

Investing for Success

Examining a Federal Capital Budget and a National Infrastructure Bank

Emilia Istrate and Robert Puentes

Today's fiscally constrained environment demands a new approach to infrastructure policy, allowing us to upgrade our existing infrastructure, expand choices in moving people and goods (and ideas), ease the burden on household budgets, and help us attain energy independence. Spending must produce real gains in productivity, inclusion, and environmental sustainability—the foundation of short- and long-term prosperity. In this time of limited resources, improving the federal investment process should be prioritized over finding ways to merely increase the amount infrastructure spending. This brief examines the current federal investment process and the extent to which a federal capital budget or a national infrastructure bank (NIB) would improve it. It finds that creating a federal capital budget would provide little improvement for the federal decision-making process on infrastructure financing. However, while the more modest NIB is no silver bullet, if appropriately designed and with sufficient political autonomy, it could improve both the efficiency and effectiveness of future federal infrastructure projects of national significance.

I. Introduction

From time to time, collapsed bridges, failed dams, and ruptured water pipes remind us of the need for increased investment in the maintenance of U.S. infrastructure. Overall, we know that infrastructure quality is generally declining, especially in metropolitan areas. And many are concerned that our extant infrastructure is woefully obsolete, geared more toward prior generations than for the challenges of the 21st century.¹

This is especially true for surface transportation (roads, rails, transit), where two national commissions, major congressional committees, and numerous interested parties have maintained a steady drumbeat for greater federal engagement—mostly through increased spending. Today, with U.S. unemployment at 10 percent, calls for increased funding, this time in order to create and retain jobs, have only gotten louder.²

However, while most of the attention has been on increasing funding for infrastructure projects, there are also renewed pleas for ways to improve the federal government's investment process. In this context, two ideas that have come up over the years are the creation of a federal capital budget and a new federal entity for funding and financing infrastructure projects of national or metropolitan significance.

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In its most basic form, a federal capital budget would separate federal expenditures into outlays for current operations and capital expenses. In this way, the federal government could separately finance and manage capital investment according to its long-term nature. Plus, the public would be able to see exactly how much the federal government is investing in the long-term growth of the national economy. For more than half a century, a federal capital budget has been proposed as a solution to the woes of the federal investment process. While bold and transformative, the idea is opposed by the budgeting community and has difficulty mustering political support from Congress or the administration.

A national infrastructure bank (NIB) is a more modest yet still potentially important reform for new federal investment. While it may take different forms, it generally refers to an entity able to select and finance multi-modal, multi-jurisdictional, and multi-sectoral infrastructure projects on a merit basis.

This paper examines the major questions surrounding the federal investment process and the extent to which a federal capital budget or a national infrastructure bank would improve it.

In the end our analysis shows that the federal capital budget would provide little improvement for the federal decision-making process on infrastructure financing. While an NIB is not a panacea, if appropriately designed and with sufficient political autonomy, it could improve both the efficiency and effectiveness of future federal infrastructure projects of national significance.

II. Background: How Does the Federal Government Budget for Infrastructure Today?

Budgeting terms and definitions can be rather arcane and ambiguous. Nevertheless, they are critical for any discussion of federal spending. The Office of Management and Budget's (OMB) annual analysis of the federal budget has included a chapter on "federal investment" for almost sixty years. OMB defines federal investment as federal outlays that produce long-term benefits to the national economy. The spending is split into three major categories: major public physical capital investment, investment in research and development, and investment in education and training.³

In each of these categories, the analysis differentiates between defense and non-defense spending and between direct federal spending and grants to state and local governments. The analysis shows actual values for the previous fiscal year and estimates for the current and following fiscal years (Table 1).

It is important to note that the categorization of federal investment from current spending is a matter of discretionary judgment. In fact, it is a political choice, depending on the priorities of different administrations. The Reagan administration equated federal investment with defense expenditures. The first Bush administration included non-defense 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).⁴

Even prior to the recent federal spending as part of the American Recovery and Reinvestment Act, federal investment has been growing for the last ten years (despite registering a small decline in 2007).⁵ Defense investment has grown almost 7 percent annually over the same period, double the rate of the non-defense category. In addition, non-defense investment has been declining in the last two years, with a 9 percent reduction between fiscal years 2006 and 2007.⁶

However, as a share of gross domestic product (GDP), federal investment has been on a general downward trend since 1962 and has stagnated at 3.2 percent since fiscal year 2003, partly due to the expansion of mandatory programs such as Medicare and Social Security (See Figure 1). Over the last thirty years, defense investment represented a greater share than non-defense investment between fiscal years 1983 to 1992.⁷ However, the difference between non-defense and defense investment has narrowed tremendously over the last two years.

It is also important to discuss the difference between *discretionary* and *mandatory* spending as articulated by the Budget Enforcement Act (BEA) of 1990.⁸

Mandatory spending is that part of the federal ledger set in authorizing laws and not open to yearly modification. Overall, about 60 percent of annual federal spending is mandatory spending currently (\$1.85 trillion in 2008) mostly in the form of social expenditures such as Medicare and Social Security. The net interest of the federal debt is also included in mandatory spending.

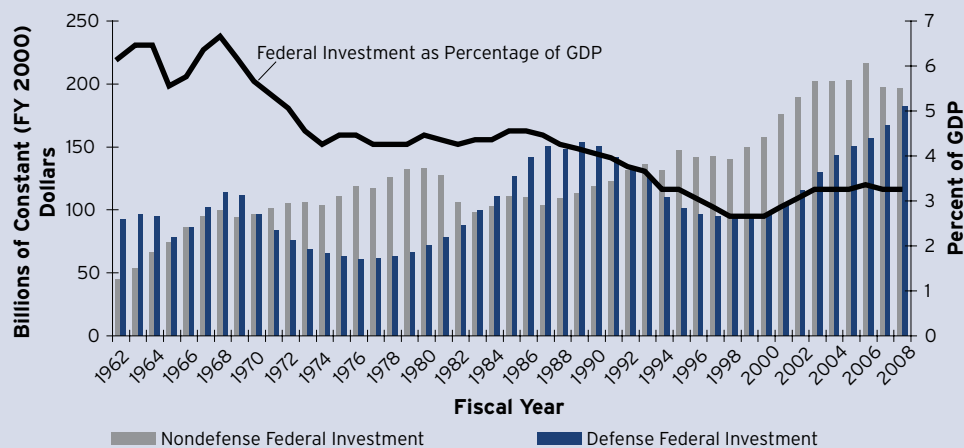
Table 1. Federal Investment, 2008

FEDERAL INVESTMENT	Actual	Estimate	
	2008	2009	2010
MAJOR PUBLIC PHYSICAL CAPITAL INVESTMENT			
Direct federal: National defense	126.3	155.7	156.6
Direct federal: Nondefense	34.8	53.9	50.6
Grants to state and local governments	72.7	88.3	100.5
Subtotal, major public physical capital investment	\$233.80	\$297.80	\$307.70
CONDUCT OF RESEARCH AND DEVELOPMENT			
Direct federal: National defense	79.6	82.3	83.5
Direct federal: Nondefense	55.3	62.2	65.7
Subtotal, conduct of research and development	\$134.90	\$144.50	\$149.30
CONDUCT OF EDUCATION AND TRAINING			
Direct federal	36.4	14.9	40.7
Grants to state and local governments	54.6	65.3	98.6
Subtotal, conduct of education and training	\$91.00	\$80.20	\$139.30
TOTAL, MAJOR FEDERAL INVESTMENT OUTLAYS	\$459.70	\$522.50	\$596.30

Note: In billions of current dollars. The major federal investment outlays exclude miscellaneous physical investments, such as the outlays for commodity inventories or conservation programs, because they are neither increasing the federal capital stock nor improving the growth prospects of the national economy. In 2008, they totaled \$2.9 billion, 0.6 percent of all federal investment.

Source: Based on OMB, 2010: Analytical Perspectives, p. 34, table 6-1.

