United States General Accounting Office

GAO

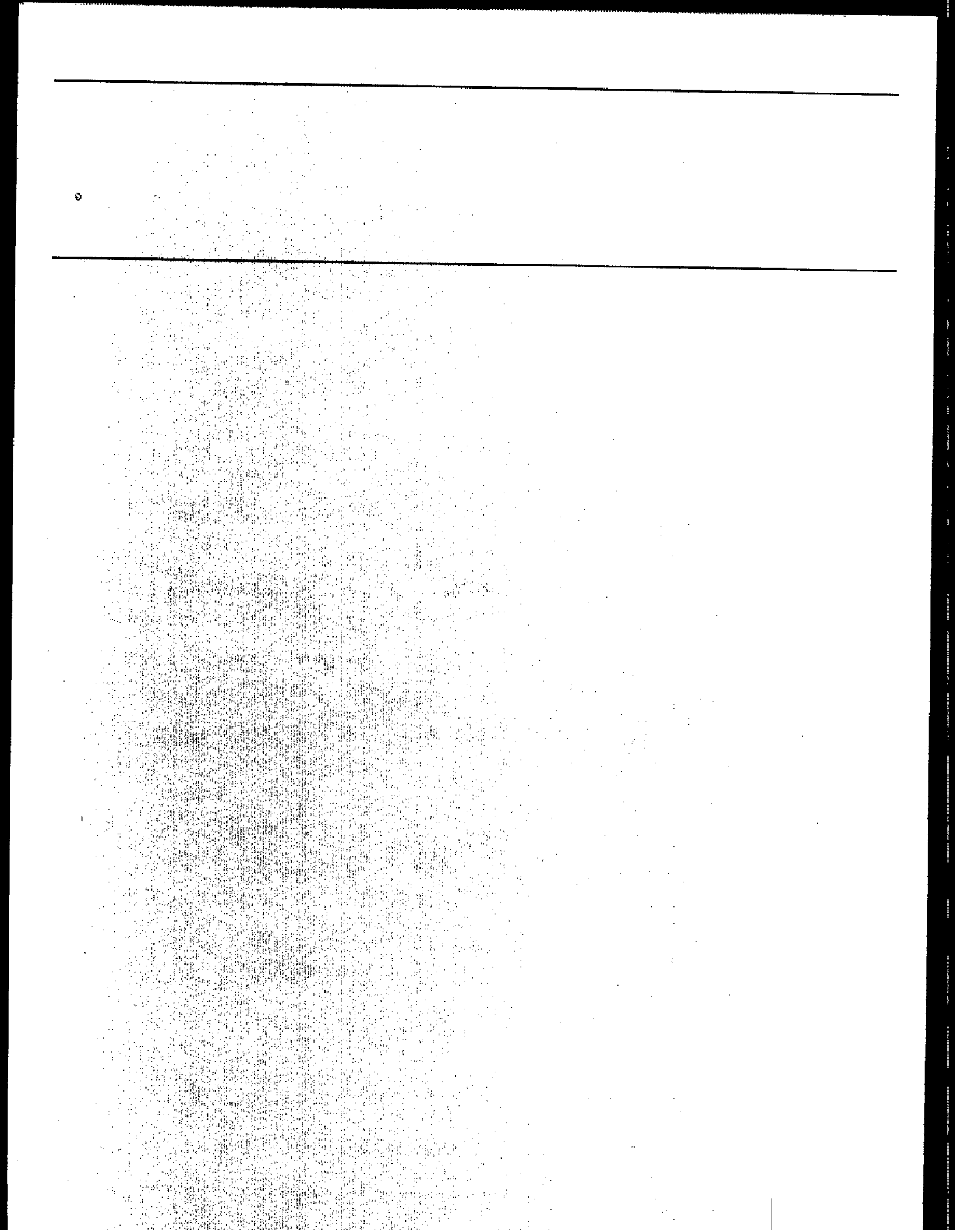
Report to the Chairman, Committee on Government Operations
House of Representatives

November 1993

BUDGET ISSUES

Incorporating an Investment Component in the Federal Budget

GAO/AIMD-94-40



GAO

United States
General Accounting Office
Washington, D.C. 20548

Accounting and Information
Management Division

B-252951

November 9, 1993

The Honorable John Conyers, Jr.
Chairman
Committee on Government Operations
House of Representatives

Dear Mr. Chairman:

This report responds to your request for an evaluation of capital (investment) budgeting. You noted that our nation needs to simultaneously pursue the potentially conflicting goals of deficit reduction and increased federal investment and you expressed interest in alternative budget presentations which may offer the opportunity to more effectively address our nation's needs. This report examines possible definitions of investment and discusses ways in which a budget with an investment component might help decisionmakers focus on making investment decisions which can promote long-term economic growth. It also identifies questions which would need to be answered before an investment budget could be implemented.

Results in Brief

The current budget structure does not highlight for decisionmaking purposes the differences between spending for long-term investment and that for current consumption because it treats all expenditures the same. The current budget process does not encourage the Congress to make decisions about how much spending overall should be devoted to programs having a direct bearing on long-term growth and productivity.

