

Capital Budgeting by the Federal Government

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I. Introduction & Background

What is a capital budget? Why does the federal government not have one? This paper attempts to address both questions. It explains how capital projects at the federal level are budgeted for on a cash-basis, as is the case for all spending in the unified budget, and why this matters. Specifically, it will consider how well this budgetary treatment leads to an efficient allocation of capital spending, government accountability, and long-term planning. It also examines alternative ways to budget for capital spending that have been proposed, their rationales, and whether they might lead to better outcomes. First, however, this paper turns to define “capital” and how other entities besides the federal government budget for capital projects.

Defining Capital

According to the broadest definition of the term, “capital” refers to any asset – physical or intangible – that provides benefits over the long-run (beyond the standard budgeting/reporting period). Most narrowly defined, capital includes only long-term physical assets (buildings, roads, equipment, etc.). Most governments, as well as the private sector, choose a definition for capital somewhere in between these two extremes. For example, the private sector generally limits its definition of capital to “physical and certain intangible assets (such as investments in intellectual property)” (Brown et al., 1999, p. 9). The definition of capital varies somewhat among state and local governments, but generally is restricted to physical and technological infrastructure. In the case of state governments, this sometimes includes grant monies distributed to localities. Meanwhile, the federal government defines capital as “land, structures, equipment, and intellectual property (including software) that are used by the Federal Government, including weapon systems” (Office of Management and Budget, 2011a, p. 1). Note that this description of capital at the federal level excludes grants to state and local governments for capital projects.

Capital Budgeting by the Private Sector

Private businesses make decisions on capital spending primarily using net present value (NPV) analysis to determine the profitability of the project. Furthermore, they are disciplined by the market and must factor in their financing options and long-term financial plan when choosing capital investments (Brown et al., 1999).

The private sector accounts for the acquisition of capital assets on a full accrual basis. In other words, they “spread capital costs over the period when benefits are accruing from the investment” (Congressional Budget Office (CBO), 2008, p. 1). They do this by expressing the annual depreciation of physical capital assets (amortization for intangible assets) as an expense on the Income Statement of their financial report, rather than accounting for the full cost of purchase upfront as an expense. Any cash outlays are registered on the company’s Cash Flow Statement,

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while the newly acquired asset and liability (if financed by borrowing) appear on the Balance Sheet. This accounting method best allows businesses to match earned revenues over the reporting period with the costs spent during that period to achieve them.

Capital Budgeting by State and Local Governments

As the President's Commission to Study Capital Budgeting (PCSCB) explained in their report, state and local governments (SLGs) typically have formal tools in place, "either in statute or by practice," for setting their capital spending priorities (Brown et al., 1999, p. 19). Moreover, similar to the private sector, SLGs are subject to some market discipline because they must work to maintain a strong credit rating in order to ensure they have the means to borrow. Most states are also subject to legal debt restrictions and balanced budget requirements that may either be statutory or constitutional. This latter issue helps to explain why SLGs generally maintain a separate budget and separate accounting fund(s) for capital projects. Balanced budget laws generally apply to the operating budget only, thereby allowing SLGs with a separate budget for capital projects to borrow to finance capital expenditures. Rather than score depreciation as an expense in the operating budget (similar to the private sector model), SLGs instead recognize capital debt service payments in the operating budget.

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At the federal level, an agency's mission and strategic goals play an important role in the decision-making process about which capital projects to pursue. Benefit-cost analysis is also applied to all major capital projects and typically this analysis must demonstrate that the project will yield positive net benefits to society in order for it to be approved. Unlike SLGs, the federal government does not maintain a separate, distinct budget for capital projects. And unlike the private sector, capital spending at the federal level is not budgeted or accounted for on a full accrual basis. Rather, the federal government budgets for both capital and operating expenditures in the unified budget on a cash-basis. This means that capital expenditures are subject to any discretionary spending caps in place for budget authority (BA) and outlays. While the total BA for a capital project is scored upfront, the outlays for a capital project may be spread out over several years (depending on the length of time over which the project will be completed). In this way, if the binding constraint is a cap on BA, capital spending projects may be at a greater disadvantage than if the constraint is on outlays (Brown et al., 1999).