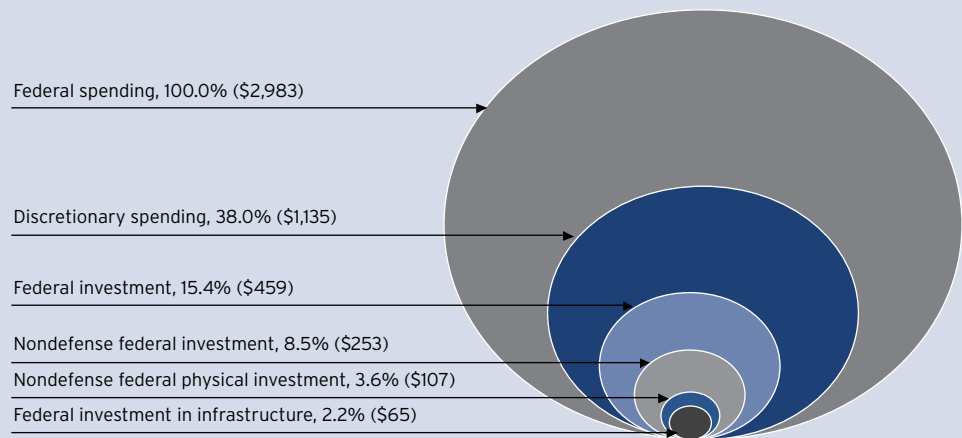
Figure 1. Real Federal Investment- Non-Defense and Defense and Federal Investment as a Share of GDP, 1962-2008



Note: In billions of constant (FY 2000) dollars. The transitional quarter amount between 1976 and 1977 is excluded, due to outlier properties. The transitional quarter adjusts for the U.S. fiscal year change from June to September.

Source: OMB, Budget of the United States Government, Fiscal Year 2010: Historical Tables, table 9.1.

Figure 2. Federal Investment in Infrastructure, as a Component of Federal Spending, 2008



Note: In billions current dollars. The federal investment in infrastructure uses the Executive Order 12893 definition, including outlays on transportation, energy, water and environmental protection.

Source: Calculated based on data provided in the fiscal year 2010 budget analysis. OMB, 2010: Analytical Perspectives.

Discretionary spending, on the other hand, is controlled through annual appropriations acts so Congress can change the budget authorization every year. Almost 40 percent of the federal spending is discretionary (\$1.13 trillion), which represents the funding for the majority of federal agencies. Federal investment is 40 percent of discretionary spending (\$460 billion), receiving new budget authority every year.⁹

Breaking it down further, federal investment may be in defense capital assets (\$205.9 billion in 2008) or in non-defense capital (\$253.8 billion). Non-defense federal physical investment represents about 42 percent of the non-defense investment (\$107.5 billion). Federal spending on infrastructure—transportation, energy, water and environmental protection—was only \$65 billion in 2008 (Figure 2).¹⁰

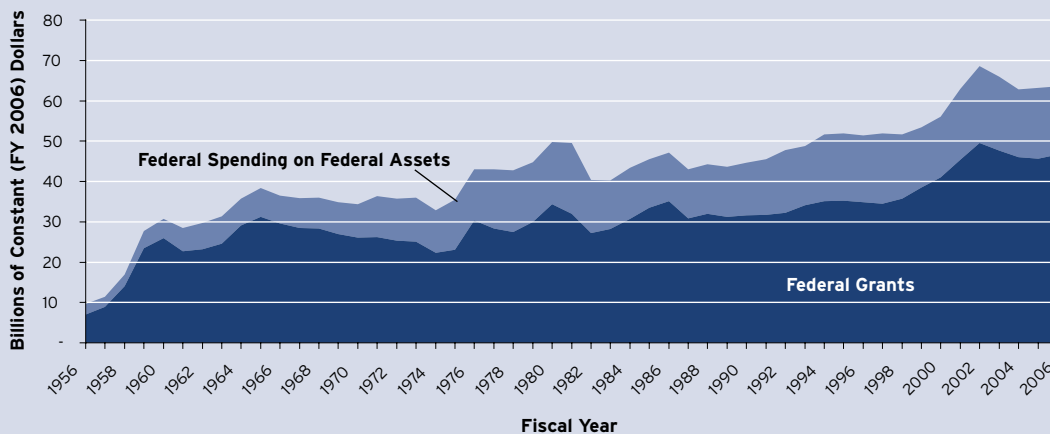
While the figures presented are not negligible, they show that federal investment is only 15 percent of the total federal spending. And only 14 percent of federal investment (2 percent of the total federal spending) was directed to transportation, energy, water, and environmental protection in 2008.

Complicating matters further, within the infrastructure category, more than three-quarters of the federal investment in infrastructure consists of transportation grants to state and local governments (\$50.4 billion). These grants have “contract authority,” which is a budget authority that allows the U.S. Department of Transportation to obligate funds from the Highway Trust Fund and Airport and Airway Trust Fund in advance of appropriations. Although this federal spending on highways, mass transit and airports is considered discretionary, Congress has little power to change it because its “budget authority,” established in multi-year legislation, is considered mandatory. Congress controls this spending through obligation limitations.

The latest surface transportation authorization law, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), guarantees the funding for highway and mass transit through budgetary firewalls and a point of order included in the Rules of the House of Representatives.¹¹ The guaranteed funding is based on estimated future receipts into the highway trust fund when SAFETEA-LU was passed in 2005, mostly in the form of gas tax proceeds.

For transportation spending with contract authority, there are two ways in which budget authority may be changed. One is Revenue Aligned Budget Authority that is an adjustment of the budget authority and obligation limitations for the highway spending based on revenue projections of the Highway Account of the Highway Trust Fund. The other, rescissions, is the cancelled unused balances of budget authority, and they are specified in legislation.

Figure 3. Federal Spending on Transportation Infrastructure, 1956 to 2006



Note: In billions of 2006 dollars. The transitional quarter amount between 1976 and 1977 was excluded, due to outlier properties. The transitional quarter adjusts for the U.S. fiscal year change from June to September. Source: Based on CBO, *Issues and Options in Infrastructure*, table W-8 and table W-9.

Transportation is also interesting in budget debates because it represents a case where the federal government invests in capital assets it does not own such as state and local roads. More than three quarters of the federal transportation investment goes to state and local assets (Figure 3).¹²

While the annual level of federal investment is usually the subject of contention, the identification of the object of investment is crucial for an effective federal investment process.¹³ The federal government is a special case, because it invests in capital assets that does not own, such as state and locally-owned assets. The discussion around the object of investment focuses on the distinction between *federal* and *national* capital.¹⁴

Federal capital is the sum of physical assets owned by the federal government. The investment in this type of capital primarily contributes to the federal government's ability to provide governmental services to the public in the future. This *excludes* both human capital such as research and education as well as capital not owned by federal government. Examples of federal capital assets are office buildings, computers, and weapons systems. OMB defines federal capital as "land, structures, equipment, intellectual property (e.g., software), and information technology (including IT service contracts) used by the federal government and having an estimated useful life of two years."¹⁵

The narrow definition of federal capital is a potential target for a federal capital budget.¹⁶ Not only is the capital owned by the federal government, but it is also comprised of physical assets that are easy to account for. The federal government already keeps account of these investments in the National Income and Product Accounts (NIPA), produced by the Bureau of Economic Analysis and the *Financial Report of the United States Government*, prepared by the Treasury. Countries such as New Zealand use a federal capital budget focused on these investments.¹⁷

National capital is the federally-financed capital that contributes more directly to the economic growth of the private sector. Most of the capital in this category is not owned by the federal government and includes highways, federally-funded research and development, and education.

Such investments target the growth of the U.S. economy, the goal of a federal budget. The majority of the federal investments in transportation, energy, and natural resources would be counted towards the national capital.

However, accounting for national capital is riddled with problems, such as the inclusion of capital that is not owned by the federal government. For example, federal transportation grants to the states grow the capital stock belonging to states, not the federal government. Currently, the federal

Accounting Standards Advisory Board treats these grants as current expenses for the federal government and does not include them in the accumulation of capital stock of the federal government.¹⁸ The National Income and Product Accounts excludes these grants from federal expenditures and records them as state investment.¹⁹

Beyond the accounting problem, for some grants, the federal government has control only when it decides to make the grant, but the grantees decide on the precise target of the spending.²⁰ For example, Community Development Block Grants (CDBG) are classified as physical investment, although part of the grants may be spent for salaries or administrative operations.²¹ General purpose fiscal assistance to the states is considered current spending by the federal government, while states may choose to spend some of the money on capital.

