



**NEW AMERICA**  
FOUNDATION

**Financing America's Infrastructure:  
Putting Global Capital to Work**

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**and**

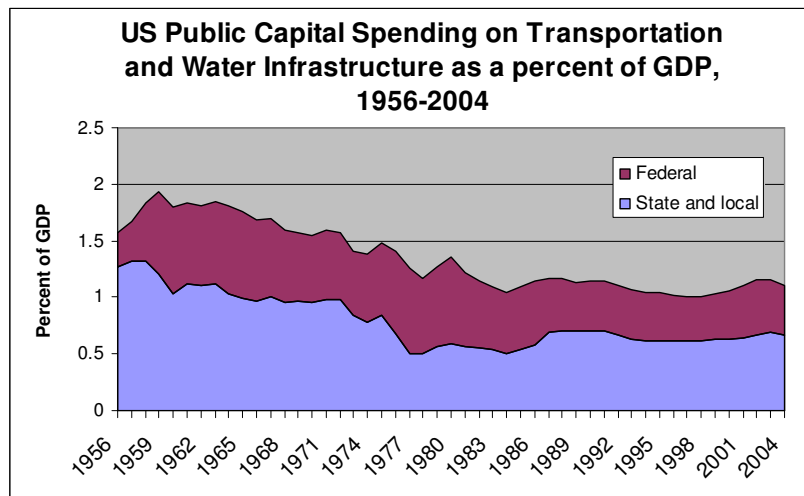
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## EXECUTIVE SUMMARY

America's basic infrastructure is outdated, worn, and in some cases, failing. Most experts agree that it is inadequate for meeting the demands of the 21st-century global economy. If we are to remain competitive, we must invest in capital assets like roads, ports, bridges, mass transit, water systems, and broadband infrastructure. Many other countries—both rich and poor—see investing in infrastructure as imperative for economic survival and success in an increasingly competitive economic environment. But the United States has lagged in infrastructure investment, in both relative and absolute terms. We are spending less than 2 percent of GDP on infrastructure, while China and India are spending 9 percent and 5 percent of GDP, respectively.<sup>1</sup>



Source: Congressional Budget Office.

If the nation's infrastructure needs are apparent, so too are the limits on available funds in federal, state, and local government coffers. In this presidential election year, we can see these limits clearly, as the nation's spending priorities are magnified by electoral politics. Although significant government funding will likely continue to play a key role in the development of public infrastructure, the scale of our funding needs increasingly compels us to look beyond government to close the financing gap. It is for this reason that public support for private sector infrastructure investment is essential.

The good news is that while the federal government struggles to find funds to address its spending needs there is abundant private capital for infrastructure investment. An estimated \$400 billion in global funds are available for equity investment in infrastructure, and the funds available to support the debt component amount to several trillion dollars if we include global central bank reserves, global pension funds, and sovereign wealth funds.<sup>2</sup> Rather than focus on these large pools of global capital as a threat, we should view them as an opportunity. So, while we have enormous infrastructure financing needs, there are also enormous pools of capital available for

investment. The trick is to bring the two together in a commercial, sustainable, and politically acceptable way.

The U.S. municipal bond markets have functioned well for many years, channeling private capital into financing certain elements of U.S. infrastructure. But current budgetary constraints and other market conditions mean that municipal finance is no longer adequate to meet the challenge of financing the scale of investment needed. And our current financing structures are unable to take advantage of the large pools of capital that are available for infrastructure financing.

We recommend two initiatives to help finance U.S. infrastructure needs beyond direct government grants. First, we suggest the enactment of legislation and the development of regulations to facilitate the origination and issuance of public sector covered bonds in the United States, which will provide a market-based, efficient, and secure mechanism to attract capital for infrastructure investment. Second, along the lines of a proposal by Congresswoman Rosa DeLauro (D-CT) last year,<sup>3</sup> we recommend that the federal government consider the creation of a new, government-owned and -capitalized infrastructure financing entity—a National Infrastructure Finance Enterprise—that would pool, package, and sell existing and future public infrastructure securities in the capital markets. The proposed entity would also seek to develop an in-house capability to originate infrastructure loans and would be able to fund itself through the international capital markets.<sup>4</sup> We believe that the entity should be capitalized at a far higher level than proposed in the DeLauro bill. Further, its scope should extend beyond that of the National Infrastructure Bank as currently proposed by Senators Christopher Dodd (D-CT) and Chuck Hagel (R-NE).<sup>5</sup>

Despite the current climate of suspicion and distrust regarding capital markets and financial engineering techniques, we believe that this should not preclude their responsible use in the future to help address infrastructure problems that require the investment and deployment of large amounts of capital.