Refining the budget presentation to focus on how the composition of spending affects the long-term economy requires agreement on which federal programs are investment in nature. Although numerous definitions of investment are possible, we concluded that the most appropriate definition would include federal spending, either direct or through grants, directly intended to enhance the private sector's long-term productivity. Such a definition distinguishes between federally owned capital that the government itself uses and investments that promote private sector growth. Thus, primary emphasis is given to activities that would lower the cost of goods and services provided and delivered by the private sector economy. Accordingly, this definition includes spending on some intangible activities such as research and development (R&D); human capital designed to increase worker productivity, particularly education

and training; and spending for physical capital to improve infrastructure, such as highways, bridges, and air traffic control systems.

Such a definition differs markedly from a capital budget designed to focus on spending intended to have future benefits for the government as an operating entity because, under our premise, "investment" would not include spending for physical capital designed to achieve federal agency programmatic goals such as spending for federal land, office buildings, and defense weapons systems because they do not directly enhance productivity in the private sector.

Our assessment of several alternatives for using an investment component to promote consideration of investment shows that establishing investment targets within a framework similar to that contained in the Budget Enforcement Act (BEA)[1] is the most promising way to use an investment component because the Congress and the administration would reach agreement on the appropriate level of investment spending. BEA discretionary caps could be changed to mandate a separate investment target (or floor) to protect against infringement from other activities.

Background

Declining levels of domestically financed investment and national savings in recent years have prompted concern that our economy may lack the capacity to grow at levels needed to provide for future generations. Federal budget deficits contribute to lower investment and savings levels. In addition, federal investment programs can also influence growth and productivity in the private economy.

Recent budget trends are not encouraging for either the deficit or federal investment. The growing portion of the budget absorbed by interest payments and consumption programs, particularly health, has squeezed the discretionary sector of the budget, which is the source of most federal investment funds. Federal outlays for physical capital, research and development, and education declined as a share of gross national product (GNP) between 1980 and 1984 and have remained relatively stable at the lower level since then. During the 1980s, both federal health spending and net interest payments on the national debt surpassed federal spending on public investment as a share of GNP.

[1]The Budget Enforcement Act established spending limits for defense, domestic, and international spending in fiscal years 1991 through 1993 and for all discretionary spending in fiscal years 1994 and 1995. The spending limits were extended through 1998 by the Omnibus Budget Reconciliation Act of 1993.

Because the deficit absorbs private savings otherwise available for domestic investment, it exerts the single most important federal influence on investment. The surest way to increase national savings and investment would be to reduce this unprecedented level of federal dissaving by reducing the deficit. In our June 5, 1992, report, Budget Policy: Prompt Action Necessary to Avert Long-Term Damage to the Economy (GAO/OCG-92-2), we concluded that we have no choice but to deal with the deficit because failure to take action will result in the deficit rising to 20 percent of GNP by 2020, due primarily to rising health and retirement costs and the associated interest costs. We stated that moving from a deficit to a budget surplus is essential for improving national savings, investment, and long-term growth. Moreover, we cautioned that the objective of enhancing long-term economic growth through overall fiscal policy is not well served by a budget process which focuses on short-term spending.

The administration and some Members of the Congress have stressed the need to evaluate current levels of both public and private investment with the goal of increasing the long-term productive capacity of the economy. Concern about how the budget deals with spending that has long-term benefits has been a driving force behind capital budget proposals.

In considering capital budget proposals, it is important to recognize the dual nature of the government in this area. The government makes both (1) long- and short-term decisions regarding its own operations, and (2) decisions affecting the long-term economic health of the economy. However, this report is not meant to preclude changing the way the budget treats choices the government makes pertaining to its own operations. The government's two roles present different issues and may well demand different responses. Unfortunately, the distinction is often ignored in discussions on the merits of capital budgeting.

Objectives, Scope, and Methodology

The objectives of this review were to determine

- the types of programs or activities that should be included in the definition of "investment" for a budget with an investment component,
- how focusing on an investment component in the budget presentation could be used to help the Congress in making investment decisions, and
- what techniques, analytical tools, or devices might be used to help decisionmakers focus on making investment decisions which promote long-term economic growth.

To meet these objectives, we reviewed pertinent literature and our prior work on capital budgeting, human capital, restructured budgets, and investment spending. We also reviewed relevant studies of the Congressional Budget Office (CBO) and the Office of Technology Assessment (OTA). We reviewed the alternative budget presentations contained in the President's budgets for fiscal years 1991 through 1994 along with the Office of Management and Budget's (OMB) instructions on character classifications found in Circular A-11 "Preparation and Submission of Budget Estimates."[2]

To determine the most appropriate definition of investment, we developed five different definitions using OMB character classification and budget function data. The definitions ranged from the most restrictive, which contained only spending for federally owned R&D facilities and equipment, grants for physical capital, education and training, and R&D, to the most inclusive, which contained the aforementioned items plus spending for Defense and other non-Defense facilities and equipment, food and nutrition, social services, and health. We convened two panels of experts from OMB, CBO, the Congressional Research Service, OTA, academia, and other organizations having an interest or involvement in the budget process. We asked the panelists for their views on the various definitions of investment.

Based on our research and discussions with members of the panels and OMB and CBO officials, we then developed four alternative approaches for using an investment component in making budget decisions. We evaluated how each approach might assist the government in focusing on long-term economic growth and how each would impact budgetary controls and the deficit.

We performed our work in Washington, D.C., between September 1992 and July 1993.