How does this treatment affect decision-making over the long run? The next section examines this question based on several selected criteria.

II. Current Practice: Is it working?

Economists and policymakers have long debated over whether capital spending should continue to be treated the same as other forms of spending by the United States Government. Does current practice promote efficient allocation of resources, government accountability, and long-term planning?

Efficient Allocation of Resources

An efficient allocation of resources is reached when any change in allocation cannot make someone better off without making someone else worse off. Inefficiency is often the result of some type of market failure or distortion. Does the current budgetary treatment of capital spending distort decision-making, leading to too little or too much capital spending overall? Some would argue that it does, and specifically that there is a “macro bias” against capital spending (Brown et al., 1999). The basis of this argument is fairly straightforward. Under the current budgetary system, the total cost of capital projects is scored upfront, at the point of decision on whether or not to pursue the project. Meanwhile, the benefits of a capital project, by definition, accrue over the long-term (usually well beyond the standard reporting period). Thus, some argue that policymakers and federal agencies are reluctant to invest in capital acquisitions because they have to bear the cost at the start but reap the benefits in the future. Moreover, decision-makers are likely to be particularly averse to the budget spikes created by capital projects when their budget authority is constrained by some type of cap.

A classic example of this issue can be observed by considering federal agencies’ decisions to either purchase or lease a building. Under the current budgetary treatment, if an agency purchased a building in 1980 for \$20 million, with an estimated lifetime use of 30 years, the on-budget cost of that acquisition for 1980 would have been \$20 million. However, if that same agency entered into a lease agreement with that building’s owner, whereby the agency paid \$2 million per year to use the building, and at the end of 15 years, the building belonged to the agency, then the on-budget cost of that acquisition for 1980 would have been scored as \$2 million. Even though purchasing the building makes the most economic sense, from a budgetary perspective, one can see how the agency might be tempted to enter into the lease-purchase agreement instead so that it doesn’t show a spike in its budget. This example illustrates how capital spending decisions may be distorted by the way they are treated in the budget.

Fortunately, in the case of lease-purchase agreements and other arrangements defined as “capital leases,” scorekeeping reforms have been passed to help prevent this type of behavior by agencies. The Budget Enforcement Act (BEA), passed in 1990, differentiates between operating leases and capital leases, and requires that the discounted present value of a capital lease or lease-purchase over the life of the contract be scored upfront (OMB, 2011b). This and other policies introduced over the years help guard against perverse incentives that result in inefficient decision-making. There is no empirical evidence to support that the U.S. budgetary treatment results in a bias against capital spending. In fact, PCSCB observed that in some cases, it is possible that the bias goes in the opposite direction. For example, if the binding constraint faced by policymakers is a cap on outlays, capital expenditures that can sometimes have low outlay rates may look more attractive than spending on operating expenditures with high outlay rates (Brown et al., 1999). However, there is no definitive evidence to support the view that there exists either a positive or negative bias for capital spending.

Accountability

How well does the current budgetary treatment of capital spending promote the use of evaluation techniques and performance management to monitor the effectiveness and efficiency of capital projects? Since capital spending is on-budget and therefore subject to the appropriations process, the federal government is held accountable to some extent to demonstrate

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the success of existing capital projects and a justification for new projects. For the same reason, capital spending is also fairly transparent, which also helps to promote accountability.

On the other hand, the current process does not require the federal government to budget for depreciation of assets or deferred maintenance – that is, “the estimated cost to bring Government-owned property, plant, and equipment to an acceptable condition, resulting from not performing maintenance on a timely basis” (Financial Management Service, 2011). While deferred maintenance information is included as required supplementary information in federal financial reports (Federal Accounting Standards Advisory Board (FASAB, 2011), not requiring agencies to budget for it makes it difficult to hold them accountable for proper use and management of assets. Capital Acquisition Funds (CAFs) can help in this regard to an extent, and will be discussed further below.