## **THE CURRENT SITUATION**

The American Society of Civil Engineers estimates that the United States must spend \$1.6 trillion over the next five years to maintain the nation's infrastructure.<sup>6</sup> Other estimates of the investment needed for the United States to remain competitive in the 21st century run much higher. The National Surface Transportation Policy and Revenue Study Commission recommended in January 2008 that “all levels of government and the private sector collectively [need to] invest at least \$225 billion each year [over the next 50 years] to maintain and improve the surface transportation system, which would be about \$140 billion more [each year] than is currently invested.”<sup>7</sup> This means that we are looking at a shortfall of \$1.4 trillion dollars over the next 10 years in surface transportation alone.

## America's Infrastructure Report Card

<b>Roads</b>	<b>D</b>
<b>Bridges</b>	<b>C</b>
<b>Transit</b>	<b>D+</b>
<b>Rail</b>	<b>C</b>
<b>Aviation</b>	<b>D+</b>
<b>Power grid</b>	<b>D</b>
<b>Drinking water</b>	<b>D</b>
<b>Wastewater</b>	<b>D</b>
<b>Dams</b>	<b>D</b>

A=Exceptional, B=Good C = Mediocre, D=Poor F = Failing

*Source:* American Society of Civil Engineers, 2005.

According to the Government Accounting Office, U.S. water infrastructure needs “are estimated to range from \$485 billion to nearly \$1.2 trillion over the next 20 years.... [Yet] the key federal programs supporting water infrastructure financing...suggest that they will have only a marginal impact in closing the long-term water infrastructure funding gap.”<sup>8</sup> To put this gap in perspective, from 1991 through 2000, the GAO reported that nine federal agencies provided only about \$44 billion for drinking water and wastewater capital improvements.

“Mired decades behind Europe and Asia in rail service quality, the United States,” says Ernst and Young “will need to spend at least \$250 billion over the next 20 years in attempts to catch up.”<sup>9</sup>

And we have not even mentioned the investments needed to upgrade dams, aviation, mass transit, and ports. All told, says the GAO “estimates to repair, replace, or upgrade aging infrastructure as well as expand capacity to meet increased demand top hundreds of billions of dollars.” According to the Congressional Budget Office, total capital spending on infrastructure<sup>10</sup> for 2004, the most recent year for which data are available, was \$145.5 billion—with roughly 37 percent of the total funded by the federal government, 57 percent by state and local governments, and 6 percent by the private sector.<sup>11</sup> The problem, according to the GAO, is that “calls for increased investment in infrastructure come at a time when traditional funding for infrastructure projects is increasingly strained, and the federal government’s fiscal outlook is worse than many may understand.”<sup>12</sup>

It is not our intention to argue the case for specific infrastructure investment in the United States as we believe that this has already been comprehensively addressed by others.<sup>13</sup> Instead, we wish to suggest new ways to think about how to finance infrastructure investment.

It would likely come as a surprise to many that the major impediment to rebuilding our infrastructure is not a lack of funds. In fact, there is no shortage of privately held funds to help pay for infrastructure reconstruction and development if it is undertaken in a market-sensitive manner. According to one estimate, over the past two years the world's 20 largest global infrastructure funds have raised nearly \$130 billion, with 77 percent of the total raised in 2006 and 2007.<sup>14</sup> As Transportation Secretary Mary Peters recently noted, "There is upwards of 400 billion dollars available in the private sector right now for infrastructure investment."<sup>15</sup> Likewise, even with today's bank credit and liquidity problems, there are literally trillions of dollars available for high-quality debt investments through both domestic and international markets.

Individual infrastructure projects can be both time-consuming and fraught with political risk, which discourages and frustrates private funds from being effectively deployed in this sector—even when they are made available to it. However, there is a way in which new debt instruments and market-based mechanisms can be introduced to complement existing financing alternatives for U.S. infrastructure.

Traditionally, the debt component of a significant portion of U.S. infrastructure investment has been in the form of municipal bonds, which rely primarily on a state's or local government's ability to offer tax-exempt securities to investors. With more than 50,000 state and local issuers of municipal bonds and 2 million separate bonds totaling some \$2.4 trillion,<sup>16</sup> the U.S. municipal bond market has proven to be effective in channeling investment to finance municipal needs—including infrastructure. But municipal finance has limitations. Although it provides tax incentives to local and state investors, it limits the universe of investors potentially willing to put capital to work because of the relatively small size of most individual municipal finance debt issues and because it excludes investors who are unable to take advantage of the tax-based incentives. In many cases, it also involves an increase in a municipality's or state's budget obligations. The limited size and liquidity of any individual offering means that municipal bonds are disproportionately held by individual investors rather than by institutions.<sup>17</sup> Thus, investors in the debt component of infrastructure finance are often local and limited. The limits of this investor base are becoming more apparent. Municipal bond markets have been facing dislocation as a result of the credit crisis at a time when the need for state and local governments for funds for infrastructure development are at historic highs and growing.<sup>18</sup>