The inclusion of human capital in a federal capital budget would create further problems. For one, it is difficult to estimate the amount and timing of the benefits from investments in these assets.²² In addition, some spending on research and development could be classified in more than one category of investment. For example, outlays for construction of research facilities finance the acquisition of buildings, but contribute also to research and development. The accounting for depreciation of these items complicates the issue. It is unclear if basic research should be depreciated and what depreciation rate should be applicable to applied research.²³

Some federal investment is not classified as financing either federal or national capital, being neither in federal assets or not directly contributing to the growth of the private sector. Housing assistance and a large portion of the community and regional development grants are examples of the items excluded from both types of federally financed capital.²⁴

While convoluted, the distinctions around federal investment are important for any discussion on improving the federal investment process for infrastructure. Currently, OMB considers federal investment as the sum of major public physical capital investment, investment in research and development, and investment in education and training. Overall, federal investment in infrastructure is a very small share of the total federal spending and is comprised mostly of transportation grants with contract authority. This type of budget authority insulates significantly most of the federal investment in infrastructure from the annual appropriation process. In addition, the state and local grants represent federal investment that does not add to the federal capital stock. All these issues complicate the debate around the federal investment process.

III. Does the Current Federal Investment Process Appropriately Allocate Resources for Infrastructure?

The federal investment process is concerned with both federal assets and the federally-financed assets not owned by the federal government. Federal investment in infrastructure deals with both elements. Investment in dams and water controls, done through the U.S. Army Corps of Engineers, fits into the category of federal investment in its own assets. However, most of the federal investment in infrastructure is not under the aegis of the federal capital process. More than three quarters of the federal investment in infrastructure is transportation grants to state and local governments.

To understand the federal investment process for infrastructure today we need to examine both how the federal government plans and manages for the assets it owns and also for those in which it invests, but are owned by states, municipalities, and others.

For the former, OMB provides detailed guidance to federal agencies on the capital process.²⁵ While it is true that there is no unified federal capital plan, OMB helps federal agencies budget, plan, and prioritize their capital projects.²⁶ The goal is to make sure that the capital assets in each agency contribute to the fulfillment of agency objectives. OMB's capital process guide, first released in 1997 and expanded in 2006, integrates the executive and legislative initiatives that affect the federal capital process.²⁷

OMB recommends frequent use of cost-effectiveness or benefit-cost analysis (BCA) in deciding whether investment in a new capital asset is the best way to fulfill an agency's needs. In addition, a BCA is considered the fundamental method of selecting a capital asset, by ranking the net present benefit of several options available.²⁸ Both benefits and costs should be estimated in a lifecycle

manner and benefits should be estimated in relationship with the goals and needs of the agency. While OMB recommends monetary quantification of both benefits and costs, it does acknowledge that qualitative considerations—explicit regulatory requirements, considerations of business strategy, or unquantifiable social benefits or costs—may be important in the final evaluation.²⁹

The result of the planning and budgeting phase should be the Agency Capital Plan. This document includes an analysis of current assets, the performance gap and what is necessary to fill it, and justification for new acquisitions proposed for funding. It would help the agency to inform the next step: budgeting. The agency formally requests budget authority for a new asset in its budget submission to OMB which decides whether or not to include the request in the administration's budget proposal. Ultimately, Congress decides the enacting of budget authority for the new asset.

Over the years, GAO examined how selected federal agencies plan and budget for capital assets and to what degree they follow OMB's guidelines.³⁰ The agencies implement the main principles of capital planning and budgeting, but the results vary. While linking the proposed investments with the strategic goals of the agency is common, several agencies had problems with conducting asset inventories and assessments of the condition of their assets (i.e. the Department of Veterans Affairs and the U.S. Customs and Border Protection).³¹

One of the major criticisms of the current federal capital process is of the full funding requirement. The current rule requires that budget authority for the full costs of the asset be enacted in advance of any commitment by the federal agency.³² This rule results in spikes in spending, especially for small agencies. In an era of tight budgets and soaring deficits, there is a concern that federal agencies might forego capital spending due to this requirement.

However, full funding is also one of the few existing mechanisms to ensure long-term accountability of the federal government for its investment decisions.³³ It is a fiscal control mechanism, because a lack of upfront fully committed funding can lead to higher delivery costs if a project is halted and re-started several times, or worse, half-finished projects—or so-called white elephants—that run out of money entirely.³⁴ This type of budgeting eliminates the crowd out effect of multiple contingent appropriations associated with an earlier project on the funding of future projects. Also, Congress will not have to be in the situation to continue funding a project that is no longer wanted.

Upfront full funding is a federal budget scorekeeping rule, enforced by OMB, and not a rule by statute. In fact, the laws are more lenient. The statutes require federal agencies, such as the Army Corps of Engineers, to have adequate budget authority for individual contracts.³⁵ In contrast, full funding regulation asks the federal agency to get upfront funding for an entire project, even if it includes several contracts.

But as discussed, most federal investments in transportation are grants to state and local governments. The federal surface transportation programs are jointly administered by the federal, state, and local governments, but the federal government has little involvement in the selection or management of the assets in which it invests. The federal government deals with its investment in surface transportation on a program basis, without direct control over the vast majority of individual projects like highways. Once funds are appropriated (largely by formula), the states can distribute them among projects within various program categories as they see fit. In fact, the U.S. code neuters the federal role and specifically says that the appropriation of highway funds “shall in no way infringe on the sovereign rights of the states to determine which projects shall be federally financed.”³⁶

Over the years, the federal government has increasingly delegated the oversight responsibility over its investment in state and local transportation assets to the grantees. For example, federal government oversight in transit occurs only for major capital projects that cost over \$100 million. For the rest of the federal transit investment, the grant recipients self-certify their compliance with the federal laws and regulations. This self-verification of compliance with federal requirements has also increased in the field of planning and project selection, which are requirements for receiving federal assistance.³⁷

There is limited linkage between federal investments in state assets and the goals of the federal programs. The surface transportation program goals are sometimes unclear or contradictory.³⁸ Even when goals are related to specific performance outcomes (i.e. congestion, highway fatalities), they are not included in funding formulas. The states do not have any incentive to increase the performance of the federal investments, as long as the formulas are agnostic to rewarding this type of behavior.³⁹ In addition, the flexibility of the states in allocating federal funds complicates the ability of the federal

government to target certain goals.

The federal investment in state and local assets does not necessarily result in a correspondingly higher level of public investment overall. As GAO found, the structure of federal highway grants is fundamentally flawed: “The federal grant system does not encourage states to use federal grants to supplement their own spending but rather results in states using federal grants to substitute for their own spending.”⁴⁰ In a recent study using latest data (1983-2000), GAO finds this “substitution rate” to be as high as 50 percent.⁴¹ This means that for every dollar of federal spending, states have withdrawn 50 cents of their own spending. These results are supported by numerous studies that confirm the federal aid displacement of state investment.⁴²

In short, the federal budgeting community agrees that federal government does not treat federal investment appropriately.⁴³ While both the federal capital process and the federal grants to states have their own problems, there are three main problems plaguing the federal investment process as a whole:

1. Bias against maintenance. While federal investment allows maintenance funding, most of the investment is geared towards new capital assets. To the extent federal investment supports maintenance, state and local grantees use their transportation grants to cover major maintenance, such as major rehabilitation and repair of capital assets. However, without the funding of appropriate preventive maintenance, the useful service life of infrastructure assets is shortened unnecessarily.

Analyzing data provided by the Federal Highway Administration (FHWA), the Congressional Budget Office (CBO) found that maintenance of existing road infrastructure has higher net benefit than new construction, beyond a certain point.⁴⁴ Efficient resurfacing projects had an average benefit-cost ratio double that of new lane projects.⁴⁵

Through the federal capital process, federal agencies are required to conduct asset inventories that would assess the capital assets’ condition and need of maintenance. In addition, Federal Financial Accounting Standards require the agencies to report deferred maintenance.⁴⁶ The federal agencies vary in the implementation of these conditions.⁴⁷

Federal transportation grants to states for new capital assets do not have adequate maintenance clauses. Given that the grant programs allow for the inclusion of major repair and rehabilitation projects, states do not have a strong incentive to spend on preventive maintenance but rather let assets degenerate until they can qualify for more federal money.⁴⁸ This result has been reinforced by the fact that state and local governments cannot use the money resulting from a tax exempt bond issue to cover maintenance.⁴⁹ However, deferred maintenance should affect the creditworthiness of state and local governments due to its impact on the condition of the borrowers’ assets.⁵⁰

2. Flawed selection process. In general, government investment is justified if the targeted capital asset is associated with a market failure and produces a net welfare benefit to society. While the market failure is usually easily identifiable, the costs and benefits of federal government financing for a project are harder to estimate. Many have called for investment in a capital asset to be justified based on economic analysis, such as a BCA or wider BCA that would intertwine quantitative and qualitative factors. While there are legal requirements for BCA based approaches, there is no uniform implementation or estimation for a wide range of projects.

