REPORT
of the
PRESIDENT'S
COMMISSION
to STUDY
CAPITAL BUDGETING

WASHINGTON, D.C. FEBRUARY 1999

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GENERAL NOTES

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The President's Commission
to Study Capital Budgeting

February 1, 1999

Honorable William J. Clinton
The President
The White House
1600 Pennsylvania Avenue, N.W.
Washington, D.C. 20500-0001

Dear Mr. President:

We are hereby submitting the final report of the Commission to Study Capital Budgeting.

As you requested, we have concentrated on capital spending by the federal government. However, we have concluded that capital spending by all levels of government, as well as by the private sector, provides the nation with important long-term benefits.

Our research shows that the current budget process does not permit decision-makers in the executive branch and Congress to pay sufficient attention to the long-run consequences of their decisions. This results in inefficient allocation among capital expenditures and shortchanges the maintenance of existing assets.

In this report, we propose a series of recommendations that we believe would improve each of the component parts of the budget process: *setting priorities* currently and for the long run, *making budget decisions* in the current year, *reporting on those decisions*, and subsequently *evaluating them* in order to make improvements in future years. We do not propose, however, the current adoption of a formal capital budget, as defined and discussed in the report.

To implement the proposed recommendations, the executive branch and Congress must ensure that the *appropriate information* is made available to decision-makers and the public throughout the budget process. As a result, policy makers will be both properly informed when deciding how to spend taxpayers' money, and held accountable by the public for those decisions.

This report reflects the views of commissioners from many different backgrounds. We reached our conclusions after conducting nine hearings, at which more than thirty experts from the private and public sectors presented their views. While the members of the commission endorse the recommendations presented herein, individual members do not necessarily agree with all of the analysis or with each and every word of the report.

The commission worked diligently to carry out your directions. We hope that our recommendations will help the Administration, future presidents, and the Congress in improving the budget process, especially as it relates to decisions about capital spending.

Respectfully,

Kathleen Brown, Co-Chair

Jon S. Corzine, Co-Chair

ACKNOWLEDGEMENTS

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PREFACE

By Executive Order 13037, issued on March 3, 1997, the President of the United States established this Commission to Study Capital Budgeting. The order directed the commission to prepare a report discussing various aspects of capital budgeting, including the budgeting of capital in other countries, state and local governments, and the private sector; the appropriate definition of capital; the role of depreciation in capital budgeting; and the effect of a capital budget on budgetary choices, macroeconomic stability, and budgetary discipline. [1]

Since its formation, the commission has had nine meetings, has heard testimony and received written submissions from many individuals from the public and private sectors, and has reviewed the relevant and voluminous professional literature. It has carried out its work on its own. The Administration did not provide any instructions concerning particular results or suggestions that it wanted the commission to explore or recommend.

This report is the product of the commission's hearings and of deliberations among its members and associated staff. [2] The members of the commission endorse the recommendations presented in the report, although individual commissioners may not agree with all of the analysis or with each and every word. In some cases, the separate views of certain commissioners on selected subjects are provided in footnotes to the report (which are signified by alphabetical letters; all other numbered notes after this preface are found at the end of the report).

[1] The full text of the initial order and subsequent amendments are shown in Appendix A. Other materials the commission examined in carrying out its duties, including summaries and full versions of the testimony the commission heard from a variety of experts and interested parties, are posted on the website of the commission at: www.whitehouse.gov/pcscb.

[2] The staff from the various organizations who provided assistance to the commission are listed in the Acknowledgements.

EXECUTIVE SUMMARY

The subject of capital budgeting—or indeed public budgeting for any purpose—may appear to be of interest to only a special audience: government professionals "inside the Beltway" and perhaps some analysts in the investment community. Nothing could be further from the truth.

The budget of any organization, private or public, is a statement of both the *resources to be made available* to the organization and the *priorities* of those who manage it. The budget that the President submits to the Congress, which in fiscal year 1999 covered expenditures of nearly $2 trillion, tells the American people how the administration proposes to spend their taxes and, until recently, the proceeds of federal debt issued to finance the shortfall between total expenditures and revenues. The budget is thus inherently a political document, but in the best sense of the term. This is because it reflects the collective judgment of the individuals in a democracy about how much public funds are to be raised and how they are to be used.

This commission has devoted its attention to one particular kind of expenditure in the federal budget: spending on "capital." Although this term has been defined in various ways for different purposes, a common element among all of the definitions is that capital spending—whether undertaken by the private or public sector—is intended to generate benefits over the *long run*.

In this report, we have concentrated on capital spending by the federal government because it is our charge. But we cannot emphasize too strongly that capital spending at all levels of government, as well as by the private sector, provides important benefits to the nation as a whole in significant part because those benefits *are* delivered over the long run. It is easy in the day-to-day battles over budget policy to forget that such spending helps determine the kind of society that we and our children will live in—not just this year but many years from now as well. We therefore encourage this president and future presidents to help educate American citizens about the importance of devoting current resources toward future needs—in the form of spending on capital by both the private and public sectors.

Most firms in the private sector, as well as many state and local governments, recognize the importance of capital expenditures by making decisions about them separately from decisions about how much to spend on annual operating expenses. By contrast, the federal government has never done this.

This commission has been directed to examine whether this practice ought to be changed—that is, whether the federal government should adopt a "capital budget"—and, if not, what other steps, if any, should be taken to improve the federal decision-making process as it relates to spending on capital or "investment" expenditures.

Capital budgeting is a process that takes explicit account of capital spending levels. In this report, we primarily examine versions of a capital budget in which either: (1) the size of the deficit or surplus is made to depend, in part or in whole, on the amount of expenditures defined as "capital," or (2) a single decision is made about how much to spend on "capital," under some definition. A variation of the first definition is what we label the "simplistic" version of the capital budget, one in which capital spending may be financed, in part or in total, by borrowing. We treat the second definition as the equivalent of imposing a separate "cap" on expenditures defined to be capital, or in the alternative, a process whereby the depreciation of capital is explicitly taken into account in the budget process. We briefly note in a concluding section that there are other, perhaps less formal, variations of a capital budget that we do not extensively analyze here.

The commission had its origins during the Congressional debate about whether to amend the Constitution to require the federal

government to have a balanced budget every year. Nothing in this report should be construed as support for the balanced budget amendment considered by the Senate in 1996.[a] Nor does the commission endorse the adoption of the simplistic version of the capital budget. Furthermore, a majority of the members of the commission does not support, at this time, adopting a budget procedure that would impose a separate cap on capital spending.[b] The reasons for reaching these conclusions are spelled out in the body of the report.

At the same time, we have concluded from our study of existing practices and after gathering evidence from a wide range of experts, that the existing federal budget process—as it affects decision-making about capital expenditures as well as other types of spending—has significant weaknesses. Insufficient attention is paid to the *long-run consequences* of budget decisions. Capital spending in particular is *inefficiently allocated among projects.* Moreover, the current process shortchanges the maintenance of existing assets.[c]

Accordingly, the commission urges the Congress and the executive branch to undertake a thorough examination of how the budget process may be improved beyond addressing capital-related needs. Toward this end, it may be productive for both branches to create a new Commission on Budget Concepts to aid them with this task.[d]

In the meantime, we believe there are a series of constructive responses to the shortcomings we have identified, though they do not include adopting any particular form of a capital budget as we have just defined the term. These responses are aimed at improving each of the component parts of the budget process: *setting priorities* currently and for the long run, *making budget decisions* in the current year, *reporting on those decisions,* and subsequently *evaluating them* in order to make improvements in future years. Key to achieving these improvements is ensuring that the *appropriate information* is made available to decision-makers and the public throughout the process so that policy makers (1) are properly informed when deciding how to spend taxpayers' money and (2) can be held accountable by the public for those decisions.

The recommendations we summarize below take account of two important features of federal budgeting.

First, many government efforts have objectives, such as the management of foreign affairs or the defense of the nation, that cannot be readily measured in monetary terms. In stark contrast, it is relatively easy to keep score in the private sector, where firms are often judged by a single metric, such as current profitability, return

[a] Comment of Commissioners Corzine, Kramer, Leone, Levy, O'Cleireacain, Rattner, and Rubin: We wish to register our strong opposition to *any* amendment to the Constitution that would mandate balanced federal budgets. The macroeconomic straightjacket implied by such a change in the Constitution would cost the nation dearly in lost growth, unnecessary unemployment, and slow recovery from recessions. Indeed, were such an amendment to pass, it would be essential that many spending items be exempted routinely, while others be exempted under clearly defined circumstances. Rather than simplify the budget process, it would then become more confused and opaque. In addition, democratic governance would suffer since the ability of Congress and the president to respond to public priorities would be unduly constrained.

Specifically, in a recession tax receipts fall and spending for such items as unemployment insurance rises. This imbalance offsets recessionary forces, thus speeding recovery. It is one of the reasons economic downturns have been less severe since World War II than before. Indeed, the insistence on trying to balance the budget in the early 1930s is generally considered to have deepened the Great Depression. The counter-cyclical advantages of the current system are not trivial. Giving them up may lead to real costs, particularly among working men and women: income lost when government cannot fight a recession is lost forever.

[b] Comment of Commissioners Lynn, Penner, and Stein: We do not favor adopting at this time a capital budget of any kind, whether of the kind here labeled "simplistic" or any other known to us. We endorse the qualification "at this time" to allow for the possibility that future developments in information, sophistication, and discipline in the budgetary process might recommend a different course.

[c] Comment of Commissioners Corzine and Levy: These weaknesses in the budget process may have macro as well as micro consequences. One of the aggregate effects of sub-optimal choices may, at times, be either an inadequate or an excessive level of capital spending.

[d] Comment of Commissioners Corzine, Leone, and O'Cleireacain: We believe it is both possible and desirable to move toward classifying the federal budget in two parts: as "capital," in the sense of investment with long-term effects: and as "operating," such as consumption expenditures and transfer payments for the current year. This approach, which is consistent with private sector organizations' practices, would enable the U.S. government to better understand, manage, and finance its commitments.

As is the custom at the state and local levels of government, a capital budget classification does not mean that the government would lose its flexibility to manage during periods of fiscal constraint/plenty. Nor does it mean that all capital expenditures must be financed from borrowed funds. Moreover, the definition of capital, like other aspects of the current budget structure, could be refined and updated over time.

on equity, or the dollar value of their shareholders' equity.

Second, borrowing is subject to less discipline at the federal level than it is at lower levels of government. States and localities cannot "print money" to cover the debts they issue, whereas one arm of the federal government—the Federal Reserve—has the ability to "monetize" debt issued by the Treasury. A related difference is that federal debt is viewed by the marketplace as practically free of default risk, whereas states and localities have a strong interest in maintaining high credit ratings, which constrains borrowing at the state and local level.[e]

These considerations necessarily imply that federal budgeting rules should not simply replicate rules that may be used in the private sector or at the state and local levels of government. But at the same time, because the existing federal budget process has the weaknesses we have noted, certain improvements are appropriate. We have concentrated on suggestions for the executive branch; however, as will become evident below, certain of these require the cooperation of and concurrence by the Congress.

We also recognize the essential role of the American people as monitors, advocates, and parties whose interests ultimately are at stake during the budget process. For this reason it is important to increase the transparency of that process—not only to enhance the quality of inputs to the Congress from the private sector and other levels of government, but also to increase the federal government's accountability to the American people.

To facilitate the setting of priorities among all programs, not just those involving capital expenditures, the commission recommends:

Recommendation 1: Five-Year Strategic Plans.—Although federal agencies are now required (under the Government Performance and Results Act) to prepare strategic plans every three years and performance plans annually, this process should be improved in several respects:

- The strategic plans should (1) be prepared annually, (2) be integrated with the annual performance plans and the agencies' five-year budget projections that are now submitted to the Office of Management and Budget (OMB), and (3) be included as an integral part of the budget justifications sent to the Congress.
- The strategic plans of the agencies and their annual budgets should be tied to the life-cycles of their capital assets.
- OMB should standardize the formats of these plans, in consultation with GAO and CBO, to make them more useful to policy makers.
- OMB should expand its efforts to evaluate the plans and facilitate the Administration's use of them for government-wide planning.
- Congress should take such plans into account in deciding on annual agency appropriations. It should also consider how it might improve its own procedures so that it can pay more attention both to the longer-run implications of its current year decisions and to issues with longer-run consequences. In undertaking this task, Congress might find it useful to take advantage of the wide range of institutional expertise available to it, including resources within the Congressional Budget Office, the General Accounting Office, and the Congressional Research Service.

Recommendation 2: Benefit-Cost Assessments.—There should be an ongoing effort within the federal government to analyze the benefits and costs of all major government programs (whether or not related to capital spending), so that they can be adjusted, refashioned, or eliminated, as appropriate. OMB, the agencies, and the Congress (through GAO and CBO in particular) should be given the resources to carry out this important function.

[e] Comment of Commissioners Kramer, Leone, and O'Cleireacain: We believe the text over-emphasizes "theoretical" market discipline when it comes to borrowing for capital by the states. Most states, as a simple matter of "capacity to pay," could borrow much more than they do. In fact, almost always, in the real world the actual constraints are political (including referendum requirements) and practical—demands for current revenues limit the amounts available for debt service.

To improve the process by which annual budget decisions are made, the commission recommends:

Recommendation 3: Capital Acquisition Funds.—To promote better planning and budgeting of capital expenditures for federally owned facilities, Congress and the executive branch should experiment by adopting for one or more agencies separate appropriations for "capital acquisition funds" (CAFs). Budget authority would be lodged in the CAFs for federally owned capital assets. The CAFs would "rent out" their facilities to the various programs within each agency, charging them the equivalent of debt service.

- CAFs would help ensure that individual programs are assessed the cost of using capital assets.
- By spreading capital costs across entire agencies, CAFs would help smooth out the lumpiness in appropriations sometimes associated with large capital projects.
- If the CAF experiment proves successful, the CAF approach should be adopted throughout the government.

Recommendation 4: Full Funding for Capital Projects.—All capital projects, or usable segments thereof, should be fully funded before the work begins. In this way, Congress can fully evaluate their likely costs and benefits before appropriating funds for them.

Recommendation 5: Adhering to the Scoring Rules for Leasing.—Existing rules that govern the scoring of leases should be strictly followed by both agencies and the Congress. This will discourage the signing of short-term leases when it is cheaper over the long run to construct or purchase a facility.[f]

Recommendation 6: Trust Fund Reforms.—Although trust funds for highways, airports, and other uses insulate certain types of spending from the balancing process that is inherent in the rest of the budget, they can be useful if the funds going into them truly represent charges or fees for the use of the government services they support. But this purpose is fulfilled only if the monies raised by earmarked taxes or fees to support infrastructure or other types of capital—averaged over some reasonable period, such as three years—are actually spent on the dedicated uses.

- To ensure that this is done, the President's budget should disclose the earmarked taxes or fees and spending of these various capital-related trust funds. This will allow policy makers to make informed decisions about whether to increase spending on the authorized activities or reduce the charges now being assessed purportedly to finance those activities.
- State and local governments that are recipients of capital-related grants from the federal government should be required to maintain their capital—such as highways—as a condition to receiving any additional federal aid (unless those governments can demonstrate that there is no longer a need for the assets the federal government initially supported).

Recommendation 7: Incentives for Asset Management.—The executive branch and the Congress should experiment with incentives to encourage agencies to manage their assets efficiently. One possibility might be to allow, on an experimental basis, one or more agencies to keep a limited portion of the revenues they raise from selling or renting out existing assets.

Steps must be taken to improve the methods that are used to give the results of those decisions (and the programs they support) to the public and policy makers. In particular:

Recommendation 8: Clarification of the Federal Budget Presentation.—The President's annual budget should contain a breakdown of proposed current and projected federal spending over the budget year and the subsequent four years among the following categories: investment, operating expenditures, transfers to individuals, and interest. Such a breakdown would make available to policy makers and the wider public the President's long-run vision for federal spending. This information might also encourage Congress to

[f] Comment of Commissioner Levy: I urge the Congress to address the lease-purchase problem as part of a special or comprehensive amendment to the current budget process. I discuss this issue in greater detail in a subsequent footnote (l).

find ways of taking a longer-run view in its annual budget deliberations.[g]

Recommendation 9: Financial Statement Reporting.—Reporting on financial activities and asset positions of the federal government should be enhanced in a number of ways to better inform the Congress and the public about the ways in which the federal government's assets are being used and maintained:

- Federal agencies should be required to issue to policy makers and the public more detailed information (both in print form and on their websites) about the composition and condition of the federally owned or managed capital assets under their control. OMB should consolidate these reports, which should continue to be based on independently developed accounting standards, and report on them in summary fashion in the annual budget.
- There should be enough information in the consolidated reports to provide Congress and the public with accurate benchmarks for making appropriate comparisons both in the current year and over time.
- The calculation of depreciation in various government reports should be standardized.

With more comprehensive, objective information on how the federal government as a whole, as well as individual agencies and programs, have used resources, increased or depleted assets, and undertaken new investments, debates over critical national policies would be better informed. Private corporations report audited financial results and asset and liability positions to investors. By the same token, the federal government should make available to the American people audited financial statements and underlying detail that go well beyond the information shown annually in the unified budget. Just as corporate decision-makers have accurate accounting data to help them assess past performance and make decisions about the future, Congress and the public should also have accurate accounting on federal assets and investments.

[g] Comment of Commissioners Lynn, Penner, and Stein: We do not believe that this four-way classification of expenditures would be helpful in making good budgetary decisions.