Large institutional funds and central bank managers prefer to focus on bond issues in the range of \$500 million and above, with many preferring bond issues above \$1 billion. This ensures adequate liquidity, reassuring investors that if they were to decide to sell their bonds at a later time there would be an adequate market to absorb such a sale without an undesired market disruption. Entities like central banks, in particular, have enormous sums to invest and a relatively conservative risk appetite, preferring to buy government bonds from OECD countries, supranational entities, government agencies and government-sponsored agencies, public sector covered bonds, and highly rated corporate bonds.<sup>19</sup> Most of the demand for the bond issues of foreign infrastructure development

banks, such as the European Investment Bank (EIB), Europe’s development bank that for the past 50 years has funded infrastructure development in the EU, comes from central banks and related sovereign wealth funds from around the globe.<sup>20</sup>

But it is not only international investors that remain on the sidelines of U.S. infrastructure investment. Many large, U.S.-based institutional investors, particularly U.S. pension funds, also have limited exposure, refraining from the purchase of municipal bonds for the same reasons as large non-U.S. investors: the lack of scale and liquidity, and more limited tax benefits than are available to in-state investors. In the United States, pension funds such as CalPERS, which has assets of \$242 billion, have announced that they are dedicating funds for U.S. infrastructure investment because “governments are facing budgetary restraints, and municipal bonds that have been widely used to finance infrastructure cannot keep pace with the demand.”<sup>21</sup> Given their desire for an enhanced return over U.S. Treasuries and a willingness to invest and hold long-term securities, pension funds like CalPERS would be ideal investors in U.S. infrastructure finance, if the securities in the sector were sufficiently large and liquid, and not so disproportionately driven by targeted tax benefits out of their reach.

What is missing is a mechanism for channeling these enormous pools of capital into long-term infrastructure development. We believe that the global bond markets already provide this framework and that the U.S. government should proactively seek to bring together our need for capital with investment entities willing to provide it through the global capital markets.

Europe attracts investment to finance its infrastructure development from across the globe—including from central banks, U.S. and foreign pension funds, financial institutions, insurance companies, and other entities—through its large, pooled infrastructure-related debt markets. Addressing the issue of the size and granularity of the U.S. market—thereby attracting a wider group of investors—could be expected to have a positive impact on the overall funding costs for issuers, including those engaged in public infrastructure projects.

The pooling of financial assets should not automatically be dismissed as being too financially risky. Rather, we believe that lessons can be learned from the current mortgage and credit crises, from the experiences of other countries (particularly within the EU), and from our own experience with the evolution of the U.S. mortgage market, government-owned and government-sponsored enterprises, and related market entities. Today’s global economic reality requires that we consider the use of financial tools to achieve our public policy goals.

## **PUBLIC-PRIVATE PARTNERSHIPS**

Although, historically, most infrastructure projects undertaken in the United States—canals, railroads, and the like—were created, owned, and financed with significant private sector involvement, over the past century, most public infrastructure projects in

the United States—and abroad—were undertaken and paid for by government. Now, at a time of increasingly tight budgetary constraints and significant infrastructure needs, there is growing recognition here—and abroad—that private sector involvement in the construction and management of public infrastructure is once again both necessary and desirable. This has led to the question of how to balance private sector commercial interests and the public interest, which in turn has given rise to a relatively recent phenomenon: the public-private partnership.

Participants in Europe’s infrastructure market marvel at how European national and municipal governments, generally considered to be less market friendly and more suspicious of the private sector than American government at all levels, could be so far ahead of the United States in using creative partnerships with the private sector and innovative capital markets tools to raise vast sums for infrastructure projects. The United Kingdom, for example, has taken a targeted private sector approach to infrastructure finance since the 1990s. Many projects must prove that they cannot be more efficiently funded by the private sector before receiving government funds, ensuring “value for money.” Today, roughly 16 percent of all infrastructure investment in the U.K. comes through the UK Treasury’s Private Finance Initiative.<sup>22</sup>

Of course, whenever private sector involvement in infrastructure development is contemplated, whether stand alone or in partnership with government or a quasi-governmental entity, it goes without saying that the infrastructure project to be financed must be commercially viable. That is, for a project to have private sector involvement, it must have sustainable and predictable cash flows or the ability to generate revenue through tolls, user fees, landing rights, or dedicated tax receipts sufficient to repay the financing being sought. While terms may be favorable and/or subsidized, private sector involvement will require a proposed project to be able to support private sector financial terms. If there is to be increased private investment in infrastructure, local communities and other interested parties will need to accept the requirements of the private sector and the markets, including predictable cash flow generation, assumption of litigation and timing risks, and other commercial considerations of concession-based financing. While there has been a recent increase in the number of U.S. states willing to consider private-public partnerships, less than half of them have put enabling legislation in place.