The Federal Capital Investment Program Information Act of 1984 requires the federal budget to include projections of public civilian capital spending and recent assessments of public civilian physical capital needs.⁵¹ Also, an Executive Order from 1994 clearly specifies the requirements of BCA for federal investment in infrastructure, in all federally-financed assets.⁵² It refers to the estimation of market and nonmarket costs and benefits over the full life cycle of a project. Further, it directly addresses the issues of demand management, implementation of better management practices to improve the return of current projects, and involvement of states, as recipients of federal grants. Federal agencies are supposed to use these principles to justify major infrastructure investment and grant programs, those in excess of \$50 million annually.

With all the legal requirements in place, BCA is not done consistently by federal agencies.⁵³ The states themselves often do not use formal BCA in deciding among alternative projects and regular evaluations of outcomes are typically not conducted.⁵⁴

3. Insufficient long-term planning. A major complaint is the “short sightedness” of the federal investment process. The federal budget is released and updated annually, but there is little attention to long-term plans, and there are no mechanisms to hold policymakers accountable for the long-run effects of annual budgetary implementation.

Overall, federal agencies lack comprehensive long-term capital plans.⁵⁵ While not providing a unified view at the federal government level, a federal agency’s long-term capital plan would show an agency-wide perspective to inform congressional appropriations committees.⁵⁶ Some congressional staff responsible for resource allocation and oversight of federal agencies expressed interest in receiving this type of information.⁵⁷

The federal transportation grants have contract authority that allows states to do multiyear planning and contracting. The federal surface transportation program provides an 80 percent matching grant to states to conduct statewide planning and to develop long-range statewide plans. These plans “should include capital, operations and management strategies, investments, procedures, and other measures to ensure the preservation and most efficient use of the existing transportation system.”⁵⁸

While both the federal agencies and the grantees have to develop long-term capital plans, there is no comprehensive long-term strategic view for the capital assets financed by the federal government. There is no incentive for decisionmakers to push for better long-range planning, because there is no accountability mechanism to assess the long-term results of federal investment.

The federal investment process does not appropriately allocate resources either through federal agencies or state and local recipients. Bias against maintenance, a flawed selection method and insufficient long-term planning plague the federal investment process. Overall, these problems result from both the incentives provided by the legal or regulatory framework and their implementation. For example, while operating leases score lower in the federal budget, they also lead to underinvestment in federal capital.⁵⁹

Besides the shortages of the OMB capital guide and the existing statutes, the administrative discretion of the federal agencies and the grantees contribute to the deficiencies in the federal investment process. The federal agencies do it because of inability to follow a multitude of regulations and executive orders, in the context of ever changing policy objectives. This issue is complicated in the case of the U.S. Department of Transportation that mostly assists state-run transportation programs.⁶⁰ The local and state grantees drive the capital planning and management of the transportation assets funded by the federal government. A clear and direct link between investment decisions and outcomes would help both federal agencies and grantees in managing the federal investment process.

IV. What Has Been Proposed For Better Federal Investment in Infrastructure?

General recognition of the problems discussed in the previous section has given rise to calls for reforms to allow for better—and greater—federal investment in infrastructure. While not necessarily new or singular, two ideas have garnered considerable attention lately.

A. Federal Capital Budget- Definition and Historical Background

One idea is to create a federal capital budget by separating capital expenditures from other expenses (referred to as “current” or “consumption” expenditures).⁶¹ However, this description is a bit simplistic. The federal capital budget proposals extend to changing the financing and accounting of federal capital expenditures.

While the private sector and most U.S. states employ some version of a capital budget, the U.S. *federal* budget currently functions on a consolidated basis where capital and consumption expenditures are comingled.⁶²

Over the years, a wide range of capital budgets have been proposed to modify the federal budget. Depending on the goal of the proposal, a federal capital budget could re-arrange federal spending in

the budget, or else may come with actual changes in fiscal policies, or it could spread capital expenditures over a number of years.⁶³ While the budget literature does not provide explicit differentiations among these federal capital budget proposals, we specify four categories for an easier understanding of the disseminated concepts.

- **Basic segmentation model.** The basic segmentation format would include an operating budget and a capital budget. The operating budget would show the current expenditures, in terms of revenues and expenses. The capital budget would present federal spending on capital projects and revenues allocated for these expenditures. The simple separation of federal capital spending from current expenditures may be justified by the desire to improve the public’s understanding of fiscal policies and gain acceptance for federal investment.

- **Capital debt budget model.** Other proposals target changes in fiscal and federal debt policies. For example, a version of capital budget proposes capital spending be financed, in part or in total, by borrowing.⁶⁴ The capital budget deficit would not be recorded in the federal budget towards the total federal deficit. Some claim that the operating budget should be balanced in this case and only capital investments be financed by debt.⁶⁵ This is similar with the capital budget version employed by the states. This proposal would shield federal investment from growing current expenditures.

- **Depreciation model.** Taking the private sector practice as a model, another proposal shows the depreciation of capital as an expense in the operating budget and as income in the capital budget, balancing out in the consolidated budget.⁶⁶ In this way, the cost of capital is spread over the useful life of an asset. Only a portion of federal spending on capital, the depreciation, would appear in the annual federal spending. This would eliminate the problem of spikes in federal investment, due to current upfront budgeting of the full cost of capital projects.⁶⁷

- **Fusion model.** Most of the capital budget proposals do not limit themselves to just one model, but include accounting for depreciation, a cap on federal investment, and exclude federal investment from the federal deficit. The rationale is to reach multiple goals, from increased transparency of the budgeting process and public acceptance, to government spending and borrowing, to more federal investment in infrastructure.

These and other federal capital budget proposals have been debated for more than half a century.

In 1949, the Hoover Commission recommended the separation of current consumption and capital expenditures, based on the example of government corporations under the Government Corporation Control Act of 1945.⁶⁸ While not adopted as such, it formed the basis of the Special Analysis D of the budget, which is an annual review of “investment, operating, and other outlays,” still in use today.⁶⁹

In 1967 the Budget Concepts Commission strongly rejected a capital budget and decided to use the current consolidated format.⁷⁰ The commission considered the model in which capital spending would be excluded from the calculation of federal deficit and only capital spending would be financed by borrowing. The arguments used included the non-economic budgetary considerations of the federal government, resulting spending bias towards “brick and mortar” investments, and accounting and definition issues in the implementation of a capital budget.⁷¹

The issue resurfaced in the 1980s, when President Reagan’s Treasury Secretary Donald Regan and Martin Feldstein, chairman of the Council of Economic Advisers, tried to get the administration to back a federal capital budget.⁷² OMB was against the proposal, citing similar arguments with the 1967 Commission.⁷³ Interest waned when Regan—the biggest advocate of the proposal—left the administration in 1987.⁷⁴

The second Clinton administration revived the debate in 1996 when a Commission to Study Capital Budgeting was set up in connection with the congressional debate around a balanced budget. This Commission also rejected the use of a capital budget. Their arguments were similar with the previous cases and emphasized the unique character of the federal government and its role in changing the allocation of resources, needed especially during recession times. Further, the Clinton Commission could not agree on a single definition of capital or determine whether the current budget format creates a deficit or a surplus in federal investment.⁷⁵

These experiences illustrate that the issue of moving to a federal capital budget is not a partisan one as it was proposed, and rejected, during both Republican and Democratic administrations. The main problem was that the idea never gained intellectual support.⁷⁶ In the budget literature, it is considered a “budget reform perennial”—an idea reoccurring over time with no major improvements from

one proposal to the next and with little chance of passage in Congress.⁷⁷ Capital budget proposals have failed over the years due to political opposition from Congress or from inside the administration, and technical opposition from federal budgeteers.

While the opposition from federal budgeting executives is likely to remain unchanged, today there is once again raising political interest in the idea.⁷⁸ The lessons from prior efforts show that the passage of any type of capital budget proposal requires support from both the White House and Congress.⁷⁹

B. National Infrastructure Bank- Definition and Historical Background

While not as a far-reaching change as a federal capital budget, a national infrastructure bank (NIB) is a targeted mechanism for financing infrastructure. A development bank in essence, an NIB would have to balance the rate-of-return priorities of a bank with the policy goals of a federal agency.