Defining Investment for Long-Term Economic Growth

The definition of investment used for budgetary purposes is extremely important, particularly if favorable budgetary treatment is accorded investment activities.

[2]Character classification codes are used by OMB to report budget outlays for investment separately from noninvestment. A four-digit number identifies data on investment and noninvestment outlays. All investment activities are classified in the 1000 series, while all noninvestment activities are classified in the 2000 series.

There are many possible definitions of investment, ranging from only federally owned physical assets to all physical assets financed with federal funds, education and training, research and development, health programs, and social services. The definition of investment used for budgetary purposes depends on the purpose that a budgetary investment component is expected to serve. Because we believe that the need to enhance the nation's long-term productive capacity is among the most pressing needs facing the country today, we defined investment as federal spending, either direct or through grants, that is directly intended to enhance the private sector's long-term productivity.[3]

OMB used two different definitions of investment in the fiscal year 1994 budget. OMB Circular A-11 defines investment as those outlays that yield benefits largely in the future. Its definition includes (1) direct federal spending and grants to state and local governments for construction and rehabilitation of facilities, major equipment, research and development, and education and training and (2) direct federal spending for commodity inventories and the purchase and sale of land and structures for federal use.[4] For analytical purposes, OMB assigns a distinct character classification code to each type of investment and non-investment spending. OMB used the Circular A-11 definitions and character classification codes as the basis for developing the Federal Investment Outlays summary presentation which appears in the President's 1994 budget proposal and in Special Analysis D[5] which had been part of the budget in fiscal years prior to 1991. Fiscal year 1994 investment outlays using this definition are estimated by OMB at $253.4 billion.

The administration also used a broader definition of investment than that contained in Circular A-11 in the fiscal year 1994 budget request. A chapter on investment proposals presented its investment program, showing increased spending of $7 billion for fiscal year 1994 and $113.6 billion over 4 years. This spending included outlays for investment activities as defined by Circular A-11, such as physical assets, education, and research and

[3]Productivity gains are achieved by reducing the amount of labor needed to provide a given level of goods and services or by increasing the goods and services produced by a given amount of labor. This is discussed in our report Federal Budget: Choosing Public Investment Programs (GAO/AIMD-93-25, July 23, 1993).

[4]Prior to the 1994 budget proposal, investment was comprised of outlays for loans, other financial investments, construction and rehabilitation, major equipment, commodity inventories, research and development, education and training, collection of information, and international development.

[5]Special Analysis D, "Federal Investment Outlays," distinguished between spending for investment and spending for current operations and was included in the President's budget documents from the fiscal year 1951 through the fiscal year 1990 budget presentations.

development. It also included an increase of about $3.7 billion for programs such as child nutrition, substance abuse and mental health services, correctional facility improvements, and food stamps, which are not classified as investment in the section on Federal Investment Outlays prepared on the basis of definitions in Circular A-11.

In a 1987 study, CBO outlined a range of definitions of investment for analytic purposes but did not endorse any specific definition. The most stringent definition applied national income accounting principles to federal accounts, thus including only physical assets (excluding defense weapons systems) financed and owned by federal agencies. The broadest definition included spending on capital grants to state and local governments, federal credit subsidies for physical investment, intangible capital (research and development), and human capital (education and training).

CBO did not include health care spending as investment in human capital because, while such spending improves the nation's general welfare and creates a healthy work force, society primarily provides health care for reasons other than to increase productivity.

Experts on the panels we convened considered a wide range of options for defining investment. Some panelists suggested including grants for infrastructure, R&D, and education and training, as well as some federally owned assets that are designed to increase long-term economic productivity. Most panelists rejected broadening the definition of investment to include social insurance and welfare programs because they are shorter-term programs whose primary purpose is consumption. Many, however, would include some preventive health programs, such as child immunization, and food and nutrition programs, such as the Special Supplemental Food Program for Women, Infants, and Children (WIC) because these programs involve current spending to reduce future spending by helping recipients lead more healthy, productive lives. The objective of WIC, for example, is to reduce health problems in women, infants, and children that are the result of inadequate diets through nutrition education and food assistance. According to some, this could increase lifetime productivity. However, other research has shown that while these types of programs improve the nation's general welfare or reduce future federal costs, these, by themselves, would not increase productivity. Rather, they contend that many other factors, such as education and training, are necessary to achieve long-term increases in productivity.

Based on these discussions, we developed a definition of investment as spending directly intended to promote the private sector's long-term economic growth. This definition includes spending for research and development, human capital, and some infrastructure. Research and development produce new technology that leads to innovative products and production processes that lower costs; human capital is increased by the education and training that improves work force skills; and infrastructure includes roads, airports, and telecommunication systems and other facilities that lower private sector cost of producing and delivering goods and services. This would exclude spending on physical assets for which the principal purpose is use in agency missions, such as federal office buildings and weapon systems, rather than enhancement of long-term economic growth.

Appendix I displays two examples of the activities based on OMB character class data that could be included in a definition of investment as spending intended to increase long-term economic growth. While both examples would be considered relatively restrictive, the second is somewhat broader than the first. Under the first example, about 8 percent ($131 billion) of total federal outlays would be classified as investment. It includes direct federal and grant outlays for (1) R&D construction and equipment, (2) R&D, except for Defense applied research and weapons activities development research, which we believe is unlikely to be applicable to civilian use, and (3) education and training. It also includes grants to state and local governments for infrastructure, such as highways and acquisition of equipment, and a small selection of outlays for direct federal construction and acquisition of equipment, such as flood prevention and control, construction of power generating facilities, and acquisition of air traffic control equipment. Our research indicated that it was reasonable to expect that such spending would contribute to future economic growth.