It is important to note that private-public partnerships and other similar financing mechanisms are not appropriate for all public infrastructure projects. Projects that are not considered to be good candidates for private sector involvement, either for commercial or political reasons, should continue to be financed under existing schemes, including by means of government budgetary outlays, gas taxes, highway trust funds, municipal bond receipts, and the like. As Transportation Secretary Peters pointed out in a recent speech, “A review of recent public opinion surveys found majority support for tolling and road pricing concepts in 56 percent of the surveys. When people know how the funds will be used...and the tangible benefits they can expect...support is higher still. In King County, Washington, residents favored using electronic tolls over gas taxes to fund replacement of the 520 Floating Bridge by a margin of 78 percent to 17 percent.”<sup>23</sup>

## **A COVERED BOND MARKET FOR THE UNITED STATES**

Covered bonds, or debt securities backed by cash flows from public sector loans or mortgages, form a large, established part of the European financial landscape, although they are relatively unknown in the United States.<sup>24</sup> In contrast to other forms of pooled securities, the underlying obligations remain on the bond issuer's consolidated balance sheet. A covered bond investor has recourse to a pool of assets that secures or "covers" the bond if the originator (usually a bank or other financial institution) becomes insolvent. The issuer of a covered bond gains the benefits of pooling its individual (smaller) obligations. But because of the continuing direct relationship between lender and borrower, the risks inherent in other forms of securitization, where the lack of an ongoing relationship between the originator of a loan and its ultimate holder can lead to irresponsible behavior, are avoided.

A covered bond also provides flexibility to the issuing bank, usually allowing it to change the individual components of the cover pool to maintain its credit quality, as well as to change the terms of the underlying loans themselves. This structure keeps the loans on the books of the bank that originated them and removes many of the complications inherent in other forms of securitization. By contrast, U.S. mortgage-backed securities are usually issued off-balance-sheet, with the banks selling the loans to special-purpose bond-issuing vehicles. This structure, which removes any direct ongoing relationship between the originator and ultimate holder of a loan or other debt security, certainly contributed to the subprime and credit crises. It was not the actual pooling that was a problem, but rather, the fundamental disconnect between the entity getting compensated for originating a loan and the holder who bears the costs of misunderstanding the quality of the obligation itself.

In Europe, the covered bond is used to enhance the availability of mortgages, but there is also an enormous market for covered bonds backed by public sector loans.<sup>25</sup> Public sector covered bonds typically pool loans to central, regional, and local government authorities, and are either guaranteed by the public authorities or backed by project cash flows for commercially viable infrastructure projects. The European covered bond market increases the availability of funds dedicated to public infrastructure. There is no such equivalent market in the United States.

The appeal of covered bonds for investors is that they represent an enormous, liquid, high-quality asset class. For banks, they represent a form of borrowing that is generally low-cost and long-term. For public sector borrowers, they represent an efficient way to gain access to funds that might not otherwise be available, given size and liquidity issues.

The United Kingdom recently adopted new covered bond legislation that specifically includes public-private partnership loans backed by cash-flow payments from public entities. Under this scheme, loans are made by a bank to fund infrastructure projects such as roads, hospitals, schools, or utilities. These loans are pooled and sold to investors as a large, liquid covered bond, which is then traded on the markets with other such bonds. By this means, banks in Europe are able attract the large pools of global capital that are



uninterested in the U.S. municipal bond markets. For example, more than a hundred central banks and state agencies invest in public sector covered bonds issued by Depfa Bank, one of Europe's largest public sector banks and a prolific issuer of public sector covered bonds. Other investors in public sector covered bonds include large U.S. investors that often remain on the sidelines of the U.S. municipal markets. It is noteworthy when the world's largest investors, from the United States and elsewhere, are providing massive amounts of debt financing for infrastructure—only not in the United States.<sup>26</sup> This is because the United States lacks a mechanism for pooling public-sector-related securities.

This type of market, unlike its mortgage-backed security equivalent, simply did not emerge in the United States. Laying the proper legislative and regulatory groundwork to create such a market would, we believe, be a catalyst for increasing the funding available to public infrastructure projects.<sup>27</sup> We believe that if the United States were to put in place covered bond legislation similar to Europe's, demand for U.S. public sector covered bonds would be immense. The adoption of such legislation would help stimulate lending to commercially viable infrastructure projects, generate a new, cheap, long-term funding source for financial institutions, and create a new class of tradable securities (but without the risk of “uncovered” securitization).