Long-term Planning

Finally, does budgeting for capital spending on a cash-basis alongside other forms of spending in the budget support effective planning over the long run? In order to achieve this objective, the budgetary treatment of capital should indicate the costs that will be borne by future generations as a result of decisions made today. Keeping capital spending on-budget means that the budget deficit more accurately reflects these costs. In this way, the treatment assists in long-term planning. Moreover, since capital projects are on-budget and must be approved by the Office of Management and Budget (OMB), they are subject to benefit-cost assessment requirements, which also support long-term considerations. Finally, by scoring the full price of capital projects upfront, the long-term costs of a project are matched with the decision to incur them. Arguably, with respect to the federal government that will eventually be supported by future generations, the importance of this decision framework outweighs the usefulness of matching current-year costs with current-year benefits (as the private sector strives to do).

On the other hand, if the amount of government spending on capital is distorted by the way it is treated in the budget for the reasons discussed above, then this could mean that the government is not investing enough now in capital projects that will more than pay for themselves over time, or that it is investing too much in projects that will result in negative net benefits over time. Again, if this is an issue, CAFs may offer a solution, as they would attempt to match the “irrevocable loss” incurred by the decision to acquire a capital asset that could be resold (to be discussed further below). Moreover, because the federal government does not budget for depreciation or deferred maintenance, the budget deficit does not provide an accurate estimate of the costs that will be borne by future generations.

III. A Federal Capital Budget?

The discussion above highlights some of the major strengths and weaknesses of the current budgetary treatment of capital spending. Some argue that outcomes would be improved if the federal government were to budget for capital projects separately from other types of spending and do so on a full accrual basis. This alternative method is explained and discussed below.

How It Would Work

This budgetary treatment would closely mimic how the private sector accounts for capital spending. With this option, the federal government would recognize an asset's annual depreciation, not its purchase cost, as an expense in the operating budget, which would be funded through appropriations (Brown et al., 1999). In other words, this approach would replace the current cash-basis budgeting process for capital assets with an accrual accounting system, thereby changing the timing of when capital spending costs are recognized in the budget.

The main argument in support of this alternative is that capital spending is unique in that its benefits extend over a long period of time. Having a separate capital budget would mean that policymakers would not have to make direct tradeoffs between spending on capital (long-term investments) and operating expenditures (immediate-term investments). Moreover, accounting on a full accrual basis would allow the government to spread costs over the useful life of the asset. Advocates for this reform believe such treatment would eliminate any bias against capital spending caused by the current system. If there is in fact such a bias presently, this approach may indeed help promote a more efficient allocation of resources. Additionally, this system would require by necessity that the federal government budget for depreciation of its capital assets, which would help promote accountability and long-term planning as discussed above.

Arguments against a Federal Capital Budget

Despite the benefits that a federal capital budget could provide, the United States Government has chosen not to adopt one thus far. Why is that? There are numerous reasons explaining why so many policymakers and experts, including the PCSCB and the President's Commission on Budget Concepts (Kennedy et al., 1967), have opposed a separate budget for capital at the federal level, which mainly fall into four categories:

1. Technical challenges
2. Increased borrowing
3. Reduced transparency
4. Inefficient allocation of spending

This paper will cover each of these points in turn.

1. Technical challenges

The primary technical concern associated with a capital budget is the difficulty in gaining consensus on how capital should be defined. Provided implementing a federal capital budget would make it easier to obtain funding for capital projects, "program advocates would have strong incentives to get their proposals classified as capital spending" (CBO, 2008, p. 9-10), which could lead to conflict over how narrowly or broadly capital should be defined. As discussed above, the definition of capital is subject to interpretation. The table below describes all federal spending for FY 2011 which OMB defines as federal investment, which includes all "federal outlays that produce long-term benefits to the national economy" (Istrate & Puentes, 2009, p. 2). Theoretically, all such spending might be classified as "capital spending," which would amount to capital spending of approximately \$538 billion.