Under the second example, spending on childhood immunization programs and WIC would be added to the items in the first example. These were the additional programs that some of our panelists believed were also likely to contribute to the nation's long-term productivity. Although these additions increased estimates of total investment outlays by $4 billion, the percentage of total federal outlays classified as investment remains essentially unchanged at about 8 percent.

Investment and Current Operations Spending Differentiated Only in Supplemental Budget Displays

While we, the current administration, and some Members of the Congress have stressed the need to review proposed levels of investment, this is not an easy task. The only distinction in the federal budget presentation between spending for investment and spending for current operations has been in displays contained in alternative budget presentations, such as the Physical and Other Capital Presentation or in Special Analysis D,[6] which accompanied the Presidents' budgets. These supplemental presentations have no effect on the executive branch's budget decision-making because they are assembled after budget formulation decisions have been made. Equally important, the current presentations do not show the entire budget so that investment can be viewed in the context of all federal spending.

Although the current presentations have provided some supplemental information to congressional decisionmakers, they are not part of the formal budget process. They have had little effect on the level of investment undertaken by the government because appropriations subcommittees provide funding by department and agency in appropriation accounts that do not distinguish between investment and consumption spending.

As discussed earlier, the President's fiscal year 1994 budget contains a separate chapter on proposed increases in investment. However, this chapter shows only proposed increases, not the total level of proposed investment spending. In addition, this chapter classifies certain activities as investment that are not included in the Federal Investment Outlays presentation elsewhere in the budget. This use of two different definitions of investment within the same budget document may create some confusion.

Without aggregate numbers and consistent definitions, it is not possible to judge whether any particular proposed budget is more or less investment-oriented than that of prior years or than alternative budget proposals. In the current budgeting environment, the total level of investment in any year is the result of many individual decisions, not a conscious choice about an appropriate overall level of investment. The creation of a comprehensive investment component within the federal budget, comprised of all federal spending that both the executive and legislative branches have agreed meets the definition of investment, would provide a framework for policymakers to evaluate and make a conscious decision about the level of spending for investment purposes.

[6]See footnote 5.

Using an Investment Component in the Federal Budget Process

An investment component in the budget process could be used in various ways. We developed four approaches that could be employed singly or in combinations that could reflect a range of possible uses, from displaying investment for analytic purposes only, to creating a new investment budget category and establishing targets for the appropriate level of investment. We examined each approach to determine both how well it might (1) help decisionmakers focus on long-term economic growth and (2) affect budgetary controls and the deficit. The four approaches are

- modifying the existing display to show federal spending as investment or noninvestment,
- using an investment component for depreciating investment activities,
- using an investment component to permit deficit financing, and
- establishing annual investment targets agreed upon by the Congress and the administration.

We determined that the fourth approach, which is an investment target within a BEA type of framework, is the most promising because it would require that the Congress and the administration agree on a definition of investment and on the appropriate levels of investment spending within an agreed-upon fiscal policy path.

The following sections discuss each approach.

Modify Existing Display of Investment Activities in the Federal Budget

This approach would categorize and display each activity in the President's budget in terms of investment and noninvestment based on the intent of the activity. Such a display would differ from OMB's current "Federal Investment Outlays" presentation (which shows only investment outlays) by showing investment levels relative to all federal spending.

Changing how investment information is displayed in the budget does not change the current situation with regard to budget control and the deficit. It would permit conscious consideration of appropriate levels of investment and noninvestment as part of the budget decision-making process, but it would not include any mechanism that would prompt decisionmakers to make specific choices between investment and consumption or to select a specific level of investment. This approach simply provides additional information for the decisionmaker.

As described previously, OMB has classified all spending in the federal budget accounts as investment or noninvestment using character

classification codes. The OMB character class coding structure could be used as the starting point in identifying investment activities based on any agreed-upon definition of investment.

In addition to displaying investment outlays as they relate to total federal spending, other additions to the investment information presented in the budget could be useful in evaluating total public investment. For example, the display could include information on the effectiveness of various investment programs; tax expenditures[7] related to investment; deferred maintenance; and historical information about federal, state, and local spending on investment.

Data on the effectiveness of investments could show what has been accomplished or is expected to be accomplished by the investment outlays in either program or economic terms. Tax expenditures and outlay data could show the collective impact of government spending and tax policy on investment and consumption. Decisionmakers could then see both the trends and the mix of outlays and tax expenditures used to accomplish government investment objectives.

Data on deferred maintenance of physical capital could be used by policymakers to identify the amount of maintenance expenditures that are being delayed to a future period and of the decline in value of an asset due to deferred maintenance. Studies, such as CBO's 1991 study on How Federal Spending for Infrastructure and Other Public Investments Affects the Economy, have shown that maintenance is often more cost-effective than new construction.

Displaying historical data on federal, state, and local investment spending would enable decisionmakers to compare investment spending levels between different levels of government as well as with federal investment undertaken in the past. It also would provide data for analysis of total public investment spending and facilitate studies of shifts in spending between the various levels of government.