Officials considering covered bond legislation in the United States could benefit from the experiences of foreign governments and regulators, especially in Europe and the United Kingdom, which adopted new covered bond legislation earlier this year.<sup>28</sup> In fact, many U.S. banks already actively participate (underwrite, trade, and provide research analysis) in the European covered bond markets through their European operations. Some U.S. banks, like Washington Mutual and Bank of America have already started to take advantage of the diversified funding opportunities covered bonds provide by issuing their own covered bonds backed by their U.S. mortgage portfolios and selling them in to the European market.

We do not believe that the introduction of a covered bond market in the United States would be fraught with regulatory or market peril. In fact, the Federal Deposit Insurance Corporation recently issued a policy statement regarding covered bonds indicating its intention to facilitate the development of such a market, although the impetus for this move lay with the need to assist in financing the mortgage portfolios of U.S. financial institutions in the wake of the breakdown of the U.S. mortgage-backed security market.

No matter how attractive the idea of a new public sector covered bond market may be to marketplace participants, it is unlikely that individual U.S. banks will take a leadership position in attempting to create such a market here on their own. We believe capital will follow legislation. At this point, public sector finance equals municipal bond finance. Most U.S. banks do not have large existing portfolios of public sector debt. The U.S. banks leading the way in the development of a mortgage-backed covered bond market are likely to embrace the idea of creating a public sector covered bond market. But a public sector covered bond market will require sufficient liquidity and scale to be attractive to

financial institutions, and it is unlikely that this can be created efficiently and profitably from scratch without the government taking the first step.

## **NATIONAL INFRASTRUCTURE FINANCE ENTERPRISE**

In 2007, Senators Dodd and Hagel proposed the creation of a National Infrastructure Bank (NIB).<sup>29</sup> We believe that this proposal has much to recommend it and should be applauded. However, we also believe that the nation's infrastructure needs are so large and pressing that the proposed entity may not be adequate to address the challenges that the United States faces in financing infrastructure development in a timely manner and on the scale required.

The bill as it currently stands contemplates a cap of \$60 billion on federally guaranteed bonds, which is low relative to both needs and the market's potential appetite. Moreover, as we understand it, the NIB would not, in fact, operate as a bank, but rather more as an agency, with no capitalization, thus limiting the ability of the entity to create leverage the way foreign government-owned development banks do. It appears that the architects of the bill conceived of the NIB principally as a way to avoid the overt politicization of large infrastructure projects, which are often subject to the politically driven earmark process in Congress. The senators should be praised for their attempt to create a mechanism to remove politics from the prioritization of public infrastructure projects and the expenditure of federal funds. However, we believe more dramatic steps are required.

A bolder step would be to seek to mobilize and attract large pools of capital from around the world by creating what we call the National Infrastructure Finance Enterprise (NIFE), a government-owned and -capitalized institution, similar to the original 1938 version of the Federal National Mortgage Association, commonly known as Fannie Mae. This entity would be given a near-term mandate for the purchase, pooling, and market-making activities of infrastructure-related securities that meet specific conforming criteria, (similar to the activities of Fannie Mae and Freddie Mac in the mortgage market). It would then issue bonds in the capital markets, at a multiple to the capital contributed by the federal government,<sup>30</sup> to fund the purchase of infrastructure-related securities. It would also pool and sell those securities in a willing market. This could, we believe, provide the near-term market mechanism to attract additional financial investment to the infrastructure sector on attractive terms and stimulate the creation of a new public infrastructure bond market. While the pooling function could be undertaken relatively quickly by working with the financial sector, the longer-term objective of NIFE would include development of other in-house functions, including lending, insurance, and guarantee capabilities.

As noted above, Congresswoman DeLauro has proposed the creation of a National Infrastructure Development Corporation (NIDC), which would undertake many of the longer-term functions that we suggest here. Her bill is comprehensive, significant, and right on target. However, we believe that it does not go far enough in addressing the scale or immediacy of this country's infrastructure funding needs. The NIDC's proposed

capitalization of \$3 billion annually for three years is small relative to that of global peers, market demand, and domestic financing needs. By comparison, as of January 2007, the European Investment Bank had subscribed capital of €164.8 billion (approximately \$255 billion). And although NIDC's mission is consistent with that of our proposed NIFE, it does not explicitly call for the purchase and pooling of infrastructure-related loans or securities. This is important because such pooling would allow the new entity to immediately channel finance into infrastructure, without the need to wait for the creation of a new lending origination function—which would likely take several years. Moreover, this pooling function would be crucial in providing impetus to banks and other financial institutions to actively engage in infrastructure finance lending themselves.