Recommendation 10: Condition of Existing Assets.—Work is planned at the federal level for agencies to begin developing standardized methods for estimating deferred maintenance. The commission strongly supports these efforts and encourages OMB to work with the agencies to complete this task promptly and to implement its results. In addition, the federal government, working with states and localities, should endeavor to report on the condition of assets owned at these lower levels of government, or at least those that have received federal support. In combination with the rest of the information provided in the audited financial statements, data on deferred maintenance will enable policy makers to develop sound plans for maintaining existing assets and spending on new ones where that is advisable.

Finally, steps should be taken to improve the process used in evaluating the impact of past budgetary decisions, so that policy makers can be in a position to make improvements, if warranted.

Recommendation 11: Federal "Report Card."—Under OMB guidance, agencies should assess the extent to which major investment projects have produced returns in excess of some benchmark cost of capital, such as the prevailing interest rate on long-term federal debt, the average cost of capital expected by private market investors, or some other threshold that OMB believes the public would find useful. This federal "Report Card" could be included in the President's annual budget. The commission recognizes that the projects for which it might be feasible to provide a monetary analysis may account for a relatively small fraction of total spending; nonetheless, it believes that over time advances in estimating techniques may permit a larger fraction of total spending to be evaluated in this manner. Where benefits and costs cannot be expressed in monetary terms, the evaluations should identify project objectives and assess outcomes qualitatively.

The foregoing recommendations are summarized in the table on the following page. The columns in the table refer to three different classes of capital, which are discussed in the body of the report: the federal government's own assets (such as buildings in

which federal agencies are located), the federal government's investment in assets owned by state and local governments (such as highways), and the federal government's investment in what we have labeled intangible national assets that are financed but not owned by the government (such as benefits accruing from federal expenditures on research and development and or on education). Our recommendations are then classified both by the stage of the budget process at which they are directed and by the types of capital that they are likely to affect. Because a number of our recommendations are designed to improve decision-making with respect to one or more categories of capital, they are listed in multiple columns.

While the primary responsibility for initiating most of the foregoing recommendations rests with the executive branch, in certain cases Congress also has an important role. Indeed, virtually all of the recommendations require active Congressional cooperation if they are to have a positive effect on the budget process and budget decisions.

Although the commission as a whole does not endorse setting a separate cap on capital spending, it nonetheless discussed the technical details of such a change in budget procedure. The concluding section of this report contains our findings on these issues, outlines the key pros and cons of subjecting capital spending to its own limit, analyzes proposals to reflect depreciation of capital assets in the budget process, and briefly describes some alternative versions of a capital budget.

In sum, the federal budget process can be and should be improved. The commission believes the recommendations outlined in this report would help accomplish this objective.

Summary of Recommendations by Stage of the Budget Process and Type of Capital Affected

	Federal Investment In:		
	Federal Assets	State/Local Assets	Intangible Assets
Strategy and Planning	Five-Year Plans Benefit-Cost Analysis	Five-Year Plans Benefit-Cost Analysis	Five-Year Plans Benefit-Cost Analysis
Decision-Making	CAFs Full Funding Proper Lease Scoring Trust Fund Reforms Investment Life-Cycle Planning Incentives for Better Asset Management	Trust Fund Reforms States/Localities Maintain Assets	
Reporting	Improved Financial Reporting Audited Financials Asset Inventory	Improved Financial Reporting Audited Financials Asset Inventory	Improved Financial Reporting Audited Financials
Evaluation	Report Card	Report Card	Report Card

WHAT IS "CAPITAL"?

This commission has been charged with examining capital budgeting in other countries, states and local governments, and the private sector, and, in the process, with addressing a number of questions about capital budgeting. It is only appropriate, therefore, to begin with the threshold issue: what is "capital" (or its annualized counterpart, "investment")?

The commission has not settled on, nor does it endorse, a single definition of capital.[1] Instead, a series of distinctions between different types of capital or "investment" spending, both by governments and by firms in the private sector, seem warranted for different purposes (and different commissioners place varying amounts of emphasis on alternative definitions of capital).

One distinction relates to the *functions* of capital. At its broadest level, any spending that yields benefits beyond the typical reporting period (such as a year) should be considered to be investment, and "capital" refers to the assets created by this spending. Such a definition would encompass spending not only on physical or fixed assets, such as structures and equipment, but also on human and a variety of intangible assets. "Human capital" consists of the skills imparted to individuals through training and education that enable them to increase their earnings not just in a single year, but potentially throughout their lives. Intangible assets can cover a very broad class of items. In private sector financial accounting, for example, intangibles are often measured by the expenditures required to gain patents, copyrights, trademarks, or other intellectual property protection. Certain types of public spending—including research and development (R&D), defense, nutrition, disease prevention, police protection, and drug treatment and prevention programs—may also produce intangible assets that deliver, or are at least designed to deliver, benefits over years, if not lifetimes.

Broad definitions of investment or capital could be useful for several purposes. For example, to the extent citizens and policy makers are interested in enhancing economic growth, the definition should count both private and public sector spending on buildings, equipment, research and development (including some defense-related R&D), and education and training. An even broader definition would be justified if the goal were to measure capital aimed at improving social welfare—one that included expenditures on national defense and police to enhance security as well as spending on childhood immunization, maternal health, nutrition, and substance abuse, to improve the health and well-being of citizens over many years.[h]

The accounting standards used in the private sector do not take such an expansive approach to the definition of capital. Generally speaking, they limit capital to physical and certain intangible assets (such as investments in intellectual property). Similarly, the National Income and Product Accounts (NIPA)—the federal government's statistical system for collecting and reporting data on overall economic activity—define capital to be spending only on physical assets.[2] It is important to keep in mind, however, that while these accounting standards may be conservative, they do not necessarily constrain the way managers think about spending that provides longer-run benefits. For example, although private sector accounting standards define employee training expenditures as an expense, this spending typically generates longer-term benefits to the firm (and to the employees). The fact that these expenditures are written off during the course of a year does not stop managers or investors from considering

[h] Comment of Commissioner Levy: A distinction must be made between *practical* and *theoretical* definitions. Defining investment based on its benefits (such as "increasing social welfare" or "increasing long-term growth") is useful in theoretical discussions, but no accounting is possible since we can never be sure which outlays qualify. At the same time, practical definitions—such as those embodied in Generally Accepted Accounting Principles (GAAP)—always have shortcomings, but still can be very useful. If we are to consider using investment or capital in federal accounting and budgeting, then we must resign ourselves to the use of practical definitions. The definitions of the Federal Accounting Standards Advisory Board (FASAB) are a functioning example.

them as investments in the future well-being of the firm.

A second distinction relates to who *owns* capital: specifically, whether it is owned privately or publicly (and if publicly, by federal, state, or local governments). Individuals and firms reap most of the benefits from the spending on capital they undertake; however, the public benefits when government is making the expenditures. For example, government spending to educate each generation of citizens benefits the entire public by ensuring that the population continues to be literate, cognizant of the benefits of our system of government, and able to work in an ever-changing economic environment. Similarly, when the government spends money on the nation's defense or finances basic scientific research, the benefits accrue to all citizens. Appropriately enough, economists call investments that confer benefits on a wide class of parties "public goods" because no private person or firm can capture all of their benefits. Identifying and funding those programs that produce returns to society well above the cost of capital is especially important for enhancing economic growth.

These points highlight the different criteria that are used to decide whether to add to private and public capital. In the private sector, capital spending decisions are made based primarily on how they affect shareholders, and are evaluated predominantly in monetary terms. In the public sector, decisions about capital take into account the impact on the public at large and rest on both monetary and non-monetary considerations.

A third distinction is between *federal government capital* and *national capital*. Federal government capital, as we use the term, refers only to those assets the government owns, such as federal buildings or federal military hardware. National capital is a broader term, including all government spending aimed at delivering long-term benefits to any portion of the nation, whether or not it is owned by the federal government. So, for example, using the broad functional definition of capital discussed above, national capital would include spending at all levels of government on roads and other physical assets, research and development, and education and training, among other items. At the federal level, what OMB labels as "federal investment outlays," illustrated in Table 1, represents federally financed national capital regardless of who owns it.[3] As the table shows, nearly half of the federal government's investment outlays in fiscal year 1997 were devoted to physical capital, about one-third to research and development, and the balance to education and training—roughly the same proportions that were prevalent during the earlier part of the decade.[4]

Federal government capital, in contrast, can be defined as including only assets owned by the federal government, so it can be accounted for in a fashion similar to the way capital is measured in the private sector. For example, OMB's *Capital Programming Guide*, which provides guidance to federal agencies on capital planning, procurement, and management, defines "federal capital" to include land, structures, equipment, and intellectual property (including software) belonging to the federal government that has an estimated useful life of at least two years. Consistent with this definition, Table 2 illustrates how the federal government provided almost $66 billion of budget authority for fiscal year 1997 on "major capital acquisitions": government buildings, information technology, and "other items" (weapons systems in the case of the Department of Defense, and facilities and equipment for other agencies). The table shows that the major part of the federally owned investment was for defense-related purposes.

This distinction between "national" and "government" capital is of more than academic interest. As discussed below, the government of New Zealand has adopted a separate capital budget but only for government capital. In contrast, the General Accounting Office has suggested defining a budget target that is a variation of national capital: public investments that promise "to raise the private sector's long-run productivity," which would include spending on infrastructure, non-defense R&D, education and training, and some defense activities, but would specifically exclude what GAO calls "federal capital," such as government-owned buildings, weapon systems, and land [GAO, 1993].

Table 1. FEDERAL INVESTMENT OUTLAYS, FISCAL YEAR 1997

(billions of dollars)

	Outlays	Percent of total
Physical capital:		
Direct federal defense	$52.4	23%
Direct federal nondefense	19.7	9%
Grants to state and local governments	41.5	18%
Subtotal, physical capital	113.6	50%
Research and development:		
Defense	40.2	18%
Nondefense	30.9	14%
Subtotal, research and development	71.1	31%
Education and training:		
Grants to state and local governments	25.0	11%
Direct federal	19.0	8%
Subtotal, education and training	44.0	19%
Total, federal investment outlays	**228.8**	**100%**

Source: OMB, *Analytical Perspectives, Fiscal Year 1999,* p. 125.

Table 2. MAJOR FEDERAL CAPITAL ACQUISITIONS, FISCAL YEAR 1997

(budget authority, in billions of dollars)

Construction and rehabilitation:	
Defense military construction and family housing	4.2
Corps of Engineers	1.6
General Services Administration	1.4
Department of Energy	1.2
Department of the Interior	1.0
Other agencies	5.6
Subtotal, construction and rehabilitation	15.1
Major equipment:	
Department of Defense	42.8
Department of Transportation	2.2
NASA	0.6
Department of the Treasury	0.3
Other agencies	4.4
Subtotal, major equipment	50.3
Purchases of land and structures	0.3
Total, major acquisitions	**65.7**

Source: OMB, *Analytical Perspectives, Fiscal Year 1999,* p. 135.

A fourth definitional distinction is between capital created by (1) direct government spending and (2) public and private capital spending induced by government policies. The advantage of confining any definition to direct spending is that measurement is relatively easy. Nonetheless, if the objective is to measure the impact of overall government policy on national capital (narrowly or broadly defined), then a definition based only on the government's direct expenditures is too limited. A full accounting would also require inclusion of capital spending at the state and local levels and by the private sector that may be brought about by such policies as federal deficit reduction (through lower interest rates), and targeted tax incentives, as well as regulatory mandates such as those requiring or inducing expenditures on pollution control or occupational safety.[5] Granted, such induced spending may be very important; however, the operational problem with adding induced expenditures is that they cannot be directly measured, but instead must be estimated, using economic models or survey responses.

The different definitions underscore the proposition that "capital" is not a single, uniform concept, but one that varies according to why the term is being used. Indeed, this is one reason that most members of the commission are opposed to recommending that a separate capital budget using one single definition of capital be adopted for decision-making purposes. Nonetheless, definitional issues should not stand in the way of illuminating the consequences of choosing among different government programs, whether or not they are labeled as capital. Nor should debate over definitions distract attention from (1) the need to improve planning and evaluation for whatever expenditures policy makers may choose to label as capital, or, (2) in the case of federal capital in particular, the need to identify the assets the government has and report them in a coherent way.

Finally, one important characteristic of much (but not all) capital spending is that its value declines over time. Buildings and machines wear out. Patents and copyrights have limited lives. Even the value of basic education and training may decline in a world of continuing technological change, which requires many workers to upgrade their skills constantly to maintain their earnings.

Accounting standards in the private sector, as well as the concepts reflected in the National Income and Product Accounts, take account of the declining value of capital items by requiring property and plant and equipment (but not land) to be "depreciated" or "amortized" over their "useful lives." The annual amounts of depreciation or amortization represent expenses that, along with salaries, supplies, rent, taxes, and other expense items, are deducted from annual revenue to determine profits each year.[6] A number of different methods for depreciation and amortization are in use, ranging from the "straight-line" method (that computes the annual deduction simply by dividing the original capital investment by the years of useful life) to various forms of "accelerated depreciation" (that deduct more in the early years of an asset's useful life and less in later years). Businesses may also use depreciation methods for financial accounting purposes that are different from those they use to compute their income tax liability.

Some state and local governments account for the declining value of their debt-financed capital assets by including in their annual budgets the annual debt service on the bonds they issued to finance the investments. Debt service includes interest and the annual amount of the principal of the bond that is paid off (similar to amortization of principal on a mortgage that individuals may take out to finance their homes) or put into a "sinking fund" that is eventually used to pay off the bonds when they mature. The amortization component of the debt service charge is analogous to depreciation, but with a time profile that is the opposite of accelerated depreciation—much larger deductions in the later years than in the earlier years.

TRENDS IN CAPITAL SPENDING

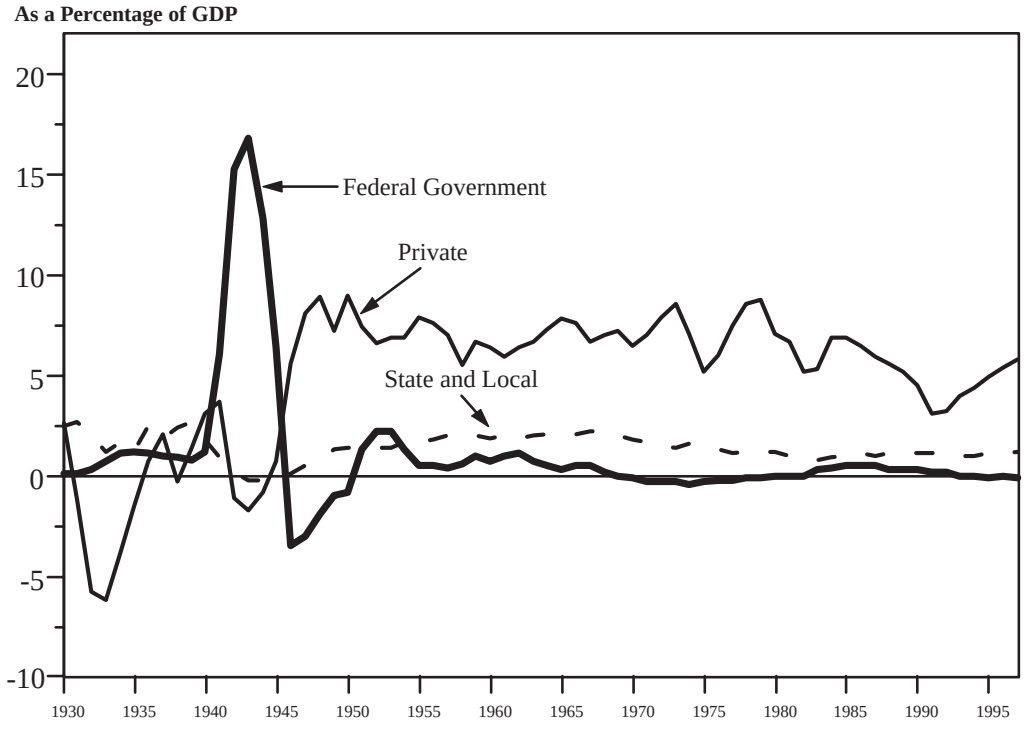
Two important distinctions are useful to keep in mind when considering trends in capital spending:

- The amount of capital spending in any given year is defined as "investment." This is different from the total amount of the existing capital "stock," which is the cumulative total of all previous investment minus cumulative depreciation.
- Investment, in turn, is often measured in two ways: as either the "gross" amount of spending on capital items or the "net" investment, which is the gross figure minus annual depreciation. Many analysts concerned with the contribution of capital to economic output pay more attention to the net figures than the gross figures.

Figure 1 depicts trends in net spending on physical assets alone, as a share of GDP, by the private sector, state and local governments, and the federal government.[7] Since World War II, the shares of such net spending in GDP have been reasonably stable—more so in the public sector than the private sector—with private investment substantially exceeding public investment. Meanwhile, within the government sector, since 1950 net investment at the state and local level has consistently outpaced federal spending. It is important to note, however, that about one-quarter of state and local infrastructure spending is financed by federal grants, and much of the rest has been subsidized by the federal tax exemption on municipal and state debt.

FIGURE 1

NET CAPITAL SPENDING ON PHYSICAL ASSETS



One reason that public investment has been of special interest to economists, business, and policy makers is its impact on economic output. In particular, some economists have argued that the decline in the public investment-to-GDP ratio shown in Figure 1 has contributed significantly to the slowdown in long-term growth from the first half of the post-World War II era to the second.[8] As shown in Figure 2, although it has picked up in recent years, over the past 25 years the annual rate of productivity growth in the United States, which determines the growth in average living standards, has been substantially below that of the 1948–73 period, which some have characterized as a "golden age." Figure 3 suggests that the slowdowns in public spending and productivity growth have occurred more or less around the same time.