Depreciate Investment Activities

This approach would report the total up-front cost of investments in a capital portion of the budget, and the annual depreciation in an operating portion of the budget would spread the investment costs over the life of the investment. Thus, the operating budget would reflect the cost of goods and services in the period that they are used or consumed.

[7]A tax expenditure is a revenue loss attributable to a provision of the federal tax laws.

Depreciation has been a long accepted part of accounting in business organizations. Under business accounting practices, depreciation is the allocation of the costs, less salvage value, of fixed assets, including equipment, buildings, and other structures, over their useful lives. It is recorded in a business organization's financial statements to reflect the use of assets during specific operating periods in order to match costs with related revenues in measuring income and to determine the organization's profit or loss, its federal tax liability, and the depreciated value of the asset.

State governments neither budget for depreciation nor charge their operating budgets with depreciation. They often use separate capital and operating budgets because they are legally required to balance their operating budgets. Most charge the operating budget with debt service—principal and interest—when bonds are sold to finance the capital.

Depreciation is also not currently used in the federal budget, but some capital budget advocates argue for its use. Appropriations and outlays are normally recorded on a cash basis in the budget; thus the costs of programs intended to produce future benefits are recorded up front. Advocates of traditional capital budgets argue that this large up-front commitment of resources, and the resulting additions to total spending, makes investments unattractive spending decisions compared to other types of spending, especially under the current budget process with its spending caps.[8]

Depreciation is not a practical alternative for the Congress and the administration to use in making decisions on the appropriate level of spending intended to enhance the nation's long-term economic growth for several reasons. Currently, the law requires agencies to have budget authority before they can obligate or spend funds. Unless the full amount of budget authority is appropriated up front, the ability to control decisions when total resources are committed to a particular use is reduced. Appropriating only annual depreciation, which is only a fraction of the total cost of an investment, raises this control issue.

In addition to the funds control issue is the difficulty of determining an appropriate depreciation amount. Investments in human capital would be particularly difficult to depreciate because of the difficulties in measuring

[8]Given the BEA discretionary budget caps, if resources are committed up front for capital items, spending for alternative discretionary items is squeezed out.

the value and appropriate period over which such human capital expenditures should be charged. Also, depreciation schedules are often arbitrary; thus, including depreciation in the budget could result in spending decisions being based on questionable data. There could be incentives to use lower depreciation rates to make the operating expenses and the deficit look smaller by extending the periods over which costs are allocated. Questions have also arisen over the issue of the federal government allocating depreciation for physical assets, such as highways, that are financed with federal funds but owned by state and local governments.

The debate over depreciation could be relevant to the government's role as an operating entity—but not to its role in increasing private economic growth. Unlike the government's investments intended to increase long-term economic growth in the private sector, assets such as buildings or computer systems are more easily measured for depreciation. And, unlike most federal investment programs, the federal government fully owns the assets it purchases for internal operations.

The Federal Accounting Standards Advisory Board (FASAB) is addressing the appropriate use of depreciation for federal accounting purposes. It is not clear what types of spending, if any, would be depreciated for these purposes. If depreciation concepts are to be used in budgeting, it would be desirable that they be developed in concert with accounting concepts.

If depreciation were to be included in the budget, various alternatives for depreciating investments are possible. We discuss some of these in appendix II.

Permit Deficit Financing of Investment Activities

This approach would permit borrowing to finance investment activities while retaining a balanced operating budget. Some advocates of intergenerational equity (which calls for spreading the costs of government benefits fairly among the generations receiving benefits) argue that only capital items, which are used for many years, should be financed by borrowing. Other proponents favor deficit financing if the rate of return for the federal investment is better than the private investment it displaces. This would be a marked contrast to current practices which do not differentiate between current consumption and long-term investments.

The majority of state governments have some form of a capital budget and use a combination of current revenues, short-term debt, and long-term

debt to finance capital expenditures. The most frequently used debt financing tool for capital assets in state governments is long-term debt. If debt financing were implemented consistent with intergenerational equity theory, the term of the borrowing would coincide with the life of the capital asset, and, as a project generated services over a number of years, the services would be paid for by the people who use them. In practice, however, states finance capital projects through a combination of taxes, user fees, federal grants, and debt financing, and some states do not link the financing method and borrowing period either to a capital asset or its useful life.

Regarding the rate of return argument, the long-term return on federal investment is less well understood than returns on private investment, and it is not subject to the same market discipline. The choice, therefore, between spending for investment and spending for consumption can be seen as the setting of priorities within an overall fiscal constraint, not as a reason for relaxing that constraint and permitting a larger deficit.

Regardless of how it were implemented, deficit financing of investment would create a problem for the integrity of any budget process. If investments can be deficit financed while other types of activities (noninvestment or operating) may not, there would be significant incentives to try to categorize operating activities as investment. Unlike the rest of the budget, activities categorized as investment would not be subject to the same pressures to reduce the deficit. Charging annual depreciation of investments to the operating budget (which would be required to be balanced) could exert some control over the amount of investment undertaken.

Establish Annual Investment Targets

The BEA established a set of caps on discretionary spending as part of the budget control process. Investment spending could be considered formally in the budget process by establishing similar aggregate targets for investment. Since we believe that a primary budgetary objective should be to reduce the deficit, a declining unified budget deficit path should be determined first. Then, within that path, a target for investment spending could be established. Policymakers could evaluate individual investment programs to determine which competing investments should be selected within the overall target.