Given the acknowledged risks of securitization (the de-linking of the origination of a loan or other obligation from the ultimate owner of the security), NIFE should be enabled to create its own tight conforming standards for infrastructure finance securities. Such conforming standards would encourage banks and other lenders, secure in the knowledge that their participation in the financing of infrastructure projects would not tie up their capital for a longer term than they might deem prudent, to provide infrastructure finance to creditworthy public projects and public authorities with solid financial footing. We believe that until such time as a private covered bond market is created these conforming criteria can protect the financial integrity of NIFE, while jump-starting a new infrastructure finance market to complement the existing municipal bond market.

By creating conforming standards, NIFE would effectively be setting national rules for the financing of infrastructure projects. This in turn would allow banks to sell off some or all of their exposure on consistent terms. As the market developed, public sector loans could be sold to NIFE, or pooled privately for issuance as public sector covered bonds.

We recognize that the subprime mortgage crisis and concerns about the pooling of securities have soured many on the concept of using these market mechanisms to achieve policy goals. But we should not throw the baby out with the bath water. The underlying concept remains sound, when properly applied and regulated. Fannie Mae, from its inception as a government-owned enterprise, and later as a government-sponsored enterprise along with its non-government-sponsored counterparts in the market, provided substantial benefits in aiding the creation of housing stock and home ownership in the United States. Lessons learned from abuses in those markets should be applied to any new infrastructure finance market, but market mechanisms should continue to be considered useful tools. Likewise, NIFE should act to complement and catalyze a covered bond market, not to compete with it.

As NIFE developed, it could evolve more along the lines of the NIDC proposed by Congresswoman DeLauro, with its own infrastructure lending and insurance functions. In that event, as with the European Investment Bank, we recommend that new infrastructure projects financed by NIFE be required to have a minimum of 50 percent participation from other sources, and preferably as much as 75 percent, on commercially viable terms.

Many financial institutions that work with and co-finance projects with the EIB also issue public sector covered bonds backed by their portion of the loans.

A properly structured NIFE could potentially operate effectively without an explicit U.S. government guarantee with respect to its bond issues, thus relieving the federal government of the budgetary considerations that this would entail. It would, however, require an initial capital investment by the federal government to finance the purchase of a 100 percent shareholding in the entity. (This was originally the case with Fannie Mae.) We believe that long-term securities issued by this entity without an explicit U.S. government guarantee would potentially be priced at between 50 and 70 basis points wider than the relevant U.S. Treasury benchmark. This would present an attractive “yield pick-up” to investors, including those U.S. and international pension funds, central banks, sovereign wealth funds, and other large institutional investors that, as noted above, have enormous pools of capital to deploy, but who are currently resistant to most U.S. infrastructure-related investment due to the constraints mentioned earlier. This structure would also avoid raising national security concerns under the Foreign Investment and National Security Act (FINSA) and by the Committee on Foreign Investment in the United States (CFIUS), as foreign government investment would be limited to debt as opposed to equity participation and would in the case of NIFE be separate from the ownership of any underlying infrastructure project itself.

It is our view that, unlike the proposed NIDC, which would be transformed into a government-sponsored enterprise after five years, the NIFE should remain 100 percent owned by the U.S. government for an undefined period. The need to protect ultimate equity ownership in an entity with such strategic implications argues that NIFE should have a public mission and remain in public (government) hands. Moreover, this would ensure that all cost savings achieved by its operations were passed on to the local users and communities, and would avoid fees or commissions that might be unduly burdensome. To avoid the potential problem of NIFE competing with a private sector able to provide adequately for infrastructure financing needs down the road, a sunset provision for the entity should be contemplated.

## **SUMMARY**

U.S. infrastructure needs are immense and urgent. Federal, state, and local government funds will not be sufficient to finance the scale of infrastructure investment required if the United States is to remain competitive in the 21st century. While some public sector infrastructure will always require government funding, there is wide scope for the private sector to fill the gap. The good news is that there is no dearth of funding or of potential projects. Rather, there is a political and structural logjam. We have posed two market-based solutions to allow capital to flow to where it is most needed to address some of our most pressing infrastructure needs.

The shortfall in investment in U.S. infrastructure will only worsen, as other economies leapfrog the United States in both the amount of investment in new infrastructure and the

attention such investment receives. As other nations invest in infrastructure, they will reap the rewards of a continuing improvement in their strategic competitive position in the world economy. It is ironic that while many of the former socialist societies of the “old world” now look to the private sector and capital markets to invest in and upgrade their infrastructure, the world’s greatest capitalist nation looks increasingly to the federal government to solve its infrastructure problems.

The world is awash in capital, and the United States needs that capital to repair and improve its crumbling infrastructure. Undoubtedly, those who disapprove of private sector involvement and the use of market-based tools to provide fundamental support for public infrastructure will view our proposals as far too friendly to market forces. On the other end of the political spectrum, those who believe in a limited role for government will also object to our proposals, believing that markets should be left to their own devices without government involvement of any kind. But we are convinced that the huge infrastructure problems facing the nation demand innovative solutions and that the federal government has a vital role to play in encouraging public-private partnerships and enabling capital to flow where it is most needed.