A new bill, the National Infrastructure Development Bank Act (NIBDA) was introduced in May 2009 by Representatives DeLauro, Ellison, Israel, and Weiner. In addition, the 2010 budget proposal includes appropriations for a National Infrastructure Bank.

These NIB proposals envisage an entity that improves the federal investment process in infrastructure assets of national importance and accelerates the investments in this type of infrastructure.⁸⁰ The focus is on multi-jurisdictional or multi-modal projects with regional or national impact. Emphasis would be placed on projects that cut across stove-piped federal infrastructure programs. It is unclear whether the bank would be limited to certain sectors, such as transportation, or if it would allow for applications from a variety of infrastructure areas.

For these types of infrastructure projects, an NIB could provide federal funding in terms of grants, loans, and loans guarantees. Under the NIDBA and the FY2010 budget proposal, the federal government would provide \$25 billion over five years in terms of appropriations.⁸¹ In the case of NIBDA, this would be 10 percent of all the subscribed capital.⁸² Under the House bill, an NIB would be able to leverage the paid in capital by issuing bonds. The proceeds from the bonds would be used to finance major infrastructure projects proposed by public entities (states, municipalities, and agencies), public private partnerships, and firms.

As presented in the 2010 budget proposal or the current bill in the House, an NIB would be a federal special purpose entity. Its grants would score as any other federal grants, with no requirement of full funding. Its budget authority would include the subsidy cost of its loans. In the FY 2010 budget proposal, NIB funding is direct federal investment, similar to the funding for the Corps of Engineers.⁸³

An NIB for the U.S. is frequently compared to the European Investment Bank (EIB), as suggested by NIDBA 2009. The EIB has been functioning successfully for the last 50 years, playing a major role in connecting the European Union across national borders. Starting as a development bank focused on infrastructure, the EIB widened its operations, financing projects on innovation, small and medium businesses, and environment, in line with current European Union economic objectives.

The EIB has over 164.8 billion Euros in subscribed capital by all the 27 European Union member countries. Only 5 percent of the amount is actually paid in. The amount of loans and guarantees that it can provide is 2.5 times the subscribed capital. In 2008, the EIB contracted to fund 57.6 billion Euros, mainly on transportation, energy and global loans.⁸⁴ The EIB posted a net profit of 1.6 billion Euros for 2008.⁸⁵

While not trying to maximize profit, EIB functions as bank, not as a grant-making mechanism. The EIB raises funds from capital markets and lends them at higher rates, keeping its operations financially sustainable. It offers debt instruments, such as loans and debt guarantees, and technical assistance. In order to maintain efficiency and serve projects of different sizes, EIB deals directly only with loans larger than 25 million Euros. For projects below this threshold, EIB provides intermediary loans, which are credit lines granted to commercial banks to lend to Small and Medium Enterprises and local authorities. The EIB finances up to half of the cost of a project which may be initiated either by public or private entities.⁸⁶

The budgetary impact of federal investment through an NIB depends heavily on its governance structure. Its investment would be included in the federal budget and the federal budget deficit, if it is designed as a federal financing entity. A shareholder-owned corporation would remove an NIB and its debt from the federal budget, but it would increase its borrowing cost and the concerns about implicit federal liabilities resulting in another Fannie Mae crisis.

Though it has not been discussed as long as the federal capital budget idea, the creation of a special financing entity for infrastructure has been around in the policy circles for at least 20 years.

The early Clinton administration considered the subject in a number of unofficial concept papers.⁸⁷ An NIB focused on transportation was discussed during the reauthorization of the federal transportation program in 1998.⁸⁸ The transportation reauthorization process around SAFETEA-LU saw a proposal for an NIB for transportation as a government chartered corporation.⁸⁹

In 2007 the United States witnessed the introduction of a number of bills proposing the establishment of some type of special purpose entity to finance infrastructure, including: National Infrastructure Bank Act of 2007 (S. 1926, introduced by Senators Dodd and Hagel on August 1 and H.R. 3401, introduced by Representatives Ellison and Frank on August 3); the Build America Bonds Act of 2007 (S. 2021 introduced by Senators Wyden and Thune on September 6); and the National Infrastructure Development Act of 2007 (H.R. 3896 introduced by Representative DeLauro on October 18). While not passed in the 110th Congress, they provide historical background to the discussions around an NIB.

- **The National Infrastructure Bank of 2007** designed the NIB as an independent federal entity, with a five-member board of directors appointed by the President and confirmed by the Senate. Its scope was to evaluate and fund infrastructure projects “of substantial regional and national significance.” For this type of major infrastructure projects, the NIB would provide federal funding in terms of grants, loans, loans guarantees to projects requiring federal investment of at least \$75 million. The federal government would provide initial capital of \$60 billion that NIB would use to issue bonds. The Treasury would pay the interest on the bonds and it would act as a guarantor for the principal of the loans of an NIB. The proceeds from the bonds would be used to finance major projects proposed by public entities (states, municipalities, agencies).
- **The National Infrastructure Development Corporation** intended the entity to be a federal corporation. The bill proposed a five year transition for the Corporation towards a Government Sponsored Enterprise (GSE) like Fannie Mae or Freddie Mac. The Corporation would be capitalized with up to \$9 billion in appropriations over three years. These appropriations would be used to make loans or buy securities issued by others to finance infrastructure. A subsidiary of the Corporation, the National Infrastructure Investment Corporation, would act as an insurer of loans and debt towards financing infrastructure. The hope was that the Corporation would become self-financed through business income and sale of public stock (when it became a GSE).
- **The Build America Bonds Act** would authorize the establishment of a Transportation Finance Corporation (TFC) as an entity formed by two or more state infrastructure banks. In comparison with the other two special purpose entities proposed in 2007, this corporation would be under the control of the participating states, not the federal government. However, similar with the other two entities, it would receive authority to issue up to \$50 billion of special purpose bonds. The TFC would use this capital to issue bonds and dedicate the proceeds to finance eligible transportation projects. The TFC would be liable for the payment of the bonds, which would not be guaranteed by the federal government. However, the federal government would effectively pay the interest, because the bonds are designed as tax credit bonds.

VI. Would the Federal Investment Process Be Improved by the Introduction of a Federal Capital Budget or a National Infrastructure Bank?

The current federal investment process presents a series of regulatory and implementation limitations. In theory, both a federal capital budget and a National Infrastructure Bank would provide a series of improvements. However, the design and the implementation of these mechanisms may vary widely and result in more problems.

A. The potential of a federal capital budget

One key role of a federal capital budget is its potential to function as a management tool, helping the planning process for federal investment.⁹⁰ Learning from states and municipalities, a capital budget usually comes with a capital improvement plan (CIP). A CIP includes the construction and maintenance

plans for capital assets for a five or six year period and is implemented over several phases.

The first phase in implementing a capital budget is an inventory of assets and capital investment needs. At the state level, a mixed group of engineers, economists, demographers and financiers assess the condition of the capital assets, the current and future needs and the associated costs. Without a doubt, expanding this practice to the federal level would improve the current federal assessments of public civilian physical capital needs. In addition, a federal capital budget would benefit from a comparison and integration of the needs assessments across infrastructure systems.

Based on the needs and inventory analysis, state representatives from the responsible department, budget office, governor's office, and third-party advisors prioritize a list of proposed projects. This list includes projects suggested by the legislative body, government agencies, advocacy groups, or the public.

This prioritization may be done by identifying multiple selection criteria and attaching appropriate weighting factors.⁹¹ If the criteria considered are rather standard (i.e. benefits and costs in terms of number of jobs created, public safety, generation of revenues), the weights are decided among the stakeholders.⁹²

After the list of capital projects is finalized, the government needs to identify funding sources for each project. If state and localities rely heavily on federal support for their capital spending, the federal government uses revenue from taxes (earmarked, such as gas tax, or general) and debt, backed by general taxes. Given the long-term use of the capital assets, it may be argued that a federal capital budget be financed with long-term debt. In this way, the life of the asset is matched with the bond term. In addition, the use of long-term debt addresses the intergenerational equity for the use of capital, because funding the construction or maintenance of capital assets benefits current and future users.