The claim that the first slowdown (in infrastructure spending) "caused" the other one (in productivity growth) has proven to be highly controversial, however. Among other things, various economists have claimed that the causation runs the other way: that is, (1) public capital spending has slowed because economic growth has slowed; (2) the public capital buildup in the 1950s and 1960s was largely associated with once-in-a-generation events—the construction of the interstate highway system and the construction of schools for the baby boom generation—that could not have been expected to be repeated after they were completed; and (3) the statistical estimates used to prove that the slower growth in capital spending caused the slowdown in productivity growth are highly sensitive to the time period examined.[9] Moreover, as already shown in Figure 1, public sector investment in physical assets is considerably smaller in magnitude than private sector investment, which has also decreased relative to GDP during the same period in which public investment has declined. Both of these facts raise the question of whether and why public capital spending in particular should be singled out as being primarily

FIGURE 2

RATE OF NONFARM PRODUCTIVITY GROWTH

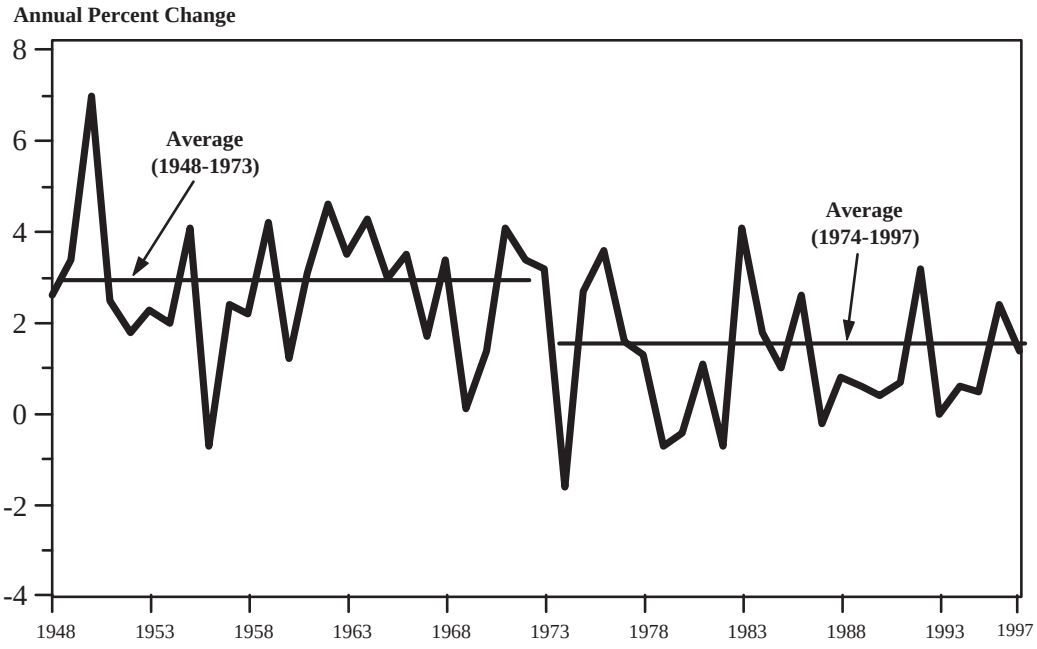
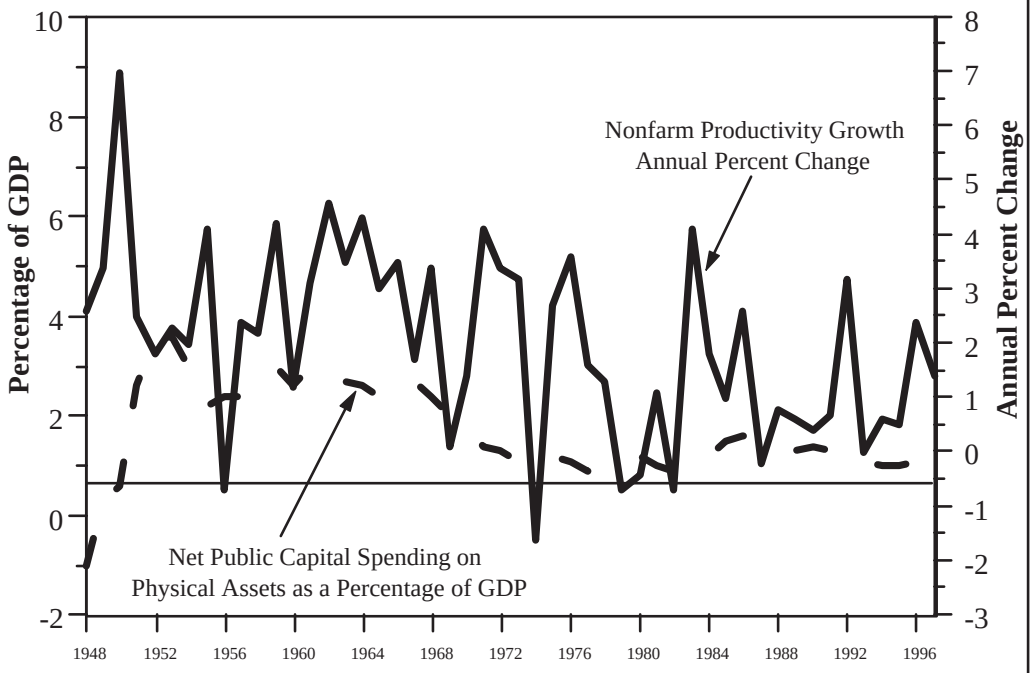


FIGURE 3

NONFARM PRODUCTIVITY GROWTH AND PUBLIC INVESTMENT



responsible for the trends in productivity growth.

There's no need to resolve the debate over what has caused the slowdown in measured productivity growth over the past 25 years to conclude that *all* types of capital (fixed assets, human capital, and intangibles), whether owned by the private or public sectors, remain important to economic growth. Economic theory has long pointed to that conclusion. The challenge for decision-makers in both the private and public sectors is to undertake those investments that realistically promise returns that exceed the cost of financing the investments; otherwise, scarce resources will be wasted.

Some observers have attempted to draw policy implications for the United States by comparing the intensity of investment activity here (both public and private), as well as rates of return on investment, with similar figures for other industrialized countries. Such comparisons, however, do not provide a standard for judging the appropriateness of the amount of total investment in this country, and still less for judging the amount of investment spending by the federal government.

In any event, several points should be made about those comparisons. First, though by conventional measurements the United States invests a smaller share of its GDP than other advanced countries do, that is not true (1) if investment is defined more broadly to include expenditures on education, research and development, consumer durables and defense capital, and (2) if the relative price of investment goods and other output is correctly calculated [Kirova and Lipsey, 1998]. Second, comparing investment/GDP ratios may not be as illuminating as comparing rates of return on capital. When this is done, the United States typically comes out on top of other countries. Third, significant differences in definitions and demographic conditions make comparisons of public investment particularly complicated across countries.[10]

BUDGETING CAPITAL

The executive order directs the commission to report specifically on capital budgeting practices used in the private sector, by state and local governments and in other countries, and then to explain the relevance of those practices for budget decisions made by the federal government.

By definition, a budget is a constraint because it implies the existence of a finite amount of resources that can be allocated among alternative uses. But what is it that limits the amount of available money? The vastly different answers to this question for private firms, state and local governments, and the federal government help shed light on the extent to which capital budgeting practices followed elsewhere are suitable for the federal budget.

Capital Budgeting in the Private Sector

The American economy is populated by over twenty million businesses, large and small, which surely have different ways of budgeting capital expenditures. Nonetheless, certain conventions have become standardized through custom and repetition, as well as through formal professional practice. As a result, it is possible to describe a stylized process that many firms, typically larger publicly held corporations, use to analyze their capital spending options, to choose among them, and then to account for those choices. To help understand these conventions, it is useful to refer to three basic financial statements that are found in the annual reports of publicly held companies: the balance sheet, the income statement, and the statement of cash flows.

The *balance sheet* provides a financial snapshot at a single point in time, usually at the end of a reporting year, of the firm's assets (on one side) and liabilities and net worth (on the other). The two sides add to the same total. Assets are "financed," as it were, by borrowing (liabilities) and shareholders' contributions (paid-in capital and retained earnings). Broadly speaking, three categories of assets are reported on the balance sheet: short-term assets (such as cash, marketable securities, receivables, and inventories), fixed assets (structures and equipment) minus any cumulative depreciation, and intangible assets minus any cumulative amortization. Using the nomenclature of this report, capital for private firms consists of fixed assets and, under some definitions, intangible assets as well.[11] It is worth noting that private sector accounting has been standardized in Generally Accepted Accounting Principles (GAAP), which are used to prepare financial statements.[12] The Financial Accounting Standards Board, an independent body of experts, is responsible for seeing that the principles embodied in GAAP are maintained, updated, and applied in a fair and reasonable manner.[13]

The *income statement* is an accounting of revenues and expenses over a certain time frame, typically a year, with the difference representing the firm's profit or loss. Because businesses exist to generate profits, spending decisions by private companies—including whether and how much to invest in capital projects—are judged predominantly by their likely impact on profitability. Investments in capital projects by definition are designed to deliver benefits over the long run, so capital spending does not appear on the income statement. Instead, the depreciation or amortization of existing capital recorded on the balance sheet shows up on the income statement as an expense that reduces reported profits.

Where, then, might spending on capital show up? The typical place is on the *statement of cash flows*. This statement combines information on where a firm gets its money and where it spends it during the course of a year: on operating activities, interest on any outstanding debt, and the full cost of capital projects.

How do firms decide how much capital spending to undertake, and of their many possible options, which projects to pursue?

Here, again, practices surely vary. But certain facts and conventions are widely understood.

First, most firms cannot spend without limits: they are constrained by their cash on hand, revenue likely to be realized in the short run, and how much additional cash they might be able to raise by selling existing assets, borrowing, or selling new equity.[14] In turn, creditors and investors decide whether to provide funds, if they are requested, and on what terms based on the firm's ability to repay its debts (in the case of borrowings) and generate profits (in the case of equity sales). In short, firms in the private sector are subject to *market discipline.*

Second, it is standard practice in private industry for firms to assess their capital projects by estimating their "net present value." Net present value (NPV) is calculated by projecting the future cash flows the investment is likely to generate (such as rentals from a building or cost savings from investing in new equipment or machinery), "discounting" the future cash flows by the "time value of money," taking appropriate account of the risk of investment, and then subtracting the initial cost of the endeavor. Future cash flows are discounted because a dollar today is worth more than a dollar to be received in two, three, or several years hence (since the dollar today can be invested in a financial instrument and earn a rate of interest).

According to standard practice, it makes economic sense to undertake a capital project only if its NPV is positive (the discounted returns are greater than the project's cost), and even then a firm may decide not to proceed.[15] For example, if the discount rate is 10 percent, a project costing $1 million but projected to generate net revenues of $200,000 annually for ten years, would have a NPV of $229,000. But if annual net revenues are projected to be only $100,000 over the same time period, the project should not be pursued because its NPV is a negative $386,000 (which doesn't even cover the project's cost).

Passing the NPV test, however, does not mean that a project will be authorized. A firm may have many potential projects that look promising when judged by their NPVs; however, it might not pursue all of them because it may have strategic objectives that cannot be readily quantified which limit the range of investments it can undertake. The firm may also be reluctant for other reasons to seek outside financing (preferring to undertake only those projects that can be financed with cash on hand), or to limit its borrowing or sale of equity.

Third, regardless of which of these approaches (or others) private firms may employ to decide how much capital investment to undertake and which projects to pursue, all of them ultimately measure the probable success of the projects by a single metric—the likely effect on future financial performance. Moreover, the process of evaluating these undertakings is different from that of deciding whether to make certain expenditures for operating purposes (the expenses necessary to keep the business running on a day-to-day basis). These decisions do not require long-run projections of impacts or discounting into the future, although techniques such as calculating NPVs are often used to decide whether to terminate existing lines of activity. Accordingly, operating budgets are often prepared and overseen in the private sector through a process that is separate from the capital budget (although both processes are often linked by an overall management plan).[16]

Finally, a firm's decision to undertake one or more capital projects is not necessarily linked with a decision about how to finance those projects. Some firms, averse or unable to take on additional debt, may finance all, most, or part of their capital projects with cash on hand; others may borrow; and still others may sell equity. But just because capital spending may require a separate decision and budget, it need not be financed to any degree with additional debt.

Capital Budgeting by State and Local Governments

Just as there is no single capital budgeting practice prevalent in the private sector, the approach to capital budgets also varies among state and local governments. Nonetheless, some general tendencies are worth noting.[17]

First, most state governments maintain a capital budget separate from the operating budget. However, states differ substantially in how they define capital, the degree to which capital is separate in the governor's proposed budget and in the legislature's budget, and the means by which they finance capital expenditures.[18]

Second, whether or not states budget capital spending separately from other expenditures, most states have long-range capital plans, ranging from three to ten years, with five years being the most frequent planning horizon. The spending figures in these plans tend not to be as detailed as the figures included in the annual budgets.

Third, available survey evidence indicates that the states most satisfied with their capital budgeting process use some method of keeping their legislatures regularly informed about capital needs. Some state legislatures also have a separate committee charged with overseeing all or most capital projects and their financing.

Fourth, unlike the private sector, where different capital projects can be judged by the common standard of impact on profitability, governments are responsible for a variety of functions, including police protection, health care, and education, whose benefits generally cannot be reduced to dollars and cents. This is a common situation shared by all levels of government. Nonetheless, governments must set priorities in deciding how to spend tax revenues and any borrowed funds.

How do state governments set priorities in deciding on their capital expenditures? Although some do it project-by-project, or case-by-case, most states have formal mechanisms, either in statute or by practice, for setting priorities. Many states that take this approach set priorities on a functional basis, allocating expenditures for higher education, transportation, aiding local governments, or protecting natural resources. Others have statutes that give priorities to certain activities, such as health and safety.

Fifth, contrary to popular belief, state governments do not always finance their capital projects by borrowing. To the contrary, states often dip into general revenues to pay for capital items, although the extent to which they are allowed or choose to do so varies. Other major sources of revenue for state capital spending include excise taxes (such as taxes on gasoline) or grants from the federal government. In addition, while debt service—interest and repayment of principal—typically shows up in state operating budgets, no state budget includes charges for depreciation.[19] Many states impose user fees on intended beneficiaries of capital projects in order to help service the debt issued to finance them.

Finally, most states have either constitutional or statutory limits (often with referendum requirements) on the amount of debt they may issue. State borrowing is also disciplined by the market. Rating agencies determine the ratings they give to a state's bonds, which strongly influence the interest rate at which those bonds can be marketed. These ratings are set in significant part by measuring the amount of state debt outstanding against the economic output generated in the state. Higher interest rates due to adverse ratings can force states to limit their borrowing.

As a broad generalization, local governments follow procedures and conventions similar to those outlined for state governments.

Current Budgeting by the Federal Government

It may be surprising to some that throughout much of American history, the federal government had no central budget. Until the Budget and Accounting Act of 1921, which created the Bureau of the Budget, each individual agency submitted a budget to Congress. Since 1921, the Bureau of the Budget (now OMB) has coordinated the preparation and submission of a Presidential budget for the entire executive branch. The President is required to submit the budget for the coming fiscal year by the first Monday in February. This gives Congress eight months to enact the legislation that will continue the operation of most government operations and programs. If the necessary appropriations laws have not been enacted by October 1, temporary "continuing resolutions" usually

provide funds until full-year appropriations are enacted.

Although the Congress considers the President's budget proposals, it usually does not actually pass a law setting forth a budget (although, as discussed below, the "budget resolution" passed by Congress establishes a framework for later Congressional consideration of different pieces of the budget). Instead, it enacts thirteen separate appropriations bills for the approximately one-third of all federal spending that is deemed to be "discretionary." The thirteen appropriations bills are developed for full Congressional consideration by the same number of subcommittees of the Appropriations Committees of each chamber.

The other two-thirds of the budget covers so-called "mandatory spending," which is mainly for entitlement programs such as Social Security, Medicare, Medicaid, and unemployment insurance. Mandatory spending continues at levels regulated by standing laws unless Congress enacts legislation to change them (for example, by changing a benefit formula). The same is true of tax receipts. Congress assigns responsibility for legislation governing mandatory spending and receipts to the authorizing (rather than appropriations) committees.

Until the Congressional Budget Act of 1974, Congress had no procedures for coordinating legislation governing appropriations, mandatory spending, and revenues into an overall fiscal policy. Instead, a fiscal policy simply emerged as the sum of all of the enacted bills. The 1974 Act aimed at bringing more order to the budget process by creating separate budget committees in both the House and the Senate, and the Congressional Budget Office (the congressional counterpart to OMB), which provides information to Congress about the costs and effects of legislation. In addition, the Act requires Congress first to decide what the projected budget surplus or deficit should be and then to be guided by that decision in enacting spending and revenue bills.

More specifically, the 1974 Act calls for Congress to adopt each year a "budget resolution" that sets a ceiling on total outlays and a floor on total receipts. The resolution, which is not presented to the President because it is technically not a law, also allocates "budget authority" and "outlays," by functional categories, to the appropriations committees (for discretionary spending) and the authorizing committees (for mandatory spending). The appropriations committees, in turn, further allocate budget authority among their thirteen subcommittees, which must report bills back to the full committee consistent with those allocations. The resolution may also direct authorizing committees to achieve a specified amount of savings by reducing mandatory spending or increasing receipts. Finally, the 1974 Act established parliamentary rules ("super-majority" voting requirements in the Senate) to stop bills that violate the budget resolution.

The distinction between "budget authority" and "outlays" is fundamental to understanding the way budget decisions are actually made. Congress grants budget authority (BA), enabling agencies to incur obligations. Those obligations, in turn, require outlays (actual cash payments). Capital expenditures and operating expenses typically have very different "outlay rates." Capital projects are often completed over several years, so the outlays for them are spread out over some period of time. In contrast, the outlays for such things as salaries of government workers, repairs, and maintenance, along with payments under the various entitlement programs, typically coincide with the amount of BA for the same year.