## NOTES

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<sup>1</sup> Robert L. Reid, “The Infrastructure Crisis,” Special Report, *Civil Engineering* (Online Magazine of the American Society of Civil Engineers), January 2008, [http://pubs.asce.org/magazines/CEMag/2008/Issue\\_01-08/article1.htm](http://pubs.asce.org/magazines/CEMag/2008/Issue_01-08/article1.htm).

<sup>2</sup> As of April 2008, global central bank reserves were estimated to exceed \$6 trillion; OECD pension funds were estimated to total approximately \$18 trillion; and sovereign wealth funds were estimated to exceed \$3.5 trillion. These three pools of capital are expected to grow at a tremendous pace over the coming years. See “Foreign Investment and Sovereign Wealth Funds,” Douglas Rediker and Heidi Crebo-Rediker <http://www.newamerica.net/files/GSFIWorkingPaper1.pdf>.

<sup>3</sup> The National Infrastructure Development Act of 2007 (HR 3896) was introduced by Congresswoman DeLauro on October 18, 2007.

<sup>4</sup> There is historical precedent for this. NIFE could be established much like Fannie Mae at its inception, before it became a publicly held, exchange-listed, government-sponsored enterprise.

<sup>5</sup> The Dodd-Hagel National Infrastructure Bank Act of 2007 would establish a federal bank that could prioritize and assist with the financing of infrastructure projects of substantial regional or national significance, using both public and private capital.

<sup>6</sup> American Society of Civil Engineers, *Report Card for America's Infrastructure* (Reston, VA: ASCE, 2005), <http://www.asce.org/reportcard/2005/index2005.cfm>.

<sup>7</sup> “Physical Infrastructure: Challenges and Investment Options for the Nation's Infrastructure,” statement of Patricia A. Dalton, Managing Director, Physical Infrastructure Issues, highlights of GAO-09-763T, testimony before the Committee on the Budget and the Committee on Transportation and Infrastructure, U.S. House of Representatives, May 8, 2008, <http://www.gao.gov/new.items/d08763t.pdf>.

<sup>8</sup> Ibid.

<sup>9</sup> Ernst and Young, “Investing in Global Infrastructure,” 2007, <http://www.uli.org/AM/Template.cfm?Section=Home&CONTENTFILEID=27598&TEMPLATE=/CM/ContentDisplay.cfm>.

<sup>10</sup> Infrastructure defined as highways, mass transit, freight railroads, passenger railroads, aviation, water transportation, drinking water and wastewater, water and other natural resources.

<sup>11</sup> “Current and Future Investment in Infrastructure,” Testimony Statement of Peter R. Orzag, Director of the Congressional Budget Office, before the Committee on the Budget and the Committee on Transportation and Infrastructure, U.S. House of Representatives, May 8, 2008.

<sup>12</sup> “Physical Infrastructure: Challenges and Investment Options for the Nation’s Infrastructure.”

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<sup>13</sup> See Bernard Schwartz and Sherle Schwenninger, “Public Investment Works,” *Democracy*, issue 6 (Fall 2007); and Felix G/ Rohatyn and Warren Rudman, “It’s Time to Rebuild America: A Plan for Spending More—and Wisely—on Our Decaying Infrastructure,” *Washington Post*, December 13, 2005.

<sup>14</sup> Robert N. Palter, Jay Walder, and Sian Westlake, “How Investors Can Get More Out of Infrastructure,” *McKinsey Quarterly*, February 2008, [http://www.mckinseyquarterly.com/Financial\\_Services/Investment\\_Management/How\\_investors\\_can\\_get\\_more\\_out\\_of\\_infrastructure\\_2105\\_abstract?gp=1](http://www.mckinseyquarterly.com/Financial_Services/Investment_Management/How_investors_can_get_more_out_of_infrastructure_2105_abstract?gp=1).

<sup>15</sup> “Remarks for the Honorable Mary Peters, Secretary of Transportation,” National Governors’ Conference, White House Meeting, Washington, D.C., February 25, 2008, <http://financecommission.dot.gov/Documents/02-25-08NGAPlenary.doc>.

<sup>16</sup> “Testimony Concerning Municipal Bond Turmoil: Impact on Cities, Towns and States,” by Erik R. Sirri, Director, Division of Trading and Markets, U.S. Securities and Exchange Commission, before the Committee on Financial Services, U.S. House of Representatives, March 12, 2008, <http://www.sec.gov/news/testimony/2008/ts031208ers.htm>.