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Composition of Federal Investment Outlays (billions of dollars)

	Federal Investment	Actual 2011	Estimate	
			2012	2013
Federal Capital	Major public physical capital investment:			
	Direct Federal:			
	National defense	141.6	155.8	143.0
National Capital	Nondefense	49.1	52.4	40.2
	Subtotal, direct major public physical capital investment	190.6	208.2	183.2
	Grants to State and local governments	96.5	96.5	108.3
Intangible Assets	Subtotal, major public physical capital investment	287.2	304.6	291.6
	Conduct of research and development:			
	National defense	79.7	80.8	77.6
	Nondefense	64.0	64.2	61.6
	Subtotal, conduct of research and development	143.6	145.0	139.2
	Conduct of education and training:			
	Grants to State and local governments	84.4	105.2	77.3
	Direct Federal	22.7	36.8	41.1
	Subtotal, conduct of education and training	107.1	142.1	118.4
	Total, major Federal investment outlays	537.9	591.7	549.1

Source: Office of Management and Budget, 2012, p. 356.

Meanwhile, using a more narrow definition, capital would only include the spending labeled as “federal capital” above, amounting to roughly \$191 billion. This figure might be reduced even further if only assets able to be resold were defined as capital. Clearly, how one defines capital would have tremendous implications for how many spending programs would be transferred to the federal government’s capital budget, should it adopt one. Arguably, any relatively broad definition of capital, such as one that included certain intangible assets and/or grant monies to subnational governments for capital projects, lends itself to ambiguity, and could lead to a scenario in which the majority of federal expenditures could be classified as “capital investments.” For this reason, if a federal capital budget of some kind were to be adopted, it would likely be necessary to define capital quite narrowly and explicitly.

2. Increased borrowing

A second claim commonly offered as an argument against a federal capital budget relates to the fear that this would provide the federal government with a license to borrow for any project that it classifies as “capital.” Because capital, by definition, is an asset that accrues benefits over the long-term, a case can be made that financing capital projects by borrowing is appropriate (presuming the project will pay for itself over time). This reasoning is largely why state and local governments maintain separate capital budgets, which allow them to get around balanced budget requirements. However, SLGs are also disciplined by credit market limitations in a way that the federal government is not (at least not yet). Because they compete with one another for residents, SLGs also have a greater incentive to ensure they remain in strong fiscal health and are not forced to raise taxes or cut services in the future due to poor planning and mismanagement than has the federal government, which does not have the same fear of resident

“flight.” For these reasons, fears that excessive federal borrowing would take place with adoption of a separate capital budget are real.

On the other hand, the PCSCB explained that the level of borrowing justified with a separate capital budget might be controlled by only permitting additional borrowing for “net investment” (gross investment minus depreciation). This would support long-term planning by making sure that an “undue burden” is not placed on future generations (Brown et al., 1999, p. 43).

3. Reduced transparency

A report published by CBO (2008) on the pros and cons of a federal capital budget expressed concern that a separate budget for capital spending, recorded on an accrual basis, would threaten the transparency of capital spending. Cash-basis budgeting has its drawbacks – namely that it does not measure annual change in the government’s assets and liabilities – but it also has its advantages. In cash-basis reporting, transactions are “readily verifiable,” provide “a close approximation of the government’s annual cash deficit or surplus,” and are therefore “relatively transparent and easily understood” (CBO, 2008, p. 6-7). Accrual-based accounting, on the other hand, could potentially make capital spending by the federal government more difficult to track and subject to manipulation, since accrual measures are estimates and can be sensitive to underlying assumptions (p. 12). Reduced transparency, in turn, could threaten the public’s ability to hold policymakers accountable for capital spending projects.