The Budget Enforcement Act of 1990 added further requirements to the budget process for fiscal years 1991–95. The BEA has been extended twice so that its requirements now apply (with amendments) through fiscal year 2002:

- The BEA divided all discretionary spending, of which capital spending is a part, into categories and imposed statutory limits or "caps" on each category (on both BA and outlays). The categories change from year to year, but currently consist of defense, non-defense, violent crime reduction, highways, and mass transit. The separate caps for defense and non-defense are replaced after fiscal year 1999 by a "discretionary spending" category, while the other categories remain intact. The

violent crime reduction category expires after fiscal year 2000, leaving the discretionary, highways, and mass transit categories. Increases in taxes do not increase spending allowed by the caps (although the BEA rules allow discretionary spending to be offset by fees charged for goods and services when the fees are authorized in appropriations acts). The caps were intended to restrain the growth of spending, whether or not additional tax revenues for more spending could be found.

- The BEA contained "pay-as-you-go" (PAYGO) provisions to ensure that the cumulative impact of changes in legislation affecting mandatory spending or receipts do not increase the deficit. In other words, any increases in mandatory benefits must be financed either by cuts in other mandatory spending or by increased revenue. Because most capital expenditures are discretionary, the PAYGO rules seldom apply to capital spending.

The federal budget contains several types of funds. The "general fund" is the broadest and includes income and some excise tax receipts. It also includes proceeds of general borrowing, on the revenue side of the budget; on the expense side, it includes national defense, interest on the federal debt, operating expenses of most federal agencies, and some capital expenditures (broadly defined) on R&D, education, and infrastructure and other physical capital spending. "Special funds" are earmarked for specific purposes; while they are not designated by law as "trust funds," they do not differ from them in substance.[20] Most special funds are financed by user fees. "Trust funds" also have dedicated uses, and are financed by user fees or taxes; when their surpluses are borrowed, the funds receive interest. A few of the best-known trust funds are those for Social Security, Medicare, and highways (although there are about 150 such trust funds in total).[21]

Although each of the trust funds is technically distinct, they are reported on a combined basis in a "unified budget," a concept adopted in January 1968 (for the FY 1969 Budget). The unified budget provides the bottom-line impact of all federal spending and taxing on the economy by indicating—through the cash deficit or surplus—the impact on credit markets.

The unified budget also consolidates both operating and capital expenditures, which means that the federal government does not have a separate budget for capital expenditures. The receipts and outlays shown in the unified budget are similar to a cash flow statement in the private sector, which also provides a comprehensive accounting of income and spending.

There have been several efforts since World War II to address the question of whether budget procedures should be changed to provide for separate consideration of capital and operating expenditures.[22] For example, a capital budget was incorporated in the Taft-Radcliffe amendment to the Employment Act of 1945, which was passed by the Senate but rejected in the House. The 1949 Hoover Commission did not recommend a separate capital budget, but it did suggest that the government publish budget estimates for current operating expenditures and capital outlays separately under each major function or activity in the budget.

There were periodic attempts in Congress during the subsequent two decades to adopt a capital budget, but these were often opposed by the executive branch and never resulted in legislation. The capital budget was firmly rejected in 1967 by the President's Commission on Budget Concepts, as it was in previous studies by the American Institute of Certified Public Accountants and the U.S. Chamber of Commerce. Interest in the idea returned in the 1980s with the apparent approval of Comptroller General Charles Bowsher and the suggestion by President Reagan in 1986 that the idea be studied. Interest in capital budgeting surfaced again during Congressional deliberations in 1995–96 over the proposed Balanced Budget Amendment (BBA) to the Constitution. Some of the proponents of the BBA wanted the amendment applied only to operating expenses of the federal government, excluding some defined capital that could be financed by government debt.

The federal budget process today continues to budget operating and capital expenditures together.[23] During the course of its deliberations, the commission heard several expla-

nations of why this is the case (although not all commissioners agree with each of them).

First, for reasons already discussed, federal policy makers have not been able to agree on a single definition of capital or investment in the public sector. While a technical analysis that accompanies the budget (today it is known as *Analytical Perspectives*) has used a stable definition of investment for many years, the use of the term investment in the budget to describe policy proposals has changed with the political priorities of different administrations.[24] Given the changing priorities of the Congress and different administrations through time, it is not surprising that no single definition of public capital has emerged.

Second, capital is one of a number of inputs (along with materials and labor) that the federal government uses to deliver its services (directly or through state and local levels of government) to the public. The public, in turn, judges the government not by the inputs it uses, but by the amount and perceived quality of the output it delivers. On this view, budget decisions should focus on the goals to be achieved (such as providing education or securing the national defense), and not on the mix between capital and other inputs judged necessary to achieve them.

Third, although there is no necessary connection between capital spending and its financing—indeed, many states, localities, and other authorities have clearly defined capital budgets without financing all capital through borrowing—there have been fears that a "capital budget" would allow what is called capital to be debt-financed (in large part or in the entirety). Those who believe these concerns are justified also fear that adoption of a capital budget could create a strong temptation for policy makers to classify a wide range of expenditures as capital or investment (1) to avoid having to pay for them out of tax receipts or (2) to avoid having them subject to caps on discretionary spending. This is especially true for high visibility projects for which there are clear, short-term political benefits to elected officials in both branches of government who advocate them.

The fears about excessive spending are of special concern: while it is true that the federal government cannot borrow without limit, federal borrowing is far less constrained by financial markets than is the case for borrowing by private firms and state and local governments. Investors understand that people and capital can easily move to other locales if state or local taxes are considered to be too high. This limits the ability of states and localities to borrow. Simply put, the added taxes that are required to service their debts could cause individuals or companies to move to other areas if they believe that the additional services are not worth the higher taxes.[25] By contrast, individuals and corporations in this country are far less likely to move to other countries in response to changes in taxes here. Furthermore, investors also understand that there is a buyer of last resort for federal debt—the Federal Reserve, which regularly adds to the money supply by buying Treasury securities.

Capital Budgeting in Other Countries

The national governments of very few other industrialized countries currently have a capital budget. At one time, Sweden, Denmark, and the Netherlands engaged in the practice, but all have since abandoned it. However, New Zealand and more recently the United Kingdom have adopted different versions of a capital budget for decision-making purposes.

In 1988, New Zealand's national government introduced a capital budget for government-owned fixed assets. Spending on these items is separately budgeted and not shown on the government's operating budget, which is compiled under the accrual method of accounting. Depreciation of government capital is reflected on the operating statement, analogous to the way it would be accounted for in a private business in the income statement. Nonetheless, the full cost of capital assets must be appropriated in advance.[26]

In June 1998, the United Kingdom announced an even bolder capital budgeting initiative. Under this approach, the British government has established for a three-year

period a budget for all physical investment and grants in support of capital spending. A two-part financing rule has been announced to accompany the budget: (1) the "golden rule" under which the government will borrow only to invest (and not to support current spending), averaged over the economic cycle; and (2) a limitation on borrowing to ensure that the public debt-to-national income ratio is stable over the economic cycle. The new system was adopted with the explicit intention of encouraging more spending on public capital, raising net public investment as a share of GDP from 0.75 percent to 1.5 percent [Brown, 1998, p. 6].

It is too early to judge the results from either of these initiatives. Still, at least three features of the governmental systems in both countries are noteworthy. First, neither government counts expenditures on education and R&D—part of what we have labeled "national capital"—as capital for budgeting purposes. Second, the governments in both New Zealand and the United Kingdom operate within a parliamentary system under which the party controlling the executive branch also controls the majority in the Parliament. Accordingly, the proposed budget of the executive branch is expected to be adopted into law, unlike in this country. Third, agency heads in both New Zealand and the United Kingdom have greater authority to manage their operations, with incentive-based pay, than do their counterparts in the United States.

DO CURRENT BUDGET CONVENTIONS DISTORT DECISIONS ABOUT FEDERAL CAPITAL SPENDING?

A central question the commission has addressed is to what extent, if any, does the current federal budget process lead to less-than-ideal decision-making about capital spending? We answer this question in two parts: whether and to what extent the current process leads to a bias one way or another in (1) capital spending *in the aggregate*, and thus relative to other types of spending (the possible "macro" bias), and (2) the *allocation* of capital spending *among* different projects and activities, including maintenance of existing capital assets (possible "micro" biases).

Is There a Macro Bias?

The commission reviewed evidence and heard testimony suggesting that the current budget system has important biases in both directions with respect to capital spending—no matter how the term is defined. It is impossible to know which biases predominate, however, without first having an objective standard of what level of aggregate spending is optimal.

It is difficult enough for a private firm to calculate its ideal level of capital spending, taking account of expected future profitability and the riskiness of the investments. But calculating an ideal level of capital spending for the government is far more complicated. Since the government is not a private firm, its activities cannot be judged by the profitability standard often used in the private sector. Instead, government has many different objectives that are not easily compared, such as influencing the distribution of resources among different geographic regions and income groups, ensuring national security, protecting the environment, and facilitating economic growth. In principle, it might be possible to calculate and even budget an ideal amount of capital spending for *one* of these purposes; but the commission has found nothing that provides a supportable and objective way of specifying an ideal level of all capital spending under any definition. For this reason, the commission does not believe that anyone can say authoritatively whether the existing budget process has a "macro" bias toward too much or too little total spending on capital.

Even so, it may be interesting to know whether recent changes in budget conventions have caused capital spending totals to move either up or down without specifying whether such changes may be desirable. For example, what effect, if any, have the caps on discretionary spending that have been in place since fiscal year 1991 had on capital spending? In particular, have caps crowded out capital projects?

To investigate this question, the commission examined multi-year averages for spending of different types as a share of GDP, both before and after 1990. Table 3 presents the results.

The table shows essentially no difference in spending-to-GDP ratios in each of the four categories displayed, including overall discretionary spending, between the five years preceding the introduction of the caps and the succeeding years. It is true that the spending ratios for both periods are substantially below the levels in years before 1985, especially the 1970s; but with the exception of direct physical capital (whose spending as a share of GDP dropped in the 1970s), the declines in the spending ratios occurred in the 1980s during the Reagan Administration, before the caps were enacted.

It is impossible to know what capital spending (or, for that matter, overall discretionary spending) would have been in the absence of the caps, so we cannot state with certainty that the caps had no constraining impact on capital spending. But Table 3 demonstrates that if the caps have sup-

Table 3. FEDERAL NONDEFENSE INVESTMENT AND DISCRETIONARY OUTLAYS AS A PERCENTAGE OF GDP

	Nondefense Investment				Nondefense Discretionary
	Physical Capital		R&D	Education	
	Direct	Grants			
1962–69	0.39	0.65	0.84	0.46	3.86
1970–79	0.29	0.75	0.60	0.93	4.49
1980–84	0.27	0.68	0.48	0.77	4.53
1985–90	0.28	0.53	0.38	0.56	3.62
1991–97	0.28	0.51	0.41	0.59	3.69

Source: OMB

pressed capital spending they probably have done so to no greater extent than they have for discretionary spending in the aggregate.

One feature of the current federal budget process—the general practice of having the full cost of all capital acquisitions appropriated by Congress before any portion of the acquisition can be made or the project started—has been alleged to act as a bias against public capital investment, specifically government-owned capital.[27] The commission believes, however, that full funding is important because it ensures that policy makers consider the total costs of an initiative before authorizing and appropriating the funds for it. Otherwise, policy makers would be tempted to fund only a portion of a capital project in the initial years, which means it would be too far along to stop later. We discuss below how failure to fully fund projects in the past has produced substantial waste.

Nonetheless, it is possible that decisionmakers defer some necessary, but large, capital projects because funding them requires authorized spending to "spike" in a given year. To the extent this occurs, aggregate public investment may fall short of some ideal figure.

How serious a problem this actually turns out to be, however, depends to a significant degree on whether spending is more constrained in any year by the caps on budget authority or on outlays. As it turns out, the caps on budget authority (BA) seldom have constrained spending. Instead, in most years since the BEA was enacted, the outlay caps have been reached first. As already noted, capital projects also tend to have low outlay rates—that is, they spend out their budget authority over several years. When the outlay caps under the BEA are the binding constraint, the slower outlay rates for capital projects could induce Congress to spend *more* than it otherwise would on public capital. This is because operating expenses, including maintenance, tend to spend out quickly, and thus get scored as outlays in the forthcoming budget year.[i] Of course, there are projects so large that even if the outlays are spread over several years, the annual outlay is still a "spike" and spending could be constrained if the outlay caps are binding.[j]

Efforts to get around budget spikes, meanwhile, produce distortions of their own. As just noted, agencies can be tempted to use "camel's nose under the tent" budget tactics that have led to inefficient outcomes. Another, potentially wasteful budget maneuver for avoiding spikes is for agencies (sometimes with Congressional blessing) to enter into short-term leases rather than to construct or purchase property at the outset—even

[i] Comment of Commissioner Stein: I believe the critical issue here is whether the outlay rate is slower than the benefit rate—to the decision-maker or to the country.

[j] Comment of Commissioner Levy: A multi-year outlay period for capital can at best lessen the bias against capital spending, but I cannot see how it could exert a bias in favor of capital spending, as seems to be implied by the text. When the outlay caps are the binding constraint, Congress may indeed "spend more than it otherwise would" if budget authority were binding. However, that does not imply that Congress would spend as much as it would with a clear, long-term perspective. As long as the life of the purchased capital is longer than the period over which its purchase outlays are scored, then the scoring system is biased against the purchase of such an asset. I have great difficulty imagining many examples of government capital for which the length of the outlay period is as long as—not to mention longer than—the life of that capital.

when the life-cycle cost of the purchase would be lower than the cost of stringing together a series of short-term leases. Both of these "tricks" demonstrate that seemingly arcane scoring rules can have a real impact on budget decisions.

Are There Micro Biases?

Although it may not be possible to determine whether current budgeting procedures have caused a sub-optimal amount of total capital spending, there is much greater reason to believe that the current system generates biases at the micro level: that is, capital spending is allocated among capital projects and initiatives, including the maintenance of existing capital assets, in a less-than-ideal fashion.

The Congressional Budget Office has reviewed the available studies of the measured economic returns from different activities, finding a very large variation—from programs that have produced estimated social returns well in excess of the cost of capital, to those that are producing almost no positive returns.[28] Significantly, the CBO cites evidence indicating that maintenance can pay social dividends well in excess of the returns realized on some large new projects [CBO].

The commission recognizes that budgeting is not a mechanistic exercise solely in search of initiatives with the highest economic returns.[29] But in deciding how much attention to pay to efficiency and how much to distributional objectives, policy makers must work within a structured framework that (1) confronts them with the implications of the relevant tradeoffs and (2) provides maximum incentives for producing cost-effective decisions. Of particular interest to the commission is the need for federal decision-makers to take adequate account of the interests of American society over the long run. The commission has concluded, however, that in several respects, the current budget process impedes the ability of decision-makers to achieve these important objectives.

To understand the basis for this conclusion, we first briefly review the key phases of the current federal budget cycle, and then discuss its shortcomings.

Phases of the Current Budget Cycle

The "budget process" of any organization is usefully understood as the combination of four important, separate functions: planning and analysis, which leads to budget recommendations; the making of budget decisions; accounting and reporting of the results; and evaluation of the outcomes of budget decisions and subsequent readjustment in programs, where appropriate. We have already described the legal process by which budget decisions are made. At the risk of some over-simplification, here are some key features that explain how the federal government carries out the other three functions.

The process begins generally 18 months in advance of each fiscal year at the agency level, when individual departments and agencies develop internally the budget requests they will make to the President (initially through OMB) for that fiscal year. Until relatively recently, with few exceptions, agencies focused their budget plans only on a single year and generally paid little attention to their long-run plans. This changed to some extent with the enactment of the Government Performance and Results Act of 1993 (GPRA), which requires agencies to submit five-year strategic plans to OMB every three years. The first such plan was submitted in 1997, the next one is due in 2000.

For the most part, the strategic plans are descriptive in nature and do not contain out-year spending/revenue projections. Nonetheless, the agencies *separately* provide to OMB their spending and revenue projections five years out under presidential policy. OMB uses these projections to present in the President's annual budget five-year projections of revenue, by major source, and outlays in aggregated form and at the function and program level (OMB's data base includes projections at the "account" level beyond the budget year, but these are not shown in the budget).

The GPRA requires agencies to submit performance plans to OMB and the Congress each year. The Act also requires OMB to prepare a government-wide plan. These plans, the first of which was submitted with the President's budget for FY 1999, are supposed to lay out the agencies' goals in objective,

quantifiable terms (such as the airplane accident rate for the Federal Aviation Administration) for that budget year.

With respect to capital projects in particular, OMB's *Capital Programming Guide* requires agencies to analyze their life-cycle costs and benefits as part of any request for funding of planned projects. Once budget decisions are made, the results are reflected in annual reports issued by both OMB and CBO displaying the agencies' current and historical spending patterns.

Agencies also prepare balance sheets that report their assets and liabilities. The Chief Financial Officers Act of 1990 required all cabinet departments, major independent agencies and the government as a whole to have audited financial statements. These financial statements are prepared in accordance with federal accounting standards developed by the Federal Accounting Standards Advisory Board (FASAB).[30] Of particular interest to this commission, these standards require the financial statements to disclose in footnote form estimates of deferred maintenance, effective with the statements for fiscal 1998. In his fiscal year 1999 budget, the President set a goal of having an unqualified opinion on the consolidated (government-wide) financial statements for that year. Furthermore, twenty of the twenty-four agencies under this Act are committed to obtaining unqualified opinions on their own statements in the same time frame [OMB and CFO Council, 1998].