The capital budget is usually the first year of the CIP. It should include detailed information for each project selected: description of the project, purpose, financing method and schedule of completion for multi-year projects. Once the capital budget and the CIP are prepared, they need legislative approval. Therefore, a federal capital budget would be under the same political pressure as the current budget.

There is no guarantee that a federal capital budget would improve the selection process of federal investment. The state and local experience suggests that the prioritization of projects is an intense political process. The federal agencies, Congress, states, businesses, and advocacy groups will continue to push their priorities. If the poor condition of the U.S. infrastructure provides evidence for high priority of the maintenance of capital assets, it is not clear that a stakeholder driven prioritization process would result in this choice.

A federal capital budget does not address the maintenance bias specifically. While it requires an assessment of the condition of the capital assets, it does not ask for maintenance clauses with new capital assets purchase or construction. There is already a statutory requirement at the federal level for the needs assessment of the condition of the capital assets—The Federal Capital Investment Program Information Act of 1984. Also, the backlog of maintenance at the state level shows that even if 42 states have adopted capital budgets, the design does not necessarily translate into full implementation.⁹³

Over the years the budgeting community and various commissions organized by different administrations pointed to several budgeting and accounting problems related to the introduction of a federal capital budget:

Object of investment. The choice of one type of capital over another as the object of the federal capital budget would have a major impact on the budget and activity of many federal agencies. For the National Science Foundation (NSF), under the federal capital definition, only the outlays on physical capital (buildings, computers) would count as federal investment. The rest would qualify as current expenditures. Under the national capital definition, all the federal funding for NSF would be federal investment, because it contributes to the growth of the economy.⁹⁴

A federal capital budget would include the federal funding for transportation only if the object of investment is the national capital. Under the federal capital definition, the Department of Transportation would have a fraction of its funding included in the capital budget, due to the exclusion of the state and local grants.

The budget deficit and borrowing. One of the suggestions of the proponents of a federal capital budget is to take into account only the consumption expenditures for the calculation of the federal

budget deficit, given that capital expenditures are intended for long-term growth. Because there is no agreed upon definition of federal investment and federally financed capital, this would leave at the discretion of each administration what type of expenditures is considered investment in this scenario.

In addition, this federal capital budget proposal would make it more difficult for the federal budget to help the federal government to fulfill its functions. The federal budget treats consumption and capital outlays together, because the federal government focuses on the output it delivers and less on the mix on inputs that it uses. Capital is only one of the factors used by the federal government to deliver services to the public. In addition, it restricts the flexibility of the federal budget and impedes the federal government's provision of automatic stabilizers in times of economic recession (i.e. unemployment aid, food stamps).

Another suggestion is to finance capital expenditures only by debt. Taking the states' capital budgets as a model, this might be argued in the case of a balanced operating budget. Otherwise, if it is financed through borrowing, a capital budget will result in higher debt, on top of an unbalanced operating budget. In addition, the higher federal debt would be fueled by the virtually unlimited debt raising power of the federal government. While states and the private sector often finance their capital expenditures through borrowing, the financial markets penalize them with higher interest rates and lower ratings in case of unbalanced debt loads. Moreover, most state and local governments have legal debt limits by constitution or by statute.⁹⁵

Increasing the federal debt during these times of challenging budget deficits is a difficult strategy.⁹⁶ The federal government already has problems with funding its large budget deficit. CBO estimates the federal budget deficit will reach \$1.6 trillion in 2009. At 11.2 percent of gross domestic product (GDP), it will be the highest since World War II. With no change to current laws and policies, it will remain above \$500 billion per year, or more than 3 percent of GDP, throughout the 2010-2019 period. To fund this deficit, the federal debt would reach an estimated 54 percent of GDP this year and grow to 68 percent of GDP by 2019, more than double in terms of share of GDP from 2001.⁹⁷

Beyond the size effects, more debt-financed federal investment crowds out private investment during normal economic periods. Federal government would compete with the private sector in securing debt from the public.⁹⁸

Depreciation. The advocates in favor of a federal capital budget argue for the use of depreciation as a way to deal with budget spikes resulting from upfront full funding of project costs. Following the private sector model, a federal capital budget would spread the cost of capital over the useful service life of an asset and annually finance only the depreciation of capital, as the part of capital consumed during a year. This would result in smaller annual capital expenses versus the current full funding recommended by OMB.

However, it would obligate the federal government for the entire cost of a capital project, while the annual appropriation would be only for depreciation. In the case of a construction of a capital project, the federal agency would have to pay for the construction but wait until the project starts to be used in order to ask for appropriations for the depreciation of the project. The use of depreciation leaves the federal agencies asking Congress for funding every year for projects for which they are already obligated. There is also no agreement on a federal method of depreciation or the definition of the capital to be depreciated.

Political and bureaucratic issues. Despite the attention given to a capital budget over the years, there is little discussion about the implementation problems that federal agencies and Congress would face in case of its adoption.⁹⁹ For example, for each capital budget model proposed over the years, it is unclear how the appropriation process would function if the proposal is enacted.¹⁰⁰ Further, the ensuing power play among federal agencies and different Congress committees on the decisions upon the accounting and budgeting issues might consume more effort and time than necessary.

In sum it appears that a federal capital budget provides little improvement for the current federal investment process. Most of the provisions for the upgrading of the planning process are already in place, but they are not implemented in full—and a federal capital budget would not necessarily guarantee any better implementation of these rules. In addition, it opens the possibility of maneuvering the capital expenses, manipulating the size of the budget deficit, increasing the public debt, and long battles over the establishment of new accounting rules and procedures.¹⁰¹

B. The potential of a national infrastructure bank

A properly designed NIB is an attractive alternative for a new type of federal investment policy. In theory, an independent entity, insulated from congressional influence, would be able to select infrastructure projects on a merit basis. The federal investment through this entity would be distributed through criteria-based competition. It would be able to focus on projects neglected in the current system, such as multi-jurisdictional projects of regional or national significance. An NIB may introduce a federal investment process that requires and rewards performance, with clear accountability from both recipients and the federal government. These advantages are described below.

Better selection process. At its heart, an NIB is about better selection of infrastructure projects. The bank would lend or grant money on a project basis, after some type of a BCA. In addition, the projects would be of national or regional significance, transcending state and local boundaries. The bank would consider different types of infrastructure projects, breaking down the modal barriers. This would be a giant step from the current federal funding for infrastructure, most of which is disbursed as federal aid transportation grants to states in a siloed manner.

Multi-jurisdictional projects are neglected in the current federal investment process in surface transportation, due to the insufficient institutional coordination among state and local governments that are the main decisionmakers in transportation.¹⁰² The NIB would provide a mechanism to catalyze local and state government cooperation and could result in higher rates of return compared to the localized infrastructure projects.

An NIB would need to articulate a clear set of metropolitan and national impact criteria for project selection. Impact may be assessed based on estimated metropolitan multipliers of the project. This criterion would allow the bank to focus on the outcomes of the projects and not get entangled in sector specific standards.

Clear evaluation criteria would go a long way, forcing the applicants, be it states, metros or other entities, to have a baseline of performance. This change, by itself, would be a major improvement for the federal investment process, given that a major share of the federal infrastructure money goes to the states on a formula basis, without performance criteria.

Keeping the recipients accountable. An NIB would have more control over the selection and execution of projects than the current transportation grants within broad program structures. It would be able to enforce its selection criteria, make sure that the projects are more in line with its objectives and have oversight of the outcomes of the projects.

The new infrastructure entity should require repayment of principal and interest from applicants. This would bring more fiscal discipline and commitment from the recipients to the outcomes of the project. The extensive use of loans by an NIB contributes to the distinction between a bank and another federal agency. The interest rates charged to the state and local recipients of NIB loans might be set to repay slowly the initial injections of federal capital, while still maintaining a sufficient capital base.¹⁰³ Some experts argue that an NIB would be able to be sustainable and effective only if it is truly a "bank".¹⁰⁴

Correcting the maintenance bias. The mere establishment of an NIB would not correct for the problem of deferred maintenance.¹⁰⁵ However, through the selection process, the bank could address the current maintenance bias in the federal investment process. For example, the bank could impose maintenance requirements to recipients including adequately funded maintenance reserve accounts and periodic inspections of asset integrity.