4. Inefficient allocation of spending

While some argue that on-budget treatment and upfront scoring of capital projects leads to a built-in bias against capital spending, others fear that special treatment of spending on capital might lead to worse distortion in the opposite direction. CBO (2008) reports, “Adopting an accrual approach to only one aspect of the budget could raise concerns as to whether the budgeting system would provide a fair basis for allocating the government’s resources among competing priorities” (p. 1). This concern relates back to the earlier discussion of matching long-term costs with the decision to incur them. By not counting the cost of an entire capital project upfront, policymakers may not be held as accountable for their decisions to undertake capital projects or acquire capital assets, which could lead to a bias in favor of capital spending.

IV. Capital Acquisition Funds

Earlier this paper makes reference to capital acquisition funds, or CAFs. However, CAFs can serve different purposes depending on how they are designed and specifically whether or not they are on-budget.

On-Budget CAFs

Both the PCSCB and OMB advocate for the use of CAFs (or as OMB refers to them, capital acquisition “accounts” or CAAs) (Brown et al., 1999; OMB, 2011a). As they define them, a CAF or CAA is still on-budget and receives annual appropriations. However, it is a

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separate account housed within a government agency with the budget authority to borrow from Treasury exclusively for capital acquisitions. This same account collects funding from sub-agencies/programs as payment for use of the agency's existing capital assets (office space, equipment, etc.). These payments are set so that they cover the cost of principle plus interest paid to Treasury annually for the same period and would only be used for repayment of debt to Treasury. This system works to help individual agencies smooth budget spikes caused by a new capital acquisition. It also serves a second purpose: to encourage sub-agencies and programs to use assets efficiently since they have to incur outlays to use them.

The benefits of this approach are limited. For example, since these accounts or funds are still on-budget, they do not smooth spikes for the overall federal budget. A staff paper prepared for the PCSCB identified numerous other drawbacks of this approach, including that it would make operating programs which currently do not incur on-budget costs for use of capital assets more expensive (leading to potential pushback by program advocates) and technical challenges, such as what to do with existing assets (Capital Acquisition Funds, n.d.). Moreover, as a Government Accountability Office report asserted, while this budgeting method may help with transparency of program costs and therefore promotes accountability, it is not clear that it would have a meaningful impact on an agency's incentives to manage assets, since payments from agency subunits to the CAF are offset by payments received by the CAF and therefore do not affect the budget deficit (GAO, 2005, p. 36). Thus, it is not clear to what extent an on-budget CAF improves allocation decisions.

Non-Budgetary CAF

A more substantial reform would be to make these CAFs non-budgetary and place them in the Means of Financing (M.O.F.). This approach would resemble creating a distinct federal capital budget like was discussed above. Under this system, the CAF would borrow from Treasury to finance the purchase of capital assets that would be owned, used and able to be resold by the federal government. No outlay would be scored for this borrowed amount. Then, the agency using the asset would make annual rent payments to the CAF in the amount that the asset is estimated to decrease in value for that year (corresponding to depreciation rate). These payments would be scored as outlays so that the consumption of capital, rather than the initial acquisition, is recorded as an expense (similar to the private sector). Then, when the asset is sold by the CAF, if the proceeds are less than the debt owed to Treasury for that asset, the agency program using the asset repays the debt (funded through mandatory appropriation). If proceeds exceed debt owed to Treasury, the amount in excess of debt is credited to the agency program, therefore encouraging sound asset management by the agency.

Under this budgetary treatment, borrowing for capital acquisitions would not show up in the budget deficit and would not be subject to any spending cap, but would add to the national debt. This would eliminate any distortion created by the current system that causes agencies to make inefficient capital spending decisions (such as entering into a short-term lease when a capital lease is more cost-effective in the long run) to circumvent deficit or spending cap requirements. On the other hand, there is some risk involved with this approach for similar reasons to those listed for why the U.S. does not have a federal capital budget, which explains why both the PCSCB and OMB have historically recommended against adopting a non-budgetary CAF.