Setting an investment target would require policymakers to evaluate the current levels of investment and consumption spending and would

encourage a conscious decision about an appropriate overall level of investment. In our view, this approach has the advantage of focusing budget decisionmakers on the overall level of investment supported in the budget without losing sight of the unified budget deficit's impact on the economy. It also has the advantage of building on the current congressional budget process as the framework for making decisions. And it does not raise the budget control problems posed by the depreciation and deficit financing options.

Given the way the budget process now operates, however, a number of implementation questions would be raised by deciding to set a target for investment. These questions include the following:

- How can a decision be made on an appropriate level of investment and how can we be assured that only worthwhile projects are funded?
- Within the current budget enforcement framework, would separate floors as well as caps be necessary to assure a minimum level of investment?
- Would trade-offs be allowed between discretionary spending for investment and mandatory programs that support consumption to permit the Congress to shift resources from consumption to investment?[9]
- How would investment and noninvestment activities be allocated to congressional committees?

These are important and difficult questions and the answers could change over time. Nevertheless, we believe working answers and procedures can be agreed upon. For example, although there is unlikely to be a single "right" number for the share of federal spending that should support investment, most agree that share should rise. The Congress and the President might start by focusing on how much the share should increase each year. Selection of a range rather than a single number could provide some historical experience that could help in answering the first two questions listed above.

The Budget Enforcement Act does not permit trade-offs between discretionary spending for investment and mandatory spending which supports consumption. It would be difficult for the Congress and the administration to make any shifts in the portion of federal spending devoted to investment without some increased flexibility to make trade-offs between discretionary and mandatory spending. However, the BEA does not offer such flexibility. How to achieve these trade-offs without destroying the existing controls in the Budget Enforcement Act is a

[9]GAO letter to the Honorable John Conyers, Jr., May 19, 1993, B-247667.

question that must be addressed in order to implement investment targets. Closely related to this is the question of how the Congress would choose to consider investment and noninvestment activities—either through allocation of the targeted amount to existing congressional committees or through some new allocation process.

Although there is no guarantee that any specific project will by itself increase productivity, there are questions that can be asked to increase the likelihood that only worthwhile projects are funded. We provided one such set of questions, a discussion of available analytical tools, and a framework for evaluating investment proposals in our recent report, Federal Budget: Choosing Public Investment Programs (GAO/AIMD-93-25, July 23, 1993).

Conclusions

The most important contributions the federal government can make to a healthy and growing economy are (1) reducing the federal deficit and (2) making wise decisions on investments that will foster long-term economic growth. However, the current budget structure does not facilitate making decisions on activities intended to promote long-term economic growth. We believe that an investment component in the federal budget could help the Congress and the President make more informed decisions regarding federal spending on noninvestment activities versus investments for the future.

However, for an investment component to be effectively used by decisionmakers, it is imperative that a definition of investment be agreed upon. While there are many possible definitions of investment, the most appropriate is one that includes only those programs directly intended to increase the long-term productive capacity of the private sector. Controversy over the definition will likely escalate if the investment component is given any type of favorable budget treatment. Proponents of any program could be motivated to define it as investment so as to obtain a favorable budget treatment. Thus, the application and integrity of the definition become very important. To develop and enforce a definition, an agreement could be reached between the executive and legislative branches similar to the agreement that was reached in defining mandatory and discretionary programs for BEA.

The most promising way to use an investment component is to establish targets for appropriate levels of investment spending similar to BEA's discretionary spending limits. Recognizing the importance of deficit

reduction to long-term growth, it would be better to make decisions on the appropriate level of investment within the context of the unified budget in order to sustain focus on reducing the deficit over an appropriate period.

We are sending copies of this report to interested Members of the Congress; the Director, Congressional Budget Office; and the Director, Office of Management and Budget. Copies will be made available to other parties upon request.

Please contact me at (202) 512-9573 if you or your staff have any questions. Major contributors to this report are listed in appendix III.

Sincerely yours,

Paul L. Posner

Paul L. Posner
Director, Budget Issues

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Abbreviations

ACP	Asset Capitalization Program
BEA	Budget Enforcement Act
BPS	Budget Preparation System
CBO	Congressional Budget Office
DOD	Department of Defense
FASAB	Federal Accounting Standards Advisory Board
GNP	gross national product
OMB	Office of Management and Budget
OTA	Office of Technology Assessment
R&D	research and development
WIC	Special Supplemental Food Program for Women, Infants, and Children

Methodology for Investment

The dollar amounts in our investment definition (see table I.1) are derived from a selection of character classification codes recorded in OMB's Budget Preparation System (BPS) data tape. The amounts have been adjusted based upon discussions with two panels of experts on various investment options, consultation with economists, and an examination at the account level of character classification expenditures sorted by budget subfunction.

Table I.1: Investment Definition—Example 1

Dollars in thousands

Investment category	Fiscal year 1992 outlays[a]
Facilities and Equipment	
Research and development	$2,769,927
Other—Federally owned	8,271,065
Other—Grants	23,235,015
Research and Development	59,877,058
Education and Training	36,952,044
Total Investment	**$131,105,109**
Total Federal Outlays	**$1,651,507,152**
Investment as a Percent of Total Outlays	7.94

[a]The dollar amounts in this column are net of offsetting collections credited to appropriation accounts, but are not adjusted for offsetting receipts (proprietary receipts from the public and intragovernmental transfers). The investment categories include only spending in those budget functions that we consider investment under example 1 of the definition of investment described in this report.