Various mechanisms are in place for evaluating the outcomes and ongoing progress of federal programs. The agencies typically have evaluation efforts under way. Congress periodically asks the General Accounting Office to prepare independent evaluations. Nonetheless, no ongoing systematic, government-wide evaluation process is in place, whether for capital spending (however defined) or other types of spending.

Shortcomings of the Current Process

As reflected in the foregoing summary, a number of significant improvements have been made in recent years in certain stages of the federal budget process. Even so, the commission has concluded that the existing process, at each of its various stages, still contains a number of important shortcomings. A broad theme that ties the various flaws together is that the federal government—both the executive and legislative branches considered together—is so heavily focused on each current budget year that too little attention is paid to longer-run matters. Furthermore, policy makers are not held sufficiently accountable for the longer-run implications of their current decisions. This shows up in part in wasteful spending on some capital projects, a shortchanging of maintenance of existing assets, and perhaps some missed opportunities (which are inherently difficult to measure, but nonetheless real).

- While the strategic plans and performance goals required of agencies under the GPRA are a major step forward, a number of important defects remain at the planning stage of the process:

  —Updated long-term strategic plans are not required of the agencies annually, nor are they integrated with the five-year budget plans submitted by the agencies. Furthermore, because there is no systematic format for the strategic plans, they make it too easy for agencies simply to justify their missions rather than provide true forward-looking plans for achieving longer-term results-oriented objectives in a cost-effective manner.

  —There is uneven progress among the agencies in stating goals and missions in performance plans, as required under the GPRA.

  —Insufficient attention is paid to benefit-cost analyses of capital spending initiatives in particular, both before and after they are proposed. The analytical requirements set forth in OMB's *Capital Programming Guide* apply only to government-owned assets, and not to the broader types of assets that belong in any definition of national capital (at a minimum, infrastructure spending, R&D, and education and training). Many agencies and OMB lack the resources to design and conduct benefit-cost analyses, while Congress pays what the commission believes to be insufficient attention to such analyses in its oversight, authorizing, appropriations,

and budget resolution activities. Furthermore, GAO and CBO do not have enough analytical resources to review the work of the agencies, and thus to assist Congress in assessing the merits of capital spending proposals.

- Because budget decision-making is inherently a political process, it is likely that a bias exists favoring projects with high local visibility and a concentrated impact on employment (such as roads, buildings, and waterways) and against those that are less visible and have a more diffuse impact on employment (such as computers for the Internal Revenue Service or the Social Security Administration). Although this problem can never be fully overcome, it can and should be mitigated by a commitment by both the executive and legislative branches (1) to sound analysis before approving new projects and (2) to supporting evaluations of the impact of those initiatives after they have been undertaken (see below).
- As discussed above, failure to fully fund capital projects in advance can lead to wasteful spending. For example, the General Accounting Office has found that incremental funding practices have led to substantial cost overruns, schedule slippages, and terminations in the Department of Energy's major acquisitions [GAO, 1996]. The associated waste in expenditures has been substantial: the four canceled projects since 1983—the Superconducting Supercollider being the prime example—cost $8 billion before they were terminated.
- Several aspects of the trust funds established to support certain types of capital spending—such as the construction of highways, airports, and water projects—are problematic. As a threshold matter, the existence of the capital-related trust funds themselves insulates the programs they support from the annual balancing of priorities across the government. At the same time, the commission recognizes that, in principle, the trust fund device may be justified (1) where the revenues going into them represent charges or fees on users of the services they support and (2) the earmarked fees and taxes are spent on the purposes for which the funds were created.

The tendency toward surplus in some trust funds has become a problem under current scoring rules. Specifically, these rules treat revenues going into the trust funds on the mandatory side of the budget, but classify the spending out of the trust funds as discretionary spending and thus subject to caps. Congress and the administration took a major step toward rectifying the imbalance in the highway trust fund generated by this difference in scoring with the enactment of the Transportation Equity Act for the 21st Century in 1998. This legislation creates separate BEA caps for highway and mass transit spending, and it sets the caps equal to the receipts from motor fuels taxes collected the previous year.[31] The commission does not endorse the specific spending formula in this act as a model for other trust funds; however, it does believe that the principle of tying spending out of the capital-related trust funds to the tax and fee revenue that flows into them, averaged over some reasonable time period, is a good one to follow.

The current budget decision-making process also exerts biases against both routine and major maintenance, such as rehabilitation and remodeling (which represents a different type of capital expenditure). As already noted, the presence of the outlay caps feeds such a bias because the budget authority for both types of maintenance has associated with it a more rapid outlay rate than budget authority for new construction. In addition, there currently is no mechanism assuring that state and local governments receiving federal support for new capital projects adequately maintain those assets, once they have been constructed or acquired (nor do rating agencies generally allow maintenance to be bonded). This can defer maintenance, in turn leading to excessive funding for new assets when it may be more cost-effective to maintain existing assets.

The shortchanging of maintenance is aggravated by the lack of accurate and timely information on the condition of federal and federally funded assets. Granted, recently

adopted federal financial accounting standards require the audited financial statements of the agencies to be accompanied by footnotes disclosing the extent of deferred maintenance; yet footnote disclosure is not a substitute for a more complete and detailed report on the actual condition of federally owned assets. In addition, the federal government's financial statements do not contain information on the condition of assets at the state and local levels, some of which the federal government has funded.[32] Information about the current condition and even obsolescence of assets is critical if policy makers are to design effective maintenance and capital spending programs.

The commission cannot stress too strongly the importance of having reliable estimates of deferred maintenance. Currently, there is no generally accepted method for agencies to use in estimating deferred maintenance. This is a significant shortcoming since sound policy making requires having accurate information of deferred maintenance in setting spending priorities and in deciding whether to purchase new assets or fix existing ones. This shortcoming has led the FASAB to propose an amendment to its current standards that would relax the audit requirement for the information reported on deferred maintenance. In conjunction with this change, OMB is planning to organize a task force to develop methods for making consistent, government-wide estimates of deferred maintenance, which should enable these estimates to be fully audited. Still, until better and more-consistent information about the condition of federally owned and financed assets is routinely made available, policy makers will be unable to make fully informed decisions about whether to fund new projects or put more money toward maintaining existing assets.

Though efforts have been made to evaluate the effectiveness of government programs, we believe there is still little systematic retrospective analysis within either branch of the federal government to determine whether capital projects generated the benefits and came within the cost projections that were originally promised.

In sum, we recognize that it is difficult to determine whether the existing budget process produces insufficient or excessive amounts of capital spending in the aggregate; however, there are several reasons for believing that aspects of the process contribute to a sub-optimal allocation of capital spending among various projects while shortchanging maintenance.

RECOMMENDATIONS

The commission considered a range of proposals to address the problems that have just been identified. We believe the appropriate response is to make improvements in each of the component parts of the budget process. Many of the recommendations we outline below relate to improvements in information, but others also entail changes in the ways that budget decisions are actually considered and made.

Better Planning and Analysis

Long-range planning for *all* kinds of expenditures and operations of the federal government is essential (1) to ensure that services are delivered to the public in the most-effective manner and (2) to allow policy makers to judge how much and what kinds of capital are needed to provide public services.[33] Given the difficulty of terminating programs and initiatives once begun, the preparation and publication of long-run plans can help ensure that resources are wisely committed to new programs before they are launched, while facilitating ongoing readjustment in priorities when appropriate. The commission advances the following recommendations to help improve this process.

Recommendation 1: Five-Year Strategic Plans

Although the GPRA made major strides in requiring agencies to prepare five-year plans, we have pointed to a number of gaps in the existing planning process that should be filled.

First, the five-year plans should be prepared annually (not just every three years) and should be integrated with the annual performance plans. Furthermore, the plans should be an integral part of the budget justifications sent to Congress.

Second, the plans should be reconciled with the longer-run budget projections that the agencies already submit to OMB. In particular, the plans need to state results-oriented objectives—not just for the current budget year under current budget policy, but ideally with respect to future projected changes in policy.

Third, the plans and annual budgets should be tied to the life-cycles of the agencies' capital assets. The following elements of capital planning are common in the private sector and among state and local governments, and should be standard practice for the federal government: a needs assessment for such additional capital assets; a realistic maintenance schedule, funded appropriately; and recognized replacement cycles.

Fourth, OMB should develop standardized formats for the plans (in consultation with GAO and CBO) so that policy makers in both the executive and legislative branches can more easily compare the plans of one agency to another. Among other things, the plans should be less voluminous than many currently are, should record past successes in achieving defined results-oriented objectives, should identify shortcomings that need to be addressed, and should spot challenges that remain to be tackled. The plans should also identify major future outlays for physical assets (segregated in a separate "capital acquisition fund," as discussed below) in a level of detail that OMB should specify.

Fifth, OMB should expand its efforts to evaluate the plans (together with benefit-cost analyses of major projects, as discussed below) and to consider them in connection with government-wide planning. Among other things, the plans should help identify programs and efforts that are no longer needed, programs that might be better carried out by other federal agencies or other levels of government, and new programs that may be truly necessary. The results of this exercise should be considered in the preparation of the President's annual budget.

Sixth, in considering agency appropriation requests, the Congress should take account of the agencies' five-year plans and of OMB's annual evaluations of those plans, as reflected in the President's budget. Congressional authorization, appropriations, budget resolution,

and oversight hearings should focus on these plans and evaluations. Congress should also study ways in which it might improve its own procedures to give more weight to the longer-run implications of its current year decisions and to issues with longer-run consequences. In undertaking this task, Congress might find it useful to take advantage of the wide range of institutional expertise available to it, including resources within the Congressional Budget Office, the General Accounting Office, and the Congressional Research Service.

Recommendation 2: Benefit-Cost Assessments

The benefits and costs (both expressed in monetary terms to the extent practical) of alternative options should be considered before decisions are made. This principle has been part of executive branch regulatory rulemaking (for "major" rules) for over two decades. It has recently been required of federal capital projects as well through OMB's *Capital Programming Guide.*

The commission believes that several extensions beyond existing practice are warranted. First, the benefit-cost requirement should be extended beyond federally owned capital assets to the broader array of undertakings associated with a definition of national capital. To some extent, this is already done, although not in a systematic fashion. Most agencies fund evaluations of their programs. We are suggesting that the evaluation process become more systematic and institutionalized. Policy makers should not wait for sporadic economic studies of individual programs prepared by academic scholars to appear in the professional literature. Instead, there should be an ongoing effort within the government to analyze the benefits and costs of all major programs—whether or not related to capital expenditures—so that they can be adjusted, refashioned, or eliminated, as appropriate. As a practical matter, it may be useful to begin by requiring benefit-cost analyses only for "major" initiatives, such as those over a certain dollar threshold; later on, smaller capital projects and government programs could be analyzed in the same fashion.

Second, more resources within the agencies, OMB, CBO, and GAO, should be devoted to carrying out this mission. Those resources should also support OMB in its effort to become a clearinghouse for "best practices" in evaluation techniques that the agencies can and should draw upon in preparing their own analyses. Given the many billions of dollars at stake each year, it would be penny-wise and pound-foolish not to spend millions of dollars for analysis to help produce better information for decision-makers in both branches of government and for the public. (A related need is for the government to provide a stronger commitment to improving its base of statistical data on the entire economy. Some of this information is important in preparing benefit-cost and other analyses of various existing and proposed government programs.)

Third, working with the agencies, OMB should periodically review the evaluation techniques they use and, where appropriate, provide guidance to improve them.

Improving the Decision-Making Process

The commission believes that several measures short of adopting a separate "capital" budget could improve the quality of budget policy decisions. These recommendations are set forth below.

Recommendation 3: Capital Acquisition Funds

As an experiment, the commission believes it would be useful for Congress and the executive branch to have one or more agencies with capital-intensive operations establish a separate "capital acquisition fund" (CAF) within their budgets that would receive appropriations for the construction and acquisition of large capital projects. The CAFs would use that authority to borrow from the Treasury's general fund and then charge operating units within the agency rents equal to the debt service (interest and amortization) on those projects.[34] In addition, the CAFs would acquire all existing capital assets of the agency so that all the costs of all such capital could be allocated within the agency.

To ensure uniform implementation of the proposal, OMB should issue guidance about what capital items belong in the CAFs, such as federal buildings and other large capital purchases by the agencies.[35]

The main advantage of CAFs is that they should improve the process of planning and budgeting within agencies. If units or divisions within agencies are charged the true costs of their space and other large capital items, they are likely to make more efficient use of those assets. CAFs could also help address the spike problem by smoothing out the budget authority required for any large capital projects proposed by units within agencies. In principle, Congress could take this smoothing function one level higher by either formally or informally budgeting CAFs across all of the agencies within the jurisdictions of each of the thirteen appropriations subcommittees. However, there is still merit in having CAFs managed at the agency level to promote accountability.[36]

If the CAF experiments realize the foregoing benefits, the commission would urge that CAFs be used for all agencies.

Clearly, the CAFs would not replace the General Services Administration, which manages the Federal Buildings Fund (FBF), a government-wide revolving fund established in 1972. The FBF acquires office buildings and rents space in them to federal agencies. The GSA can and does delegate its authority to agencies to acquire their own office space under some circumstances. In such cases, an agency would acquire its office space through its CAF. Greater use of this delegation authority would be appropriate if agencies could demonstrate that the CAFs led them to improve their capital asset management practices. In addition, GSA would negotiate the acquisition of space for multiple agencies that seek to co-locate in a single facility.

Recommendation 4: Full Funding for Capital Projects

Full funding of capital projects encourages decision-makers to consider the life-cycle costs and benefits of projects before they are undertaken and to compare the funding required with other governmental priorities. This practice should be continued.

Nonetheless, large projects in particular may produce funding spikes that may cause the postponement of such initiatives in favor of smaller, less cost-effective projects, or even their cancellation. This problem can be addressed, without sacrificing the principle of full funding, by providing advance appropriations for all useful and programmatically separate segments of particular projects. A useful segment is one in which the benefits exceed the costs even if no further funding is appropriated. For example, if the full project envisions acquisition of multiple aircraft, a useful segment would be the number of aircraft for which benefits exceed costs even if no additional aircraft are ever authorized.

The preparation of five-year plans by the agencies should also help remedy the spike problem by alerting OMB and the Congress to potential future funding needs for large projects. If policy makers become aware of these requirements, they might be able to better adjust their annual appropriations accordingly.

Recommendation 5: Adhering to the Scoring Rules for Leasing

In principle, the scoring rules in the BEA are designed to eliminate any bias that policy makers might have in deciding whether to acquire or lease capital assets used in the delivery of government services. They do this by requiring the present value of so-called capital leases—those that are the functional equivalent of a purchase—to be scored up front, as if they were purchases; in this way, policy makers can make accurate comparisons between the two options and decide which is the least expensive. Under the current BEA rules, which are modeled after private sector accounting standards, a capital lease is one in which (1) the lease transfers ownership of the property by the end of the lease term, (2) the net present value of the lease payments is at least 90 percent of the fair value of the property, or (3) the term of the lease is at least 75 percent of the expected life of the asset.

The current rules give the agencies and Congress an incentive to be creative. Specifically, they can enter into a succession of shorter-term leases that do not meet the quantitative criteria for defining a capital lease precisely, which means the full cost of the lease does not need to be scored up front. Although this is legal under the

current rules, it can result in wasteful spending when, computed appropriately on a present value basis, the less expensive alternative is to buy the asset.

In principle, this problem could be remedied by a rule that required the capitalization of all short-term lease payments expected in the future. To be effective, however, this rule would require strict scrutiny of estimates of future lease payments—something that may be difficult and expensive to do in its own right.[k] In addition, there is a risk that any rule requiring the capitalization of all leases could discourage the use of short-term leases that are highly cost-effective, such as when agencies are downsizing or between moves to different locations.

Though the commission believes that the best course for now is to retain the existing BEA rule, both the agencies and the Congress should strictly adhere to it. This should be easier to do when agencies are preparing strategic plans every year. These plans could expose the intentions of the agencies with respect to capital assets in particular. In turn, OMB and Congress would be able to identify programs where purchase is more suitable than leasing, as well as become alert to possible spending spikes that could be smoothed by the other recommendations already outlined (CAFs and advance funding for useful, separate project segments).[1]

Recommendation 6: Trust Fund Reforms

Various trust funds—for highways, airports, the air traffic control system, water projects, and certain other purposes—have been created with the ostensible purpose of assuring the funding of capital projects. The funds have been financed with fees or taxes assessed on those who use the facilities (such as the gasoline tax to help support highway construction and the airline passenger ticket tax to help fund airport equipment and construction).

The commission believes two important reforms of current trust funds are necessary to make them more cost-effective.

First, averaged over some reasonable period such as three years, the revenues from taxes and fees dedicated to the trust funds supporting infrastructure or capital spending should be spent for designated purposes: capital spending and maintenance. OMB should highlight in either the budget or accompanying documents the extent to which trust fund monies are being spent for such purposes. If spending on the earmarked uses is not sufficient to exhaust the revenues over some reasonable period, then Congress should lower the specific taxes or fees so that the revenue they raise is more in line with the spending they are intended to finance.

Second, state and local governments that receive federal support for capital items (such as highways)—whether or not such support is provided through a trust fund—should be required to maintain assets financed by the federal government as a condition of receiving any additional federal support. The one possible exception to this general rule is where state and local governments can demonstrate that the assets the federal government initially funded are no longer needed (as could be the case with roads in rural areas where the population has dwindled). Otherwise, the federal government risks financing new infrastructure that may be unnecessary. States and localities seeking federal aid for capital projects should be required to certify that they have met the maintenance requirement, and the relevant federal agencies should check these certifications. To the extent that this maintenance requirement represents an "unfunded mandate," the commission believes it is one that could readily be justified as a mechanism to help ensure the efficiency of spending at all levels of government on federally supported capital projects.[37]

[k] Comment of Commissioner Penner: I believe that a rule requiring the capitalization of all short-term lease payments should be adopted and that the estimation problems associated with such a rule are no more severe than those encountered in estimating the cost of many credit programs.