Better delivery of infrastructure projects. An NIB could require that projects be delivered with the delivery mechanism offering best-value to the taxpayer and end user. The design-bid-build public finance model has been the most commonly used project delivery method in the transportation sector in the United States.¹⁰⁶ Until very recently, there has been little experimentation with other delivery contracting types. Evidence from other federal states, such as Australia, shows that private delivery saves money on infrastructure projects.¹⁰⁷

Filling the capital structure of infrastructure projects. Although the United States has the deepest capital markets in the world, they are not always providing the full array of investment capital needed –especially for large infrastructure projects with certain credit profiles.¹⁰⁸ This has been even more obvious during the current recession, with the disruptions in the capital markets. An NIB could help by providing more flexible subordinate debt for big infrastructure projects. Generally

bonds get investment-grade ratings, and have ready market access, only if they are senior obligations with secure repayment sources. For more complicated project financings that go beyond senior debt, there is a need for additional capital, such as equity capital or subordinated debt. However, this market gap is relatively small relative to federal investment.¹⁰⁹ An NIB would build upon the current Transportation Infrastructure Finance and Innovation Act (TIFIA) by providing subordinated debt to public or private entities in leveraging private co-investment.¹¹⁰

However, an NIB is not a silver bullet for the problems of the federal investment. An entity that is not self-sufficient over time and relies on Congress appropriations, by definition, will be under Congress' influence. In this case, it will be hard to entirely remove the political criterion from the selection process. If NIB is a shareholder-owned corporation, its cost of borrowing would be higher and the entity might experience similar problems to those of Fannie Mae and Freddie Mac. Lack of a clear federal role, performance based selection criteria, and a lack of emphasis on loan repayment, may render an NIB into another federal earmarks program. These issues are discussed below.

Political interference in the selection process. An NIB, as envisaged by recent proposals, would be under congressional influence. It would receive annual appropriations from Congress and the board would have to submit a report to the president and the Congress at the end of each fiscal year. Evidence from the federal transportation program shows that congressional directives sometimes choose projects which are not a priority and that would not have been chosen in a competitive selection process.¹¹¹ Talking about changing the U.S. transportation policy into performance driven decisionmaking, former U.S. Department of Transportation official Tyler Duvall articulated the problem: "The objective of depoliticizing transportation decisions by using the political process is a tough challenge."¹¹²

Debt and cost of borrowing. The NIB would add to the federal debt and budget deficit if it were to use debt to finance its activities and if there were not cuts in federal spending taken elsewhere. There is also a trade-off between independence from political influence and cost of borrowing. If an NIB is a federal agency, it may draw upon Treasury's low interest rates to finance its activities. If it is a shareholder-owned entity, it would incur higher costs of borrowing than Treasury, so the loans going to recipients would have to be at higher interest rates.¹¹³

Loan repayment. An issue of discussion is the revenue source required to repay an NIB loan. There is a concern is that only revenue producing projects, such as toll roads, would be able to obtain funding from an NIB. The TIFIA awards track record shows that while tolls are the main revenue source, there are alternatives. Awardees may use other sources of funding to reimburse the loan or secure the loan guarantee, such as availability payments. The Washington Metropolitan Area Transit Authority secured a loan guarantee with its gross revenues as well as payments provided by the local area governments to support its Capital Improvement Program.¹¹⁴

Size of projects. Although the 2007 Dodd-Hagel bill referred to a \$75 million threshold for awards, the current proposals do not mention any size. The size of projects is often considered as a proxy for the expected effect. A low threshold size might signal that the money is intended to be spread around to satisfy as many projects as possible. If that's the case, some entities might not consider applying for the funding, given the large cost to prepare the application for a project. Ultimately, the size of projects will depend on the funding available to an NIB and the perceived federal role in directly funding infrastructure projects.

Sectors. There is also a concern that an NIB would favor transportation over other infrastructure modes, due to potentially larger projects and associated revenue streams. The wastewater and drinking water advocates are worried that water projects would not be able to compete with transportation, because the water projects have a localized effect and usually do not reach the size of transportation construction projects.

Overlap with other federal programs. The mandate of an NIB in practice would overlap with the mandates of other existing programs. There are two major issues arising from this problem: how would an NIB use the existing agency expertise and how would other federal agencies relate to this new entity? If the sharing-of-expertise is accomplished through detailing personnel from other agencies, the other federal agencies may have indirect control over NIB.¹¹⁵ The issue of coordination with other agencies is a thornier one. Even current federal agencies do not have a great record at coordinating their programs.

What it is not. Independent of any proposal design, an NIB is no panacea for the problems of the federal investment process. It is not a solution for the current federal investment programs. An NIB would be focused only on its own projects, which would be financed through new federal investment. It is not a revenue source, but a financing mechanism. It is not a replacement of the current formula-based grants or direct federal funding in infrastructure.

If it could be established, a politically-independent and appropriately-designed NIB would implement a better type of federal investment process. While supplementing the current federal investment programs, an NIB would have a better selection process and project delivery. This would require clear articulation of its goals and sufficient political autonomy to exercise analytical decisionmaking in choosing projects. A competitive selection process for projects of regional and national significance would provide a basis for a performance driven infrastructure process.

VII. Conclusion

A more competitive U.S. economy needs a better infrastructure system. In a time of limited resources, improving the federal investment process should be prioritized over finding ways to merely increase the amount of funding for infrastructure. Among other ideas, a federal capital budget and a national infrastructure bank have been proposed as solutions to the reform of the federal investment process.

While a federal capital budget is an ambitious and comprehensive change to federal budget, it would provide little improvement to the federal investment process. A federal capital budget promises a better management of capital projects, but it comes with intractable accounting and budgeting problems. The use of depreciation would leave federal agencies asking Congress for money annually for projects already obligated. In terms of funding, the introduction of a federal capital budget would not provide significant additional revenues or protection for federal investment in infrastructure.

If designed and implemented appropriately, a national infrastructure bank would be a targeted mechanism to deal with new federal infrastructure spending. An NIB would provide a better project selection process for neglected federal investment in infrastructure, such as capital projects across jurisdictions and state borders, but also there would be more rigorous evaluation of projects across different types of infrastructure. Yet an NIB is not a silver bullet for dealing with infrastructure reform, either. It would not overhaul the current federal investment, but be limited only to new projects it funded.

More immediately, the OMB and Congress should improve and enforce the current regulations and statutes related to the federal investment process. Also, the debate around the federal capital budget shows that it is essential to have political support from both Congress and the administration. An NIB manages currently to draw more attention from both of them than the capital budget ever did. Indeed, for the first time the budget put forward by the administration has an NIB as a spending item. This is a major milestone and a unique political opportunity to reform federal investment in infrastructure.

Endnotes

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48. David Burwell, Capital Budget and National Infrastructure Bank roundtable, Brookings, June 10, 2009.
49. Carol O'Cleireacain, Capital Budget and National Infrastructure Bank roundtable, Brookings, June 10, 2009.
50. Personal communication from Ryan Orr, the Collaboratory for Research on Global Projects, Stanford University, November 12, 2009.
51. Title II of Public Law 98-501.
52. Executive Order 12893 of January 26, 1994, *Principles for Federal Infrastructure Investments*. It is still in force, as of November 24, 2009.
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58. Title 23 of the US Code, Sec. 135. *Statewide Transportation Planning*,
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60. Personal communication from Bryan Grote, Principal, Mercator Advisors LLC, November 23, 2009.
61. Often, the distinction is posed as between "capital" and "operating" expenditures. However, "operating" expenses are usually administrative costs and there is spending other than investment and administrative expenses. The more appropriate difference is between *investment and consumption*. Personal communication from Paul Posner, Department of Public and International Affairs, George Mason University, August 26, 2009.
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63. Sidney L. Jones, "The Capital Budget Alternative." In Albert T. Sommers, ed. *Reconstructing the Federal Budget*, New York: Praeger Publishers, 1984.
64. President's Commission to Study Capital Budgeting, *Report of the Commission*, 1999.
65. Rudolph Penner, "Budgeting for Capital Investment", testimony before the U. S. House of Representatives Committee on Transportation and Infrastructure, June 10, 2008.
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68. "Summary of Reports of the Hoover Commission," *Public Administration Review*, Vol. 9(2), 1949, pp. 73-99. Ferrel Heady, "The Reports of the Hoover Commission," *The Review of Politics*, Vol. 11(3), 1949, pp. 355-378.
69. Jones, "The Capital Budget Alternative," 1984.
70. The same Commission decided the creation of the "unified budget", by the inclusion of the Social Security Trust Fund in the federal budget. Personal communication from Alice Rivlin, Senior Fellow, the Brookings Institution, July 14, 2009.
71. President's Commission on Budget Concepts, *Report of the President's Commission on Budget Concepts*, 1967, pp.33-34.
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73. Jones, "The Capital Budget Alternative," 1984, pp.188.
74. Peter T. Kilborn, "Regan Departure Spurring Changes In Economic Policy," *The New York Times*, March 7, 1987, pp.1.
75. These arguments are based on the President's Commission to Study Capital Budgeting, *Report of the Commission*, 1999.