V. Other Potential Budget Reforms

Creating a separate capital budget or a non-budgetary capital acquisition fund would represent a dramatic change in how the federal government budgets for capital. However, there are other more modest changes that might improve the budgetary treatment of capital spending in a way that promotes efficiency, accountability, and long-term planning without posing some of the risks associated with the more extreme reform proposals discussed above.

Refining Reporting Requirements for Deferred Maintenance

One reform at the federal level that can improve outcomes in all of these areas entails strengthening reporting on deferred maintenance that federal agencies are required to perform. Because the budgetary treatment of capital does not require the federal government to budget for deferred maintenance or depreciation of its assets, there is concern that this creates a bias against asset maintenance spending. Tighter financial reporting standards in this regard can help improve this situation. In fact, the Federal Accounting Standards Advisory Boards (FASAB) just last year issued a new standard (SFFAS 40) refining the definition of deferred maintenance as a “first step toward improving reporting on deferred maintenance and repairs” (FASAB, 2011a, p. SFFAS 40-1). FASAB has also recently drafted another new standard, currently pending approval, which further expands on and standardizes the reporting requirements pertaining to how deferred maintenance and repairs shall be measured and prioritized (FASAB, 2011b). These changes will hopefully lead to better information that might inform decision-making on how to allocate spending on capital. It will also increase transparency and therefore accountability of government agencies to maintain their assets. And finally, it could assist in long-term planning by helping agencies foresee future spending requirements.

Retrospective Analysis

One additional reform that might help improve accountability and long-term planning of capital spending would be for OMB to require that more retrospective analysis of capital projects/acquisitions be performed. In theory, capital projects should at least pay for themselves over time, and ideally should result in positive net benefits to society. This view drives the requirement to perform benefit-cost analysis (BCA) at the point of decision on whether or not to pursue a capital project. However, BCAs are oftentimes wrought with uncertainty. More ex-post analysis could help improve the integrity of BCA as it is used to evaluate capital projects, and it could also help with planning for future, similar projects. For these reasons, the PCSCB included this idea as one of its recommendations (Brown et al., 1999).

VI. Conclusion

The current budgetary treatment of capital spending to some extent supports the budget’s ability to promote efficiency, accountability, and long-term planning. Various reforms, such as those contained within the Budget Enforcement Act, have already been put in place to create the right incentives for policymakers when deciding on how to spend taxpayer dollars. Meanwhile, because capital spending is on-budget, subject to annual appropriations, and accounted for on a cash-basis, spending is fairly transparent and therefore helps with accountability. Also, since

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capital is budgeted for on a cash-basis and scored upfront, a decision to undertake a capital project is effectively matched with the total cost of that project over its lifespan, which helps with long-term planning.

Despite these strengths, there are also some drawbacks to the current treatment of capital spending as well. While benefits of capital spending, by definition, accrue over a long period, the budgetary costs are incurred upfront, which some believe leads to a below-optimal level of capital spending by the federal government. A separate capital budget accounted for on a full-accrual basis or a non-budgetary capital acquisition fund would smooth budget spikes caused by capital spending and better match current-year costs with current-year benefits. However, as this paper illustrated, there are a number of valid reasons why many experts, including the PCSCB, do not recommend adopting such a drastic measure. Rather, they support more modest, incremental changes such as use of on-budget CAFs, better financial reporting on deferred maintenance, and increasing retrospective analysis of capital projects. Until there is enough compelling empirical evidence to support the argument that the current budgetary treatment of capital spending distorts policymakers' decision-making, I would recommend the federal government refrain from adopting a separate budget for capital or a non-budgetary CAF and instead focus on smaller reforms that help promote efficient allocation, accountability, and a long-term outlook.

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