[1] Comment of Commissioner Levy: The scoring of leases versus purchases of capital assets should be addressed by Congress, either in isolation or as part of a comprehensive overhaul of the budget process. For example, Congress might require any short-term lease or building to be certified as the superior choice in the long run. I agree with Commissioner Penner that short-term leases should be capitalized for purposes of comparing them with the cost of purchasing a capital asset, but I would like to emphasize that a capitalized five-year lease cannot be compared with the price of a building that will last at least 30 years. Analysts should consider the cost of leasing over 30 years, or else compare the options over five years with the estimated market value of the purchased building added back at the end of five years.

Recommendation 7: Incentives for Asset Management

In addition to improving the information available to decision-makers and changing the scoring rules, it is important that agencies have financial incentives to manage their assets efficiently. In the private sector, firms clearly have such incentives; the better they manage, the more money they are likely to make.

Federal agencies operate under much tighter constraints in managing their assets than is the case in the private sector. With few exceptions, agencies cannot sell, exchange, or lease assets on their own. Instead, if they no longer have a use for certain property, they must report it as "excess" to the General Services Administration. In turn, the GSA must first offer it to other federal agencies; if no agency claims it, the property can then be offered to state and local governments and various non-profit organizations.

The commission encourages the administration and the Congress to expand the freedom of agencies to manage their assets and to consider ways to give the agencies incentives to do so efficiently. One possibility would be to allow, on an experimental basis, one or more agencies to keep a limited portion of the revenues they raise from selling or renting out existing assets.

Better Information

The third stage in the budget process is the reporting of the results. The commission recommends two key improvements in this area.

Recommendation 8: Clarification of the Federal Budget Presentation

Policy makers must be cognizant of the cumulative impact of their many micro budget decisions when planning how much to spend on individual government programs or deciding to alter the tax code. In short, they shouldn't lose sight of the forest when planting individual trees. The forest should be plainly visible for the American people to see, in user-friendly form.

One set of forest level figures, of course, includes the aggregate totals of spending and revenue, and the resulting projected deficit or surplus in the unified budget. In recent years, the goal of a balanced budget has been the guiding principle for decision-making about the budget. In addition, given the strictures of the caps, policy makers necessarily pay attention to the broad spending breakdowns defined by the Budget Enforcement Act—namely the distinction between mandatory and discretionary spending and within the latter, the distinction between defense and non-defense spending.

The commission believes policy makers also should pay attention to another set of broad categories of spending: operating expenditures (defense and non-defense), investment spending, transfer payments made to individuals, and interest on the federal debt. Apart from the fact that federal policy makers do not budget depreciation, the separation of operating and investment spending would be analogous to a similar division used in the private sector and in most state and local governments. The breakout of transfer payments to individuals is useful because of the federal government's deep involvement in this area, protecting individuals against financial losses due to unemployment, retirement, disability, and illness. Interest on the federal debt should be reported separately because it is a financing expense rather than an operating expenditure.

Table 4 below is illustrative of the type of information that should be highlighted in future budget presentations, with the notes below explaining how the figures displayed were calculated.[m] The definition of investment, in particular, is a broad one, as it includes not only spending on federal assets, but also federal spending on education and R&D, as well as federal capital grants to states and localities. Since the definitions of investment spending in particular may vary from administration to administration, it would be useful if something like Table 4 were constructed using alternative definitions of investment. Also of use would be a chart showing historical trends in spending in the different categories, especially as a percentage of GDP, as well as projected future spending

[m] Comment of Commissioners Lynn, Penner, and Stein: We do not believe that this four-way classification of expenditures would be helpful in making good budgetary decisions.

in the various categories. This should be supplemented with charts or tables showing expected changes in the net capital stock for major categories of physical assets.

For policy makers, the kind of information just described would highlight to what extent the President proposes to invest for the future, to operate the federal government's various functions (excluding depreciation, which is not counted as spending under current budget accounting concepts), and to arrange for transfers to qualifying individuals. It would also explain how spending for all these activities may be constrained by the obligation to pay interest on the cumulative amount of federal debt.

Recommendation 9: Financial Statement Reporting

No sensible private firm would decide whether to undertake a new investment, such as a new building or plant, without detailed knowledge of the composition, condition, and value of its existing facilities. Yet for decades the federal government operated this way, without having an updated and accurate inventory and report of the condition of its own assets—let alone those of the other levels of government to which it routinely makes grants. Moreover, public policy debates about national priorities have not been as well informed as they should have been. Specifically there has been no easy way for the public, the media, or even expert analysts to evaluate such questions as whether there is an "infrastructure deficit," or whether budget cuts to reduce the unified federal budget deficit were achieved through sensible economies or by neglecting improvements or additions to the preexisting public capital stock.

As discussed earlier, the CFO Act of 1990 makes major strides in rectifying this situation by requiring individual federal agencies and the government as a whole to issue audited financial statements. Furthermore, work is planned for developing standardized methods for estimating deferred maintenance. The commission strongly supports these efforts and encourages OMB to work with the agencies to complete this task promptly.

One important consequence of the CFO Act is that the federal government now publishes consolidated financial statements. These share two important principles with private financial accounting practices that

Table 4. BREAKDOWN OF FEDERAL SPENDING BY BROAD FUNCTIONAL CATEGORIES, FISCAL YEAR 1997

(outlays in billions of dollars)

	Outlays	Percent of Total Outlays	Percent of GDP
Investment	229	14	3
Operating expenditures	243	15	3
Transfer payments to individuals	935	58	12
Net interest	244	15	3
Undistributed offsetting receipts	–50	–3	–1
Total	**1,601**	**100**	**20**

Notes: For purposes of this table, "Investment" includes all investments in physical capital (whether or not owned by the federal government), in research and development, and in education and training. "Operating expenditures" are calculated by subtracting from total outlays all of the other categories shown in Table 4. "Transfer payments to individuals" includes spending on such items as unemployment insurance and food stamps, Social Security (retirement and disability payments), Medicaid, and Medicare, but does not count student aid payments (which are included in Investment). "Net interest" primarily includes interest paid on federal debt held by the public. "Undistributed offsetting receipts" counts receipts from other parts of the budget for the employer share of employee retirement, rents and royalties on the Outer Continental Shelf, and the sale of major assets.

Source: OMB, from *Historical Tables, Fiscal Year 1999 Budget.*

are essential to objective, consistent, and trusted reporting: (1) the use of definitions based on independently determined accounting standards (determined by FASAB), which are designed to be insulated from the political process; and (2) the independent auditing of the financial data, which helps assure the public that the information is not manipulated to achieve political ends.

Still, more should be done.

First, the calculation of depreciation in various government reports should be standardized. Currently, depreciation of capital items reported in the *Analytical Perspectives* volume of the President's budget is computed with reference to the replacement cost of the assets, whereas depreciation reported on financial statements is based on historical costs of assets. This kind of inconsistency should be eliminated so that depreciation is reported consistently in all government financial reports.

Second, the agencies should make their audited financial statements, together with detailed breakdowns of assets and their condition, widely available in printed form and through publication on their websites. The financial statements should continue to be prepared on the basis of independently developed accounting standards.

Third, this information should also be consolidated at the government-wide level, either by OMB or GAO. The resulting aggregate report, with appropriate detailed breakdowns by agency and type of investment, should also be audited and published in written and electronic form.

The annual audited statements, together with the detailed breakdowns on the condition of federally owned assets, will be valuable tools for the agencies in preparing their longer-term strategies, for preparation of the President's annual budget, and for Congress in both assessing the agencies' out-year plans and deciding on current year appropriations. Policy makers and analysts would also be able to use the consolidated report, in conjunction with the information on the condition of federally owned assets, to judge the setting of priorities across the government and to assess whether the government has unmet needs that are likely to show up in future budgets. Furthermore, the report would enhance the public's ability to understand how and to what extent their tax dollars are being spent on current activities or used to increase the public capital stock. It would also reveal, for example, whether the capital stock was growing at an unreasonably rapid rate, or at the other extreme, contracting.

Fourth, the consolidated reports should provide information based on multiple concepts of investment, including the current FASAB definition of government investment as well as alternative concepts the public and the Congress might find useful. Toward this end, FASAB should examine the feasibility of developing alternative definitions—especially those that take account of investments in human capital and other intangible assets. Multiple views of investment would promote better understanding of the federal government's past use of resources and its current needs.

Recommendation 10: Condition of Existing Assets

The commission believes there should be better information on the condition of existing assets. As previously noted, work is planned at the federal level for agencies to begin developing standardized methods for estimating deferred maintenance. The commission strongly supports these efforts and encourages OMB to work with the agencies to complete this task promptly and implement its results. In combination with the rest of the information provided in the audited financial statements, data on deferred maintenance will enable policy makers to develop sound plans for maintaining existing assets and spending on new ones, where that is advisable.

OMB should also work with the agencies to compile an annual report on the condition of state and local infrastructure, or at least on that portion that has been federally assisted. The commission recognizes that this is a major, long-term undertaking and requires the cooperation of state and local governments to help identify what data are available and additional information that needs to be collected. This endeavor may also call for federal legislation requiring the states

and localities to report information about their assets to the federal government. But in this "information age," there is no reason for citizens and policy makers throughout the country—and especially those at the federal level—to remain unaware of the condition of assets that have been financed or supported with federal tax dollars.

Improving the Evaluation of Budget Decisions

Recommendation 11: Federal "Report Card"

Finally, it is critical that the federal government have mechanisms in place for constantly evaluating the outcomes of budget decisions. Many agencies already do this (although with varying degrees of success). Still, there is room for improvement.

In particular, a natural companion to the recommendation that the benefits and costs of major capital projects be assessed *before* they are undertaken, is that the agencies, under OMB's guidance and review, should (1) regularly conduct benefit-cost analyses of existing major capital spending initiatives and (2) report the results in a manner useful for decision-makers and the public. Such a "Report Card," which could be included in the annual *Analytical Perspectives* that accompanies the budget, could identify which investment projects have produced returns to society in excess of some benchmark "cost of capital"—such as the prevailing interest rate on long-term federal debt, the average cost of capital expected by private investors, or other thresholds that OMB determines useful to the public. Furthermore, it is important that the agencies and OMB use such existing mechanisms as the Government Performance and Results Act (GPRA), the Federal Acquisition Streamlining Act (FASA), and the Clinger-Cohen Act to evaluate public investment programs. In this way, policy makers can make mid-course alterations, if feasible, and learn from the successes and weaknesses of past efforts to help produce wise spending decisions in the future.

To be sure, not all programs have benefits that can be easily quantified, let alone expressed in monetary terms. Indeed, the commission recognizes that the projects in which it may be feasible to provide a monetary analysis may account for a relatively small fraction of total spending; nonetheless, over time, advances in estimating techniques may permit a larger fraction of total spending to be evaluated in this manner. Furthermore, as in the regulatory sphere, OMB and the agencies should do the best they can with the available data. Where the benefits of projects cannot be measured in monetary terms, the evaluations should identify the objectives of the projects and assess their benefits qualitatively. Meanwhile, OMB should take the lead in identifying ways to improve both the collection of information useful to such analyses and analytic techniques.

PROS AND CONS OF A "CAP" ON CAPITAL SPENDING

There is no inherent reason that a capital budgeting process used for decision-making must be linked with any particular financing rule. In principle, capital spending could be subject to an appropriations process separate from the one used for operating expenditures. To ensure spending restraint, a separate cap on capital spending could also be imposed.

Most members of the commission do not support a capital spending cap. Several commissioners, however, believe that moving in this direction might be appropriate, but with the understanding that it would require a change in the way both the executive and legislative branches do business (which might be facilitated by a study involving representatives of both branches).

In this section, we discuss issues that would have to be resolved if Congress and the administration were to agree on including a separate cap on capital spending (under some definition) as part of the budget process, as well as some implications of taking such a step. In the process, we outline arguments in favor of and against making this change in budget procedures. This discussion assumes the continuation of the spending caps that are now part of the Budget Enforcement Act.

Implementation Issues

A cap on capital spending could not be implemented for decision-making until at least the following three issues are resolved:

First, how would capital be defined? A key argument against adopting a capital cap is that there is currently no consensus on what definition would be most useful—or even whether any form of capital spending should be broken out and treated differently for budget purposes. Furthermore, if on the one hand, capital spending eventually is financed at least in part by borrowing, the temptation to expand the definition will grow. On the other hand, if a separate cap is imposed without a financing rule, it could impart a bias against any investment expenditures left out of the definition of capital.

Those favoring a separate capital cap argue that as long as policy makers identify a specific objective, a definition of capital would follow more easily. Indeed, if Congress were inclined to adopt the idea of a cap, it could ask FASAB, CBO, or some other body to provide it with recommended definitions of capital and then decide to use one of them.

Second, on what basis should any capital spending cap or target be set? Critics of the idea argue that there is no objective method for answering this question, especially if capital is broadly defined to include, say, all national assets. Indeed, as mentioned earlier in this report, there is no way to know whether or not the current budget process has a macro bias precisely because it is impossible to make an objective statement about the optimal level of broadly defined public capital.

Supporters of a capital budget cap have several responses to this. One is that policy makers already routinely make tradeoffs of programs with diverse objectives in the current budget process, and it would be no different if they were asked to do so specifically for all capital spending; indeed, having a national discussion on that issue would be helpful. Another response is that setting a limit on capital spending would become conceptually more manageable if capital were more narrowly defined to be consistent with a single objective.

Third, How exactly would Congress implement a capital cap? One answer is that Congress could simply set a non-binding *target* for capital spending in the annual budget resolution. A more ambitious step would be to impose a statutory cap that would actually constrain total appropriations for capital spending. Presumably, the appro-

priations committees would divide up the capital total among each of the thirteen appropriations subcommittees, as they do now with the so-called section "302(b)" discretionary spending allocations.[38]

Critics of the idea would argue that there is no way to guarantee that spending within any capital allocation is truly for capital rather than just labeled as such. Supporters would respond that as long as Congress agreed upon a definition of capital, an independent scorekeeper like CBO would ensure faithful implementation of the cap.

Implications

We turn next to the implications of setting a cap on capital expenditures (under some definition) that both proponents and opponents of the idea have claimed.

Impact on Budgetary Choices

Advocates of such a cap argue that it would have at least two salutary effects: it would focus greater attention on the total amount of resources devoted to achieving longer-run objectives, and it would improve the allocation of limited resources toward the most cost-effective initiatives.

Opponents of a separate cap on capital spending have several responses, apart from those already outlined in the rest of this report. Arguably, the claimed macro and micro benefits of a cap could be attained through the improved reporting requirements and longer-term agency spending plans we recommend, without running the risks of several potential adverse consequences. Also, as already discussed, any definition of capital could create a bias in favor of those items included within the definition while disadvantaging any capital or other items that might fall outside it. This problem might be mitigated, of course, to the extent that policy makers defined capital broadly—if not initially, then in later years. But a more expansive definition might weaken budget discipline, which could lead to excessive public borrowing.

Impact on Budget Discipline

In principle, budget discipline would not be weakened if a capital budget were adopted without any rule that capital—gross or net—be financed by borrowing. Indeed, advocates of a capital budget might argue that a separate cap on public capital spending would promote budget discipline at the micro level, where limited resources are allocated among alternative uses. If policy makers were explicitly required to trade off different types of capital spending, they might be more careful about which capital projects they authorize.

Critics of a separate cap on capital spending argue that it would tempt policy makers to adopt a borrowing-for-investment rule precisely because capital is identified with the long run. Future generations, after all, will reap the benefits of such spending, so why not have them incur the cost of financing it as well? To the extent public investment becomes debt-financed as a matter of course, policy makers would then have incentives to move expenditures within the definition of capital so that they could be debt-financed. This could lead to excessive government borrowing, which would lower economic growth by diverting national saving away from potentially more productive uses in the private sector.[n] In addition, future generations might not appreciate the benefits of programs or projects authorized many years before, nor might the programs be suitable for the intended beneficiaries.

More broadly, with present expenditure programs and taxes, the federal government will apparently run surpluses in the unified budget, under current budget conventions, for some years to come—although these projections (which have often proved to be incorrect in the past) could miss the mark in the future. The country needs, and does not have, policies and procedures for deciding how big those surpluses should be, assuming the projections of surplus prove to be reasonably accurate.

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[n] Comment of Commissioner Levy: Although there are reasons to limit the size of federal debt and deficits, I cannot agree that deficits "divert national saving away" from other uses. I and other economists argue that investment generally determines saving, not the other way around. Certainly "saving equals investment" is a fact, an accounting identity. However, the notion that government actions to increase or decrease public saving will similarly increase or decrease investment is a theoretical proposition that is neither universally accepted nor empirically proven. Notably, it ignores the offsetting impact of changes in fiscal policy on business saving (profits).

Deciding how much of a surplus (in the unified budget) to achieve is difficult. Federal surpluses add to the national saving, the source from which private investment can be financed, and thus contribute to economic growth. Logically, the proper size of the surplus should depend on the rate of private saving, on expected technological advance, and on expected change in the size and composition of the population. It should also represent a social choice between the consumption of the present generation and the consumption of future generations. To recommend how these and probably other relevant variables should be taken into account in deciding on the proper size of the budget surplus is beyond the charge, as well as the competence, of this commission. We do, however, want to recognize that in such a process, some weight might be given to the amount of federal investment as a factor influencing the proper size of the surplus. In rejecting both the Balanced Budget Amendment as well as a simplistic capital budget that would finance all capital with debt, we do not mean to reject consideration of the total amount of federal capital (however it is defined) in developing a more sophisticated fiscal policy in the future.