The selection is focused on public investments that most directly enhance the private sector's long-term productivity. All dollar amounts are fiscal year 1992 actual amounts, are net of offsetting collections credited to appropriation accounts, but are not adjusted for offsetting receipts (proprietary receipts from the public and intragovernmental transfers). The total dollar amounts are, therefore, higher than total budget outlays.

This investment definition includes grants for construction and equipment, direct federal construction of R&D facilities and acquisition of R&D equipment, R&D (except Defense Applied R&D and Weapons Activities Development R&D), and education and training activities. It also includes some direct federal construction and major equipment acquisitions that promote national economic development.

Federal grants for construction and equipment provide financing for investments primarily managed by state and local governments. This federal investment is important in that it can stimulate local investment for construction that might not occur absent the federal involvement and can also lead to private investment and enhancement of the economy.

Direct construction of federal R&D facilities is included because it represents the capital assets used for conducting R&D activities. It does not include assets that are required for the conduct of general government business.

Research and Development expenditures are considered investment because they create a store of knowledge that can be used over time to produce new products or production processes. Defense Applied R&D and Weapons Activities Development R&D are excluded from investment because indications are that such specifically applied research is generally not transferrable to a civilian application.

Education and training expenditures represent that part of human investment that aids economic growth by developing a more skilled and productive work force.

A small selection of expenditures for direct federal construction and direct federal acquisition of equipment has been included. Expenditures for activities such as flood prevention and control, construction of power generating facilities, and acquisition of air traffic control equipment can increase productivity and have been included in the investment option.

The character classifications above that were identified as investment were sorted by subfunction and examined at an account level. We excluded the following functions or subfunctions because we believe they do not directly enhance productivity:

- International Affairs (150) - This function promotes international security and economic development abroad rather than in the United States.
- Recreational Resources (303) - These funds are used to acquire park lands and promote other types of recreational activities.
- Farm Income Stabilization (351) - These expenditures are for subsidies and other payments to stabilize agricultural prices at an equitable level.
- Community Development (451) - These expenditures are for programs designed to aid largely urban community development.

- Other Labor Services (505) - The expenditures in this subfunction are for aids to or regulation of the labor market such as gathering labor statistics and mediation services.
- Housing Assistance (604) - These expenditures provide income support for housing for individuals and families.
- Other Income Security (609) - These expenditures finance grants or direct payments that constitute cash income for low-income individuals and families.
- Other Veterans Benefits (705) - These expenditures are for administrative expenses of the Department of Veterans Affairs.
- Federal Law Enforcement (751), Federal Correctional Activities (753), Criminal Justice Assistance (754) - These expenditures are for law enforcement activities, police protection, and the rehabilitation and incarceration of criminals.
- Central Fiscal Operations (803) - These expenditures are for general tax collection and fiscal operations of the Department of the Treasury.
- General Purpose Fiscal Assistance (806) - These expenditures are for general fiscal support of state, local, and territorial governments.
- Other General Government (808) - These expenditures are for miscellaneous costs such as the federal cost of territorial governments.

A second investment example is also included (see table I.2). It is derived from this initial investment example but also includes spending for childhood immunizations and the Special Supplemental Food Program for Women, Infants, and Children which is commonly referred to as WIC.

Table I.2: Investment Definition—Example 2

Dollars in thousands

Investment category	Fiscal year 1992 outlays[a]
Facilities and Equipment	
Research and development	$2,769,927
Other—Federally owned	8,271,065
Other—Grants	23,235,015
Research and Development	59,877,058
Education and Training	36,952,044
Childhood Immunizations[b]	1,432,706
Special Supplemental Food Program for Women, Infants, and Children (WIC)	2,544,690
Total Investment	**$135,082,505**
Total Federal Outlays	**$1,651,507,152**
Investment as a Percent of Total Outlays	8.18

[a]The dollar amounts in this column are net of offsetting collections credited to appropriation accounts, but are not adjusted for offsetting receipts (proprietary receipts from the public and intragovernmental transfers). The investment categories include only spending in those budget functions that we consider investment under example 2 of the definition of investment described in this report.

[b]Expressed in terms of obligations. Neither the Budget Preparation System nor the budget document identify outlays for these activities.

Depreciation Alternatives

If depreciation were to be included in the budget, various alternatives for depreciating investments are possible. All of the alternatives would have the advantage of showing in the budget the accrued cost of the investment consumed during the year. But there would be certain disadvantages to any depreciation option as well. Investments in human capital would be particularly difficult to depreciate because of the difficulties in measuring the value and appropriate period over which such human capital expenditures should be charged. However, if only physical capital were depreciated, it would appear less costly in the budget than human capital. Questions have also been raised about the federal government depreciating physical assets such as highways that are financed with federal funds but are owned by state or local governments.

In this appendix, we discuss three possible budget treatments for depreciation. Although other budget treatments would be possible, these alternatives highlight the many issues and potential problems involved in budgeting for depreciation.

- nonbudgetary investment financing (not included in the unified budget totals) coupled with on-budget depreciation,
- depreciation as part of a revolving fund, and
- depreciation in a display of accrued costs.