76. Alice Rivlin, the first director of the Congressional Budget Office and OMB Director between 1994 and 1996, and Carol O’Cleireacain, Commissioner of the President’s Clinton Commission to Study Capital Budgeting, Capital Budget and National Infrastructure Bank roundtable, Brookings, June 10, 2009.
77. Irene S. Rubin, “Perennial Budget Reform Proposals: Budget Staff versus Elected Officials,” *Public Budgeting & Finance*, Vol. 22, 2002, pp. 1-16.
78. At the request of the Chairman of the U.S. House Committee on the Budget, the CBO prepared a report on the federal capital budget in 2008-CBO, *Capital Budgeting*. It opposed the introduction of a federal capital budget and reiterated the problems identified by the 1967 Budget Concepts Commission and 1999 President’s Commission to Study Capital Budgeting. The issue of capital budget reappeared also in hearings on “Financing Infrastructure Investments”, U.S. House Committee on Transportation and Infrastructure, on June 10, 2008.
79. Pat Choate and Susan Walter cite the support of the President and Congress as the first requisite for a successful creation of federal capital budget. Pat Choate and Susan Walter, “A Capital Budget for the United States.” In Michael Barker and Robert N. Wise, eds., *Rebuilding America’s Infrastructure- An Agenda for the 1980s*, Durham, N.C.: Duke University Press, 1984.
80. National Surface Transportation Infrastructure Financing Commission, “*Paying our Way*,” 2009.
81. Paid in capital is the capital received from investors in exchange for stock.
82. Subscribed capital is an entity’s capital that is issued to shareholders. If an NIB is created as a whole government owned corporation, the federal government would be the shareholder.
83. U.S. OMB, 2010: *Analytical Perspectives*, 2009, pp. 35.
84. In a Global Loan, the Bank lends to a financial intermediary which makes an equivalent amount of funding available for investment projects which are too small for the Bank to handle directly. Source: European Investment Bank (EIB), “Evaluation Report: Evaluation of SME Global Loans in the Enlarged European Union,” 2005.
85. European Investment Bank (EIB), “EIB Group: key statutory figures, 2008,” (http://www.eib.org/about/key_figures/index.htm).
86. European Investment Bank, “Loans,” <http://www.eib.org/products/loans/index.htm>.
87. Stevens Redburn, Capital Budget and National Infrastructure Bank roundtable, Brookings, June 10, 2009.
88. Michael Lexton, Managing Director, J.P. Morgan Securities, remarks at Public-private Ventures in Transportation Conference, The American Road and Transportation Builders Association, September 24-25, 2009.
89. Aaron Klein, Deputy Assistant Secretary for Economic Policy, The United States Treasury, remarks at NYU/OECD roundtable on “Reaching Consensus on the Infrastructure Bank”, OECD, September 23, 2009.
90. This section draws heavily on personal communication with Michael A. Pagano, Department of Public Administration, University of Illinois at Chicago, August 25, 2009, and Michael A. Pagano and David R. Shock, “Capital Budgets: The Building Blocks for Government Infrastructure,” *Government Finance Review*, Vol.23(3), 2007, pp. 16-22.
91. Ryan Orr, “Project Viability Screening: A Method for Early-Stage Merit-Based Project Selection,” Stanford University, 2009, http://crpg.stanford.edu/publications/articles_presentations/Orr_project_viability_screening.pdf.
92. The National Advisory Council on State and Local Budgeting, which created guidelines for state and local budgeting, recommends a certain degree of consensus among stakeholders on the priorities of a jurisdiction. This is included in the notes of practice 3.1 “Identify Broad Goals.” The National Advisory Council on State and Local Budgeting, “Recommended Budget Practices: A Framework for Improved State and Local Government Budgeting,” 1998.
93. In a 1999 National Association of State Budget Officers survey 41 states and Puerto Rico answered affirmative to the question of doing capital planning in capital budgets. National Association of State Budget Officers, “Capital Budgeting in the States,” 1999.
94. David Mathiasen, “Capital Budget Nixed for Now” *Government Executive*, June 1, 1999, (<http://www.govexec.com/features/0699/0699mgmt.htm>).
95. Personal communication from David Seltzer, Principal, Mercator Advisors LLC, November 23, 2009.
96. Alice Rivlin, the Capital Budget and National Infrastructure Bank roundtable, Brookings, June 10, 2009.
97. U.S. CBO, “The Budget and Economic Outlook: An Update,” August 2009.
98. Charles Schultze, the Capital Budget and National Infrastructure Bank roundtable, Brookings, June 10, 2009.
99. As David Mathiasen, long time budgeteer, stated about the President Clinton’s Commission to Study Capital Budgeting 1999 report: “By focusing on resource allocation, the report has little to offer in the way of suggestions aimed at improving the day-to-day management, efficiency and productivity of Government operations. The problems of the Federal manager did not seem to weigh heavily on the minds of the commissioners.” David Mathiasen, “Capital Budget Nixed for Now,” *Government Executive*, June 1, 1999.
100. Jones, “The Capital Budget Alternative,” 1984.
101. Charles Schultze, “A Capital Budget for the Federal Government?,” testimony before the President’s Commission to Study Capital Budgeting, April 24, 1998.

102. U.S. GAO, Freight Transportation- Strategies Needed to Address Planning and Financing Limitations, GAO-04-165, 2003.
103. Personal communication from Charlie Schultze, Economic Studies, Brookings Institution, November 19, 2009.
104. Alice Rivlin, Capital Budget and National Infrastructure Bank roundtable, Brookings, June 10, 2009.
105. Personal communication from Ryan Orr, the Collaboratory for Research on Global Projects, Stanford University, November 12, 2009.
106. The U.S. Federal Highway Administration, "Design-Build Effectiveness Study," January 2006.
107. The state of Victoria saved about nine percent, on average, by private contracting of the delivery of certain infrastructure projects in comparison with public sector procurement. This was assessed by an independent review of the activity of Partnerships Victoria in 2004. Partnerships Victoria is the Public Private Partnerships program of the state Victoria in Australia. These savings were calculated in the Value for Money analysis, against a risk adjusted Public Sector Comparator at the beginning of the project planning. See Peter Fitzgerald, "Review of *Partnerships Victoria* Provided Infrastructure", Final Report to the Treasurer, Melbourne, Growth Solutions Group, p.17
108. John Ma, Capital Budget and National Infrastructure Bank roundtable, Brookings, June 10, 2009.
109. Personal communication from Bryan Grote, Principal, Mercator Advisors LLC, November 23, 2009.
110. The Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA) created a federal credit program for eligible transportation projects of national or regional significance. The program, managed by the Federal Highway Administration (FHWA), provides three forms of credit assistance - secured (direct) loans, loan guarantees, and standby lines of credit to public and private entities.
111. U.S. GAO, "Surface Transportation- Restructured Federal Approach Needed for More Focused, Performance-Based, and Sustainable Programs," GAO-08-400, GAO, 2008.
112. Tyler Duvall, remarks at the release event of the Bipartisan Policy Center report "Performance Driven: A New Vision for U.S. Transportation Policy", June 9, 2009.
113. The issue of the relative cost-effectiveness to borrowers of the NIB loans being funded through direct federal credit -subject to the Fair Credit Reporting Act- instead of through external sources of debt capital is a more complicated technical issue, outside of the scope of this paper. Personal communication from David Seltzer, Principal, Mercator Advisors LLC, November 23, 2009.
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For More Information

Emilia Istrate
Senior Research Analyst
Metropolitan Policy Program
Brookings Institution
202.741.6561
eistrate@brookings.edu

Robert Puentes
Senior Fellow and Director, Metropolitan Infrastructure Initiative
Metropolitan Policy Program
Brookings Institution
202.797.6071
rpuentes@brookings.edu

For General Information

Metropolitan Policy Program at Brookings
202.797.6139
www.brookings.edu/metro



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