Impact on Macroeconomic Stability

It is difficult to reach firm conclusions, in the abstract, concerning the impact a cap on capital spending would have on fiscal policy and hence on macroeconomic stability. The effect of federal fiscal policy on the rest of the economy in any given year is typically measured by the *change* in the structural budget balance (the surplus or deficit assuming some given level of economic activity, typically full employment). Each year, in the course of agreeing on a budget, Congress and the administration together decide how large or small that change in the structural fiscal balance should be. The commission cannot say with any degree of certainty whether the adoption of a separate capital cap would systematically move fiscal policy in the direction of stimulus or contraction.

A CAPITAL BUDGET AND DEPRECIATION

No government currently budgets depreciation of infrastructure [GAO, 1995]. Nonetheless, one variation of a capital budget that we consider here would attempt to mimic the income statement of a private firm by having depreciation recognized as an expense in the annual operating budget.

In principle, Congress could provide a permanent appropriation for depreciation; however, such a step would not be a meaningful exercise of control because depreciation represents an expense that in effect has been obligated in the past—the portion of the original cost of an asset that is being used or consumed in a given year.[39]

Nevertheless, recognizing depreciation should be part of any decision rule linking the amount of capital spending to the amount of federal borrowing. If this were done, however, it would be important to recognize the difference between *net* and *gross* investment. If the government borrows to finance gross investment, without taking account of depreciation of existing capital, it will be placing an undue burden on future generations. Only net additions to capital—gross investment minus depreciation—generate future benefits and thus could appropriately justify additional borrowing.

For this reason, any borrowing-for-investment rule would have to include depreciation of *all* capital assets. But if this becomes the rule—borrowing for net investment—it turns out that the level of additional borrowing that might be justified is considerably below what some proponents of a borrowing-for-investment rule might anticipate (assuming current levels of gross investment by the federal government).[o] This is illustrated in Table 5, which shows that in fiscal year 1999, the Clinton administration intended to spend $130 billion on national capital, defined by both OMB and GAO to include all federal spending that contributes directly to economic growth (most federally owned assets, federally financed infrastructure, R&D aimed at enhancing growth, and federal expenditures on education and training). In the same year, OMB estimated that the existing stock of these assets would depreciate by $72 billion, leaving net investment of $58 billion.[40] In addition, OMB also estimated receipts of $46 billion in FY 1999 from special taxes earmarked for trust funds (such as the Highway Trust Fund) dedicated to support capital spending. Subtracting these receipts from the net investment figure would yield borrowing of just $12 billion.

Table 5. BORROWING TO FINANCE NET INVESTMENT, FISCAL YEAR 1999

(billions of dollars)

National investment	$130
Less: Depreciation	–72*
Net Investment	58
Less: Trust fund revenue earmarked for capital projects	–46
Total investment purportedly requiring debt-financing	12
Projected FY 1999 surplus in the unified budget	10

*Depreciation is not included for capital projects financed by earmarked trust fund receipts. OMB estimated depreciation on these assets in FY 1999 to be $11 billion.

Source: OMB, *Analytical Perspectives, Fiscal Year 1999,* p. 156.

An issue related to depreciation is the following proposal offered by certain individuals who testified before the commission: that the budgeting for capital be switched from the current convention, under which the full cost of capital projects is appropriated up front, to a system of accrual accounting, in which the costs of such projects (and therefore their appropriations) would be spread out over their useful lives. Such a change in scoring would have the following

[o] Comment of Commissioner Levy: Under some types of a capital budget, there might be more gross and net investment, which under a borrowing-for-investment rule, would justify more borrowing.

objective: to remove the alleged bias under the current system against capital spending that arises because large capital expenditures can cause spending to bump up against, and even exceed, the caps on discretionary spending.

Earlier, however, we suggested that there was no clear evidence as to whether or not this was occurring. But even if it were, proper accrual accounting requires depreciation of existing as well as new capital. Table 5 suggests that investment net of depreciation is substantially below the level of gross investment spending (although both could be very different under a system of accrual budgeting).

Realizing this, some have argued that the scoring of capital items should be changed only for *future* projects. Depreciation on existing assets would be ignored. But this would mean that new capital projects would not have to compete for resources with previously approved projects. The commission strongly rejects this approach, which clearly would be inconsistent with standard accrual accounting practices. Moreover, if the federal government were to adopt accrual-based budgeting, it would be inappropriate to confine it to the scoring of capital. Other programs, including federal insurance and pensions, would deserve accrual budgeting as well. In fact, these programs, which now appear to be well financed when scored on a cash basis, also have large liabilities; consequently, when scored on an accrual basis, they would imply a much larger level of total federal spending than the amount now being reported. Decisionmakers could then decide to curtail rather than expand capital spending (which is not the objective of some of those who have urged the adoption of accrual budgeting).

OTHER VERSIONS OF A CAPITAL BUDGET

So far, we have considered alternative versions of a capital budget: one linked to a financing rule, a capital spending cap, and incorporation of depreciation into the consideration of capital (including a switch to accrual-based accounting). These are not the only ways to define or implement a "capital budget."

It may be possible to think of a capital budget process that is much more informal than any of the versions just outlined. For example, federal policy makers might find ways to use or publicize multiple financial statements—not just the unified budget, but separate "operating" and "capital" budgets or statements. Discipline might come from a specific constraint on the growth of debt—much like that recently adopted in the United Kingdom—rather than from any balanced budget rule. There surely are other variations, many of which would require a major overhaul of the current budget process (which constrains spending through spending caps and PAYGO rules relating to taxes and mandatory spending). However, the commission has not considered all of these alternatives in depth.

CONCLUSION

No matter how it is defined, capital spending by the federal government is important because it delivers long-run benefits to the nation. The challenge for federal policy makers is to ensure that an appropriate amount of resources is devoted to such spending in the aggregate as well as among the various projects and initiatives that appear to fit within the definition of public capital or investment.

Clearly, there is no objective way to assess whether the current federal budget process leads to a bias, one way or the other, in the amount of total capital spending by the federal government. The commission has concluded, however, that the process has a number of flaws. These shortcomings have led and continue to lead to a less-than-ideal allocation of capital spending among individual programs, as well as between new investments and maintenance of existing capital assets. In our view, the combination of recommendations outlined here would help remedy these flaws.

ENDNOTES

1. This should not be surprising. One thoughtful economist writing in 1965 noted that "the number of different definitions of "capital" employed in the writings of economists defy enumeration" [Dewey, p. 4].

2. The Bureau of Economic Analysis, which is responsible for the National Income and Product Accounts (NIPA), has developed an experimental account for research and development capital, however.

3. The outlays shown in the table include the subsidy component of federal credit programs aimed at supporting or stimulating capital spending.

4. It is important in reading Table 1 to bear in mind that the different categories of capital spending may have very different economic (and non-economic) effects. For example, it is highly likely that all, or close to all, federal expenditures on defense capital and R&D create capital that would otherwise not exist. Some federal spending on non-defense capital—such as highways and other capital grants to the states—may displace spending that would otherwise occur at the state and local levels. Similarly, some portion of the subsidies on student loans probably gets translated into higher tuition rather than more education. At the same time, it is also possible that federal matching grants for infrastructure may encourage states and localities to invest more than they otherwise would. In addition, it may be fairer or more efficient for the federal government to finance certain infrastructure than for local residents to bear all of the cost. The key point is that different types of federal capital spending have different impacts on the nation's overall stock of capital (as do federal surpluses, deficits, and taxes).

5. The federal tax code contains a variety of incentives designed to enhance various types of capital spending, including (but not limited to): tax-exemption of interest on state and local bonds used to finance infrastructure and other physical investment; tax incentives for private research and development expenditures; and various tax incentives that support investment in education.

6. In the National Income and Product Accounts, depreciation is also deducted to determine the federal government's "current surplus or deficit."

7. The GDP data have been adjusted for inflation using the chain-weighted GDP deflator, while investment expenditures have been deflated using a chain-weighted investment deflator.

8. Aschauer, 1989; see also Munnell, 1992. The Boskin Commission report recently argued that the inflation data are overstated for various reasons, which if true, would also mean that real output and productivity are understated. This report has been the subject of considerable controversy, however, among economists.

9. For a summary of such studies, see Gramlich, 1994 and CBO, 1998.

10. There are differences in ownership of certain key sectors of the economy where investment in physical assets is especially important. For example, transportation and utility services that are publicly provided in other countries are not provided by governments here (utility services being a prime example, with the exception of some federal hydroelectric projects and municipally owned power companies). In addition, in countries where the government provides hospital care services (such as the United Kingdom), investments in hospitals show up as government capital spending, whereas in the United States most health care is delivered privately (with the exception of military and veterans' hospitals and some municipally owned hospitals). Similarly, in the United States, much higher education is provided privately, whereas in many countries higher education is more likely to be provided publicly. While these differences in ownership patterns between countries do not affect comparisons of total national investment, they do distort comparisons of capital spending by governments.

11. The use of the word "capital" in the financial accounting context can be confusing, since the term is often interpreted as the shareholder's contribution to the company, and not a category of assets, which is the way the term is often defined by economists and government policy makers.

12. Under GAAP, capital assets are recorded, with some exceptions, at their original costs (minus any cumulative depreciation in the case of fixed assets), and not at their current market values.

13. There is a GAAP for state/local governments, and the body responsible for its principles is the Governmental Accounting Standards Board (GASB).

14. For mature firms with access to credit, equity is typically the last means of financing (other than through stock options to employees) because new equity dilutes the ownership percentages of existing shareholders. For new or young firms without a track record of profitability, equity may be the only means of financing, whether by selling new shares or granting stock options or shares to employees in lieu of cash.

15. An alternative way of evaluating capital projects that is sometimes used is to compute their internal rates of return, or IRR, and to compare the result with the discount rate. The IRR is that discount rate that theoretically equates the discounted future cash flows to the cost of the project or that produces a zero NPV. If the IRR exceeds the discount rate, then proceeding with the project is justified. In practice, however, the IRR can be difficult to compute and yields different results from NPV when cash flows are very uneven.

16. This need not always be the case, however. Firms that manage their spending through something analogous to the "statement of cash flow" in effect combine their budgeting for operating expenses and capital items.

17. The material in this subsection is drawn from National Association of State Budget Officers, 1997; OMB, 1998, p. 154; Hush and Peroff; and GAO, 1986.

18. Typically, states include in their definitions of capital expenditures major maintenance, although dollar thresholds for defining what maintenance is "major" also vary across states.

19. States do record depreciation expense in their proprietary (or commercial-type) funds and in trust funds where net income, expense, or capital maintenance is measured.

20. Examples of special funds include the Land and Water Conservation Fund and the National Wildlife Refuge Fund.

21. Two other types of government funds are "public enterprise funds" (revolving funds that conduct business-type operations with the public) and "intragovernmental funds" (that do the same within and between government agencies).

22. The historical material summarized in this and the subsequent two paragraphs draws on Nuzzo.

23. It should be noted that although the budget does not distinguish between capital and operating expenditures, the *Analytical Perspectives* volume of the budget contains information that makes that distinction at an aggregate level and for major programs.

24. The Reagan administration defined investment primarily to cover defense expenditures. The Bush administration broadened the term to include federal expenditures on R&D, infrastructure, child immunization, drugs, the environment and energy, and programs aimed at preserving America's heritage (such as those for the arts, humanities, and museums). The Clinton administration has used a similar definition, but has concentrated on transportation, environment, rural development, energy, community development and defense conversion, housing, education, justice, health care, and investments in information technology to improve the delivery of government services.

25. For an elaboration of this point, see Eichengreen, p. 84. Indeed, there is empirical evidence indicating that state governments have been effectively rationed out of the market when the ratio of their outstanding debt rises above 9 percent of state economic output [Bayoumi, Goldstein, and Woglom].

26. New Zealand also imposes a "capital charge" on each agency, which is paid to the Treasury twice a year. Although the capital charges of the various agencies are washed out on the overall government's budget, they were adopted as a means of encouraging departments to manage their capital assets wisely [Troup Testimony]. Below, we suggest that the federal government experiment with a similar procedure, the establishment of "capital acquisition funds."

27. The Adequacy of Appropriations Act and the Antideficiency Act require all agencies to have budget authority for all obligations, including capital acquisitions.

28. The "social" rate of return of a project measures the benefit of the project to the nation as a whole, taking into account both economic and non-economic considerations (such as equity and freedom). Social returns exceed the returns earned by the private sector alone where the projects generate benefits beyond those reaped only by those who undertake them. For example, it is widely acknowledged that much basic R&D undertaken by the government generates benefits for many firms and industries, as well as society as a whole. The same is true for education, which confers benefits not just on the individuals who receive it, but also on the entire society to the extent that a more educated work force is likely to come up with new ideas that make businesses more productive.

29. As former CBO Director Robert Reischauer pointed out in his testimony, the federal government also pays attention to distributional concerns: "On the basis of economic considerations alone, the federal government would allocate far less to roads and bridges and public buildings in North Dakota than it now does. But there is agreement that all areas of the country should enjoy the advantages of a modern highway system, even where the economic payoff is minimal." [Reischauer, p. 3].

30. The FASAB consists of nine members: one representative each from OMB, Treasury, GAO, and CBO; two representatives from other executive branch agencies; and three representatives from the private sector or state and local government. FASAB has developed two statements of accounting concepts and ten statements of standards applicable to accounting by the federal government.

31. The Act significantly increased total funding for highways to $217 billion for FY 1998–2003, a substantial increase over the $155 billion authorized for the preceding five years. The commission as a whole takes no position on the merits of this funding level, but notes only that the linkage between future spending and revenue dedicated to the trust fund addresses the problem that, in prior years, motor fuels tax revenues were not being fully used for their intended purpose.

32. Nor do the aggregate investment and capital stock data currently reported in the *Analytical Perspectives* and in the *National Income and Product Accounts* reveal the physical condition of those assets (which are reported at current cost minus an adjustment for accumulated depreciation).

33. As Paul Posner from the GAO told the commission: "Prudent capital planning can help agencies to make the most of limited resources, while failure to make timely and effective capital acquisitions can result in increased long-term costs" [Posner at 14]. As an example, Posner pointed to planning failures that have led to cost overruns, schedule delays, and performance shortfalls in the Federal Aviation Administration's modernization program. Similar problems appear to have plagued the computer modernization program at the Internal Revenue Service. In its recent *Capital Programming Guide*, OMB encourages agencies to develop long-term capital plans as part of their planning process and to use these plans to develop their annual budget justifications.

34. Debt service is an appropriate rental charge whether or not the federal government must borrow to finance a certain project. In particular, even if the government is running an overall surplus, there is an opportunity cost associated with the acquisition of a capital item—measured by the cost of borrowing—associated with not having an even larger surplus.

35. It would not be appropriate or useful to include in the CAFs grants to states or localities for what, in other contexts, may be deemed to be capital expenditures, such as those for highways. The grant itself is the program; highways and other federally assisted capital assets are not being used to provide federal services, so there are no federal programs to which the cost of using this capital should be allocated for budget decision-making. Moreover, spending "spikes" tend to be associated with the construction or acquisition of federally owned facilities; spending on highways and other "capital" items tends to be relatively smooth from year to year.

36. Some agencies have portions of their budgets considered by more than one appropriations subcommittee. For example, while most of the budget of the Department of the Interior is considered by the Interior subcommittee, the Energy and Water Development subcommittee has jurisdiction specifically over the budget of the Bureau of Reclamation (an agency within Interior). Similarly, the Labor/HHS subcommittee oversees most of the budget of the Department of Health and Human Services, but the Agriculture subcommittee has jurisdiction over the budget of the Food and Drug Administration. In these cases, it may be necessary to establish multiple CAFs that fit jurisdictional boundaries of the appropriations subcommittees.

37. Moreover, a federal mandate linking federal funding to state and local support of maintenance might encourage rating agencies to allow bonding for maintenance.

38. The number refers to the section of the BEA that provides for allocating spending totals within the cap among the appropriations subcommittees.

39. Note that one virtue of a CAF is that the rental rate that would be charged implicitly on the use of capital assets would include a charge for depreciation.

40. The depreciation total reported by OMB and shown in the table includes depreciation of education and R&D expenditures.

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APPENDIX A

Executive Order 13037: Commission to Study Capital Budgeting, and the Amendments

Federal Register

Presidential Documents

Vol. 62, No. 44 Thursday, March 6, 1997

Executive Order 13037 of March 3, 1997

Commission To Study Capital Budgeting

By the authority vested in me as President by the Constitution and the laws of the United States of America, including the Federal Advisory Committee Act, as amended (5 U.S.C. App.), it is hereby ordered as follows:

Section 1. *Establishment.* There is established the Commission to Study Capital Budgeting ("Commission"). The Commission shall be bipartisan and shall be composed of 11 members appointed by the President. The members of the Commission shall be chosen from among individuals with expertise in public and private finance, government officials, and leaders in the labor and business communities. The President shall designate two co-chairs from among the members of the Commission.

Sec. 2. *Functions.* The Commission shall report on the following:

(a) Capital budgeting practices in other countries, in State and local governments in this country, and in the private sector; the differences and similarities in their capital budgeting concepts and processes; and the pertinence of their capital budgeting practices for budget decisionmaking and accounting for actual budget outcomes by the Federal Government;

(b) The appropriate definition of capital for Federal budgeting, including: use of capital for the Federal Government itself or the economy at large; ownership by the Federal Government or some other entity; defense and nondefense capital; physical capital and intangible or human capital; distinctions among investments in and for current, future, and retired workers; distinctions between capital to increase productivity and capital to enhance the quality of life; and existing definitions of capital for budgeting;

(c) The role of depreciation in capital budgeting, and the concept and measurement of depreciation for purposes of a Federal capital budget; and

(d) The effect of a Federal capital budget on budgetary choices between capital and noncapital means of achieving public objectives; implications for macroeconomic stability; and potential mechanisms for budgetary discipline.