Nonbudgetary Investment Financing

Investment under this alternative would be financed from nonbudgetary investment accounts with the same budgetary status as credit reform financing accounts.[1] The nonbudgetary investment accounts would have permanent authority to borrow from the Treasury amounts equal to budget authority provided in the authorization legislation for new investments. Budget authority sufficient to finance lifetime depreciation of the new investment would be appropriated to operating accounts in the budget. This could either be provided and obligated up front or it could be a mandatory appropriation made annually over the useful life of the asset. Permanent indefinite budget authority would also be provided to cover appropriate interest payments to the Treasury. A depreciation schedule, consistent with the expected useful life of the asset, would be established for contractual payments from the operating accounts to the nonbudgetary investment accounts to ensure that depreciation payments would flow

[1]A credit reform financing account is an account (established pursuant to the Federal Credit Reform Act of 1990) which receives payments from a credit program account and includes other cash flows to and from the government resulting from direct loan obligations or loan guarantee commitments made on or after October 1, 1991. The transactions of financing accounts are not included in the budget totals.

automatically to the investment account. Using their permanent indefinite budget authority, the operating accounts would also pay an appropriate interest amount to the investment accounts. The depreciation and interest collections from the operating accounts would be used by the investment accounts to repay the Treasury borrowing used to finance the investments.

The advantage of this alternative, if the total depreciation is appropriated and obligated up front, is that it would be like current budget practices where full budget authority is provided up front, before an investment is made. This allows for control over the level of investment at the point where resources are committed. However, if depreciation is appropriated over the useful life of the asset, the Congress would not have to provide funding at the time it authorized the investment programs or projects; instead, a mandatory appropriation would be required each year for the useful life of the investment.

A disadvantage of this alternative is that the reported cash-based deficit will be lower than actual cash borrowing needs because the actual cash flows will be accounted for in the nonbudgetary investment accounts. Also, spending decisions might be based on questionable data given the arbitrary nature of depreciation schedules.

Revolving Fund Alternative

Under this alternative, an on-budget revolving fund would be created to budget for investments. Its financing could be provided in one of two ways. The first way would be for the revolving fund to borrow from the Treasury whatever amounts are authorized for its initial capitalization and for subsequent additional investments. It would charge the users of the investment for depreciation and interest. Thus, budget authority and outlays for investments would be scored up front as currently done. Amounts for annual depreciation and interest would be appropriated to the operating budget, subsequently paid to the investment budget (the revolving fund), and used to repay Treasury borrowing. This method of financing the revolving fund would be most appropriate for investment spending to improve an agency's efficiency and effectiveness in performing its mission. However, this type of spending falls outside our definition of investment.

The second way of financing the revolving fund would be for budget authority and outlays for investments to be appropriated and scored up front. Amounts for annual depreciation would be appropriated to the operating budget and subsequently paid to the revolving fund. However,

unlike the first funding method using authority to borrow, this method would not require the revolving fund to repay Treasury. Thus, the revolving fund would have a source of financing—the annual depreciation amounts it receives from the operating budget—to make new (or replacement) investments.

However, this method of providing budget authority for the investment's full price up front and also providing budget authority for depreciation, may raise budgetary control issues. For example, the fund could collect the depreciation charge from its users and use the proceeds for program purposes without any further congressional approval. We commented on such control problems when we evaluated the Department of Defense's (DOD) management of the Asset Capitalization Program (ACP) funds.[2] ACP was a source of funds for the five DOD industrial funds that existed prior to fiscal year 1992. DOD used program revenues (primarily depreciation charges), which were meant for capital investments, as a source of additional operating funds. After several years of operation, $1 billion in unliquidated capital investment obligations had accumulated. However, the ACP revenues had been spent on other industrial fund operations. We had previously recommended in May 1986 that the ACP establish a separate cash reserve for unliquidated obligations for capital outlays. Similar controls would be needed if this funding method were adopted to include depreciation in the budget.

Display Alternative

Budget account level displays could be designed to report accrued costs, including depreciation, in operating accounts for informational purposes only. Budget authority and outlays for investment would be scored up front, as currently done, thus budget authority and outlay totals would not be affected. OMB required data on the accrued costs of operations, including depreciation, to be included in the budget between 1961 and 1981. Agencies used a single line adjustment called "Change in Selected Resources" to convert accrued costs to obligations to conform with the way the Congress appropriated funds.

According to officials who worked at OMB at that time, accrued cost data were discontinued in the budget because the Congress did not use such information for budgetary decision-making purposes. However, discussions recently conducted by FASAB with potential users of financial statements, including congressional staff and program managers,

[2]Industrial Funds: The Department of Defense's Management of ACP Funds (GAO/NSIAD-90-202FS, June 1990).

identified accrual cost information as a commonly expressed information need. These discussions showed that those involved in the budget process are becoming increasingly aware of the value of accrual cost data in addition to obligation and cash outlay data. Also, our work[3] has shown that some agency decisionmakers said that they make budget decisions, based at least in part, upon accrued cost for accounts that finance programs similar to those found in the private sector. For such accounts, a display of accrued cost data, including depreciation, in the budget accounts could be useful for budget decision-making.

[3]Budget Issues: Financial Reporting to Better Support Decision-making (GAO/AFMD-93-22, June 1993).

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