<sup>17</sup> According to the SEC, individual investors own as much as two-thirds of these securities directly or indirectly through money market funds, mutual funds, and closed-end funds. “Reflecting the dominance of the individual investor in the market, the median size of a trade in fixed-income municipal securities is only \$25,000. A whopping 87% of all customer trades are for less than \$100,000. Over half are under \$25,000” (Christopher Cox, Chairman, U.S. Securities and Exchange Commission, “Integrity in the Municipal Market,” speech at Town Hall Los Angeles, July 18, 2007, <http://www.sec.gov/news/speech/2007/spch071707cc.htm>).

<sup>18</sup> “Federal Investment in Public Infrastructure has declined substantially over the last three decades, so that state and local governments now spend nearly three times as much as their federal counterparts on infrastructure” (Center for Strategic and International Studies, “Guiding Principals for Strengthening America’s Infrastructure,” March 27, 2006, [http://www.csis.org/media/isis/pubs/060327\\_infrastructure\\_principles.pdf](http://www.csis.org/media/isis/pubs/060327_infrastructure_principles.pdf)).

<sup>19</sup> Foreign fund managers are apprehensive about taking equity or controlling stakes in U.S. infrastructure for fear of raising protectionist backlash in the United States. Likewise, new prohibitions under the Foreign Investment and National Security Act and those put forward by the Committee on Foreign Investment in the United States now restrict certain foreign-government-affiliated entities from investing in the equity of U.S. strategic infrastructure.

<sup>20</sup> As an example, central banks bought 77 percent of the European Investment Bank’s most recent €3 billion issue, due April 2015. (*Euroweek*, May 1, 2008). EIB’s previous \$3 billion bond issue in March 2008 saw 66 percent participation by central banks (*Euroweek*, March 14, 2008).

<sup>21</sup> Fact Sheet, CalPERS Infrastructure Program September 2007, <http://www.calpers.ca.gov/eip-docs/about/press/pr-2007/sept/infrastructure0907.pdf>.

<sup>22</sup> Ernst and Young, “Investing in Global Infrastructure 2007,” <http://www.uli.org/AM/Template.cfm?Section=Home&CONTENTFILEID=27598&TEMPLATE=/CM/ContentDisplay.cfm>.

<sup>23</sup> “Remarks for the Honorable Mary Peters.”

<sup>24</sup> In Europe, covered bonds, also known as Pfandbrief, were first issued in 1769. The European covered bond market has grown to exceed €1.8 trillion (\$2.6 trillion), and despite a challenging environment, €165 billion (\$242 billion) in covered bonds were issued in 2007 alone, according to the American Securitization Forum.

<sup>25</sup> Between 2005 and 2008, public sector covered bonds made up between 35 percent and 50 percent of the overall covered bond market in Europe.

<sup>26</sup> It is likewise noteworthy when the largest flagship public-private partnership financings in the United States borrowed exclusively from non-U.S. banks to fund their loans. Among them: 1) loans to the Chicago Skyway: a group of European Banks, including Banco Santander Central Hispano, Calyon, Banco Bilbao Vizcaya Argentaria, and Depfa Bank syndicated a \$1.2 billion, nine-year non-recourse senior debt to 15 international banks; 2) loans to the Indiana Toll Road: Banco Bilbao Vizcaya Argentaria SA, Banco Santander Central Hispano SA, and Caja de Ahorros y Monte de Piedad de Madrid (Spain); BNP Paribas (France); Depfa Bank (Germany); RBS Securities Corporation (Scotland); and Dexia Crédit Local (Belgium); 3) loans to Virginia Route 895 (Pocahontas Parkway): \$420 in senior debt provided by Depfa

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Bank (Ireland); Banco Espirito Santo de Investimento (Spain), and Bayerische Hypo-Vereins Bank (Germany); 4) loans to the San Diego Toll Road SR-125: BBVA and Depfa Bank, PLC.

<sup>27</sup> In Europe, commercial banks are the primary issuers of public sector covered bonds, and they use them as an attractive source of funding for themselves. Covered bonds are also considered “ECB eligible” if the loans covering the bond are themselves eligible and the bond is rated at an acceptable level. “ECB eligible” means that banks can post the bond as collateral to the European Central Bank and receive short-term funding, providing an easy means of creating liquidity. This means that banks with covered bonds on their balance sheet know that they can use them as a means of funding themselves easily and at attractive rates in the overnight markets.

<sup>28</sup> The legislative framework for U.K. covered bonds was implemented on March 6, 2008.

<sup>29</sup> The National Infrastructure Bank Act of 2007, S. 1926.

<sup>30</sup> A very conservative estimate of leverage would be a multiple of 2.5, such as is the case with the European Investment Bank and the Nordic Investment Bank, but it could undoubtedly be greater.