totals. The California approach adds them to the receipts of each fund group, and does not net them out in combined totals.
- GAO has a capital budget that includes all capital expenditures for physical and loan assets, no matter how financed. It does not have a bond fund. In the main, the GAO capital budget is financed by depreciation charges and earmarked receipts (mainly highway and airport and airway excise taxes). The California approach has a capital fund but includes only those capital expenditures financed by borrowing to be repaid from the general fund on an amortization basis. The Sanford proposal and the unified budget do not distinguish capital expenditures in the budget aggregates. The President's budget, however, does have an auxiliary tabulation of outlays for both physical and intangible capital (see Chapter 29).
- GAO includes grants to State and local governments for physical capital investment in its capital budget. The Sanford proposal and the unified budget do not distinguish these grants in the budget aggregates, but the President's budget does include grants for capital investment in its auxiliary tabulation of Federal capital expenditures (see Chapter 29). The California budget does not include grants to localities for capital projects in its capital fund.