Sec. 3. *Report.* The Commission shall adopt its report through majority vote of its full membership. The Commission shall report to the National Economic Council by March 15, 1998, or within 1 year from its first meeting.

Sec. 4. *Administration.* (a) Members of the Commission shall serve without compensation for their work on the Commission. While engaged in the work of the Commission, members appointed from among private citizens of the United States may be allowed travel expenses, including per diem in lieu

of subsistence, as authorized by law for persons serving intermittently in the Government service (5 U.S.C. 5701–5707).

(b) The Department of the Treasury shall provide the Commission with funding and administrative support. The Commission may have a paid staff, including detailees from Federal agencies. The Secretary of the Treasury shall perform the functions of the President under the Federal Advisory Committee Act, as amended (5 U.S.C. App.), except that of reporting to the Congress, in accordance with the guidelines and procedures established by the Administrator of General Services.

Sec. 5. *General Provisions.* The Commission shall terminate 30 days after submitting its report.

WILLIAM J. CLINTON

THE WHITE HOUSE,

March 3, 1997

Federal Register

Presidential Documents

Vol. 62, No. 211 Friday, October 31, 1997

Executive Order 13066 of October 29, 1997

Amendment to Executive Order 13037, Commission To Study Capital Budgeting

By the authority vested in me as President by the Constitution and the laws of the United States of America, and in order to increase the membership of the Commission to Study Capital Budgeting, it is hereby ordered that the second sentence of section 1 of Executive Order 13037 is amended by deleting "11" and inserting "no more than 20" in lieu thereof. It is further ordered that section 3 of Executive Order 13037 is amended by deleting the words "by March 15, 1998, or".

WILLIAM J. CLINTON

THE WHITE HOUSE

October 29, 1997

Federal Register

Presidential Documents

Vol. 63, No. 240 Tuesday, December 15, 1998

Executive Order 13108 of December 11, 1998

Further Amendment to Executive Order 13037, Commission To Study Capital Budgeting

By the authority vested in me as President by the Constitution and the laws of the United States of America, and in order to extend the reporting deadline for, and the expiration date of, the Commission to Study Capital Budgeting, it is hereby ordered that Executive Order 13037, as amended, is further amended by deleting in section 3 of that order ''within 1 year from its first meeting'' and inserting in lieu thereof ''by February 1, 1999'' and by deleting in section 5 of that order ''30 days after submitting its report'' and inserting in lieu thereof ''on September 30, 1999''.

WILLIAM J. CLINTON

THE WHITE HOUSE

December 11, 1998

APPENDIX B

Commission Membership

Co-Chairs

Kathleen Brown is President of Bank of America's Private Bank West. She has been with Bank of America since 1994. From 1991 until 1994, she served as California's 28th Treasurer, responsible for managing the state's investment portfolio, and administering bond sales to finance schools, parks, prisons, housing, health facilities, and environmental programs. Ms. Brown was the Democratic nominee for Governor of California in 1994.

Jon S. Corzine is Co-Chairman and Senior Partner of the investment banking firm Goldman, Sachs & Co. Since joining the firm in 1975, he has held a variety of positions including partner-in-charge of government, mortgage and money markets trading, co-head of the Fixed Income Division and of the firm's treasury and finance functions, and Chief Executive Officer.

Members

Willard W. Brittain, of New York, New York, is Global Managing Partner of PricewaterhouseCoopers.

Stanley E. Collender, of Washington, D.C., is a Senior Vice President and Managing Director of the Federal Budget Consulting Group at Fleishman-Hillard.

Orin S. Kramer, of Englewood, New Jersey, is a general partner of Kramer Spellman, L.P., which manages investment vehicles focusing on the financial services industry.

Richard C. Leone, of Princeton, New Jersey, is the President of The Century Foundation, formerly the Twentieth Century Fund, Inc., a public policy research institution in New York. He was New Jersey State Treasurer and Chief Financial and Budget Officer for 1973–1977.

David Levy, of Pound Ridge, New York, is the Vice Chairman of the Jerome Levy Economics Institute of Bard College and Director of the Levy Institute Forecasting Center.

James T. Lynn, of Bethesda, Maryland, is retired Chairman and Chief Executive Officer of Aetna Life & Casualty. During the Ford Administration, he served as Director of the Office of Management and Budget.

Cynthia A. Metzler, of Washington DC, is a Partner with the law firm of Pepper Hamilton LLP. She was formerly Acting Secretary of Labor during the Clinton Administration.

Luis Nogales, of Beverly Hills, California, is President of Nogales Partners, and was Chairman and CEO of Embarcadero Media and United Press International and President of Univision.

Carol O'Cleireacain, of New York, New York, is a Senior Fellow at The Brookings Institution and former Finance Commissioner and Budget Director of New York City.

Rudolph G. Penner, of Washington, D.C., holds the Arjay and Frances Miller Chair in Public Policy at the Urban Institute. He is a former Director of the Congressional Budget Office.

Steven L. Rattner, of New York, New York, is Deputy Chief Executive of the investment banking firm Lazard Freres & Co. LLC.

Robert M. Rubin, of Southampton, New York, is Executive Vice President and Director of AIG Trading Group, an international currency and commodity dealer.

Herbert Stein, of Washington, D.C., is a senior fellow of the American Enterprise Institute. He served as Chairman of the Council of Economic Advisers under Presidents Nixon and Ford.

APPENDIX C

List of Witnesses and Written Statements

The following persons have appeared before the commission to testify, have presented a written statement, or both. The individuals are identified below in alphabetical order. The commission's website (at http://www.whitehouse.gov/pcscb) has a one-page staff summary for the statement of each individual and the full written testimony if written testimony was submitted. An asterisk (*) beside the name indicates that a written statement was submitted to the commission.

- James J. Abel, Executive Vice President and CFO, Lamson & Sessions, on behalf of Financial Executives Institute (appearance on May 8, 1998)*
- William R. Buechner, Director of Economics and Research, American Road and Transportation Builders Association (appearance on January 30, 1998)*
- Letitia Chambers, Chambers Associates Incorporated (appearance on September 16, 1998)*
- G. Edward DeSeve, Acting Deputy Director for Management, Office of Management and Budget (appearance on June 26, 1998)
- Senator Pete V. Domenici (NM) (January 30, 1998)*
- Robert Eisner, William R. Kenan Professor Emeritus of Economics, Northwestern University (appearance on April 24, 1998)*
- Senator Michael B. Enzi (WY) (appearance on January 30, 1998)*
- Financial Executives Institute: Proposal on Federal Capital Asset Budgeting. This proposal was mentioned in the testimony of James J. Abel on May 8 (see entry above for James J. Abel). The proposal was presented to the House Government Reform and Oversight Committee in May 1995*
- Gary Gensler, Assistant Secretary for Financial Markets, Department of the Treasury, with Roger Anderson, Deputy Assistant Secretary for Federal Finance (appearance on April 24, 1998)*
- Edward M. Gramlich, Member, Board of Governors, Federal Reserve System (appearance on March 6, 1998)*
- Representative Amo Houghton (NY) (January 23, 1998)*
- Martin Ives, formerly a member of the Governmental Accounting Standards Board (GASB), which establishes accounting standards for State and local governments, and the Federal Accounting Standards Advisory Board (FASAB), which recommends accounting standards for the Federal Government (appearance on May 8, 1998)*
- Raymond G. Kammer, Director, National Institute of Standards and Technology, Department of Commerce (appearance on March 6, 1998)
- Representative Dennis J. Kucinich (OH) (February 4, 1998)*
- Senator Frank R. Lautenberg (NJ) (appearance on January 30, 1998)*
- Frank E. Lewis, Price Waterhouse (appearance on May 8, 1998)*
- David Mosso, Chairman, Federal Accounting Standards Advisory Board (appearance on May 8, 1998)*
- Delegate Eleanor Holmes Norton (DC) (appearance on January 30, 1998)*

- Representative James L. Oberstar (MN) (appearance on January 30, 1998)*
- June E. O'Neill, Director, Congressional Budget Office, with James Blum, Deputy Director (appearance on April 24, 1998)*
- Ralph R. Peterson, Chairman, Construction Industry Round Table (December 3, 1998)*
- David Plavin, President, Airport Council International (appearance on March 6, 1998)
- Paul Posner, Director, Budget Issues, General Accounting Office (appearance on March 6, 1998)*
- Franklin D. Raines, Director, Office of Management and Budget (appearance on April 24, 1998)
- Martin A. Regalia, Ph.D., U.S. Chamber of Commerce, (June 5, 1998) *
- Robert D. Reischauer, Senior Fellow, Economic Studies, The Brookings Institution (appearance on April 24, 1998)*
- Edward G. Rendell, mayor of Philadelphia and Chairman, Rebuild America Coalition, with James Lebenthal, Vice Chairman, Rebuild America Coalition, and William Bertera, Executive Director, Rebuild America Coalition (appearance on January 30, 1998)
- Robert E. Rubin, Secretary of the Treasury (appearance on March 6, 1998)
- Charles L. Schultze, Senior Fellow Emeritus, The Brookings Institution (appearance on April 24, 1998)*
- Lawrence F. Skibbie, President, National Defense Industrial Association (June 22, 1998)*
- Representative John M. Spratt, Jr. (SC) and Richard Kogan (January 30, 1998)*
- Rick Swanson, Executive Director, Institute of Management Accountants (appearance on May 8, 1998)*
- Ronald L. Tillett, Secretary of Finance, Commonwealth of Virginia (appearance on May 8, 1998). Mr. Tillett also distributed the "Six-Year Capital Outlay Plan: 1998–2004" for the Commonwealth of Virginia.*
- Senator Robert G. Torricelli (NJ) (appearance on January 30, 1998)
- George Troup, Deputy Chief of Mission, Embassy of New Zealand (appearance on May 8, 1998).* In addition to his initial written statement, Mr. Troup later provided written answers (June 18) to certain questions asked during the testimony. At the testimony he made available five supplementary documents:

  Graham C. Scott, *Government Reform in New Zealand*, International Monetary Fund, Washington DC, 1996;

  New Zealand Treasury, *Financial Statements of the Government of New Zealand, For the Nine Months Ended 31 March 1998* (1 May 1998);

  New Zealand Treasury, *A Guide to the Management of Departmental Fixed Assets*, 1991;

  New Zealand Treasury, *A Guide to the Management of Departmental Purchasing*, 1991; and

  New Zealand Treasury, *A Guide to the Management of Departmental Working Capital*, 1991.
- Carol Cox Wait, President, Committee for a Responsible Federal Budget, June 4, 1998*
- Representative Robert E. Wise, Jr. (WV) (appearance on January 30, 1998)*

APPENDIX D

OUTLINE OF MATERIAL ON THE WEBSITE

http://www.whitehouse.gov/pcscb

Report of The Commission

Supplementary Materials

I. White House Press Releases

II. Activities of the Commission
   - A. Summary of the Activities and Process of the Commission
   - B. Meetings
     1. Schedule
     2. Agenda
     3. Minutes

III. Testimony And Statements
   - A. List of Witnesses and Written Statements
   - B. One-page Staff Summaries
   - C. Written Testimony and Statements

IV. Bibliography of Selected Published Materials Reviewed by the Commission

V. Commission Working Papers

The papers in this section were prepared by staff and submitted to the commission for its information and consideration. The commission has not necessarily endorsed the views expressed in the papers.

- A. A Matrix of Capital Budgeting Problems and Options
- B. Options Presented for Discussion

Planning

1. A Longer Term Perspective for Capital Needs

Supplementary Materials—Continued

2. Information on Federally Owned Capital Assets
3. Using Benefit/Cost Analysis

Budgeting

4. Dedicated Revenues for Selected Capital
5. Investment Targets
6. Full Funding for Capital Acquisitions
7. Capital Acquisition Funds
8. Cost of Labor and Support Services
9. Budget Treatment of Leases and Purchases

Acquisition

10. Acquisition

Management in Use

11. Capital Is Often Poorly Maintained
12. Disposition of Capital Assets

C. Controversies Surrounding Capital Budgeting
   1. Defining Capital Spending
   2. Assessing Possible Biases Affecting Investment
   3. Analyzing Macroeconomic Outcomes

D. Synopses of Selected Programs or Projects

Transportation

1. Capital Management in the Coast Guard
2. Historical Surface Transportation Program Funding and Impact of Recent Reauthorization Bill on Funding Decisions

Defense

3. Department of Defense Acquisition Processes

Science

4. National Institute of Standards and Technology Campus
5. Space
6. Synopsis of Budgeting for Investments in New Facilities for the Department of Energy
7. National Science Foundation Research

Information Technology

8. Internal Revenue Service (IRS) Modernization

Human Investment

9. WIC (Special Supplemental Nutrition Program for Women, Infants, and Children)

Water Resources

10. Water Resources Development Projects

E. How States Budget for Capital

F. Synopses of Accounting Information
   1. Basic Information about Federal Financial Standards and Statements
   2. Federal Accounting Standards for Capital Investment
   3. Consolidated Financial Statements of the United States Government for FY 1997
   4. Financial Management Status Report and Five-Year Plan

G. Other Reports
   1. Synopsis of the *Capital Programming Guide*
   2. Recommendations of the Grace Commission on Capital Budgeting and Planning
   3. Depreciation Methods

Supplementary Materials—Continued

4. Budget Impact of a Capital Budget Framework
5. Generational Accounting
6. Revised Asset Scoring Rule for BEA Scoring

VI. Bibliography of Recent Efforts to Improve Federal Budgeting for Capital

A. Recent Laws Regarding Budgeting

1. The Congressional Budget and Impoundment Control Act of 1974
2. Federal Capital Investment Program Information Act of 1984
3. Balanced Budget and Emergency Deficit Control Act of 1985
4. Budget Enforcement Act of 1990
5. Federal Credit Reform Act of 1990
6. Chief Financial Officers Act of 1990
7. Government Performance and Results Act of 1993
8. Omnibus Budget Reconciliation Act of 1993
9. Federal Acquisition Streamlining Act of 1994
10. Government Management Reform Act of 1994
11. Federal Acquisition Reform Act of 1996
12. Information Technology Management Reform Act of 1996 (Clinger-Cohen Act)
13. Balanced Budget Act of 1997

B. Governmental Studies Regarding Capital Budgeting

1. *Report of the President's Commission on Budget Concepts,* Washington, DC, 1967.
2. President's Private Sector Survey on Cost Control (Grace Commission), *Report on Federal Management Systems,* "FMS 5: Capital Budgeting," September 1983, pp. 96–111.
3. General Accounting Office reports, 1989–1998. GAO issued many reports in this period that discussed budgeting for capital, including the following:

   Budget Policy: Prompt Action Necessary to Avert Long-Term Damage to the Economy (GAO/OCG–92–2) (June 1992).

   Budget Issues: Incorporating an Investment Component in the Federal Budget (GAO/AIMD–94–40) (November 1993).

   Budget Issues: The Role of Depreciation in Budgeting for Certain Federal Investments (GAO/AIMD–95–34) (February 1995).

   Budget Issues: Budgeting for Federal Capital (GAO/AIMD–97–5) (November 1996).

   Executive Guide: Leading Practices in Capital Decision-Making. (GAO/AIMD–99–32) (December 1998).
4. Report of the National Performance Review, *Creating a Government that Works Better & Costs Less,* Washington, September 1993, p.111. See also the accompanying report, *Improving Financial Management,* "FM12: Manage Fixed Asset Investments for the Long Term," September 1993, pp. 67–72.

C. Progress in Implementing Modifications in Budgeting for Capital

1. OMB Circular A–94: "Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs," (October 29, 1992).
2. Executive Order 12893: *Principles for Federal Infrastructure Investments* (January 26, 1994).
3. OMB. Statement of Federal Financial Accounting Standards (SFFAS) No. 6, *Accounting for Property, Plant, and Equipment* (November 1995); and SFFAS No. 8, *Supplementary Stewardship Reporting* (June 1996).
4. OMB Circular A–130: "Management of Federal Information Resources," Transmittal Memorandum No. 3, February 8, 1996.

Supplementary Materials—Continued

5. OMB Memorandum 97–02, "Funding Information Systems Investments," October 25, 1996. This memorandum is also known as "Raines Rules," because OMB Director Franklin D. Raines issued the memorandum.
6. OMB. *Capital Programming Guide* (Supplement to Part 3 of OMB Circular A–11), July 1997.
7. OMB. *Budget of the United States Government, Fiscal Year 1999* (February 1998).
   a) "Principles of Budgeting for Capital Asset Acquisitions," in the *Analytical Perspectives* volume of the *Budget,* p. 140.
   b) Chapter 6: "Federal Investment Spending and Capital Budgeting," of the *Analytical Perspectives* volume of the *Budget.* This chapter includes projections of both budget authority and outlays to four years beyond the budget year, a section on major Federal capital proposals in the budget, the "Principles of Budgeting for Capital Asset Acquisitions," estimates of capital stocks and depreciation, and a section on capital budgeting.
   c) Proposal of Budgeting for Results, *Budget* volume, page 44.
8. Department of the Treasury. *Consolidated Financial Statements of the United States Government* (most recently, March 31, 1998).
9. OMB Circular A–11 (Part 3): "Planning, Budgeting, and Acquisition of Capital Assets," (July 1, 1998).
10. Agency Strategic Plans and Annual Performance Plans. These agency plans are prepared pursuant to the Government Performance and Results Act of 1993 and guidance in OMB Circular A–11, Part 2: "Preparation and Submission of Strategic Plans and Annual Performance Plans," July 1, 1998.

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