

National Infrastructure Bank (NIB) – Frequently Asked Questions, and Glossary of Terms

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Q: Why is a National Infrastructure Bank (NIB) needed?

A: Our nation's spending on infrastructure has fallen to its lowest level in 70 years: to 2.5% of our nation's GDP. That's half the comparable level in Europe, and 1/3 the level in China. As a result, we are losing our world-wide competitive edge.

Over our 240-year history, infrastructure spending has ONLY accelerated when a National Infrastructure Bank has been placed (there have been four major ones in the past, starting with the First Bank of the United States created in 1791 by Treasury Secretary Alexander Hamilton, and ending with FDR's Reconstruction Finance Corporation (RFC, 1932-1957)). Similarly, infrastructure spending has fallen when the charters for those four banks – all of them successful – were permitted by Congress to lapse.

Q: Why can't we just rely on Federal and State budgets to fund infrastructure?

A: For two reasons. First, infrastructure development needs long-term planning, and a reliable source of long-term funding, in order to succeed. That's just not possible under a system of uncertain annual appropriations (reliable funding for the [Highway Trust Fund](#) is a case in point), and politicians' short-term horizons of from 2 to 4 years. Second, the Federal budget, and many State budgets, are in financial disarray, with dwindling tax receipts, rising debts/bond issues, and ever-increasing spending on other budget items that crowd out any plans to increase infrastructure spending in the future.

Q: Why not rely on State Infrastructure Banks (SIBs)?

A: There are some 33 SIBs – revolving funds, actually – but because they were established with very small Federal and State grants (totaling \$661 million), they are simply too small to finance very much of America's infrastructure needs.

There is one notable exception, however: The Bank of North Dakota is the only state-owned deposit-money Bank in America, and it is dedicated to investing only in North Dakota's infrastructure. It is no accident, therefore, that North Dakota has the highest rate of infrastructure spending of any state in the nation (21% of that state's budget, or twice the national average), and that its spending as a % of state GDP has fallen the least of any state since 2002 (in fact, it actually grew). We need a scaled-up version of the Bank of North Dakota to fund the country's infrastructure needs.

Q: OK, then why not rely on Public-Private Partnerships (see Glossary definition below), if the claim is true that they can provide private capital to complete projects more quickly, cheaply, and innovatively than governments can?

A: For one thing, that claim has not been conclusively proven, while experience in the U.S. shows that many P3s have run into financial and operating problems. For another, **P3s simply have not stepped in to fill the infrastructure financing gap.** The American Society for Civil Engineers (ASCE) estimates that, as of 2017, \$4.7 trillion is needed just to repair our nation's infrastructure, of which \$2.1 trillion is currently NOT funded. Meanwhile, only about 1.5% of the country's infrastructure projects are paid for, through P3s, by private capital, despite banks having plenty of liquidity (cash on hand) to fund them. If P3s could have financed critical infrastructure projects over the past 60 years (since the RFC was wound down), they would have done so already.

The reality is that only a sufficiently large National Infrastructure Bank, dedicated to long-term lending for infrastructure, is proven capable of rebuilding American infrastructure.

Q: How would the NIB work?

A: The NIB would work just like the four successful National Infrastructure Banks that preceded it: by bringing into the NIB as paid-in capital: existing Federal debt (Treasury securities) held by the private sector, monetizing that paid-in capital, and using the working cash created to give out as infrastructure loans. Currently, the private sector holds about \$17 trillion in Treasuries, of which the NIB would need about \$4 trillion as paid-in capital, assuming a monetization ratio of 1:1 (see Glossary explanations and Flow Chart below). In return, private sector holders would receive preferred stock in the NIB paying some 2% per annum above what they would otherwise have received on their Treasuries.

Q: Why is \$4 trillion also the targeted total for the NIB's lending portfolio? Is that size ADEQUATE to cover all of America's infrastructure needs?

A: \$4 trillion would be sufficient to cover all of America's infrastructure needs, comprising:

- the unfunded repair needs identified by ASCE (\$2.1 T),
- that portion of the remainder (\$2.6 T) where funding falls through (a frequent occurrence, especially when matching Federal or State monies, or regulatory approval, do not materialize on time),
- cost escalators resulting from project delays (ASCE estimates that total repair costs will balloon to \$10 T by 2040, at present trends),
- funding for all manner of megaprojects, and small ones, that are not included on ASCE's repair list (e.g., cross-region development, high speed rail, rural telecommunications, or affordable housing), and
- technology and science drivers to provide 21st Century infrastructure.

Q: What funding for the NIB would the Federal Budget need to provide?

A: Only the incremental 2% interest payment on its preferred stock, or about \$80 billion per year, would be needed as dedicated new funding. That amount could be reduced, however, if the NIB's monetization ratio is raised by Congress.

The new funding could be financed any number of ways – by: raising the gasoline tax, reversing recent tax cuts, instituting a new financial transactions tax, eliminating one or more large income or corporate tax deductions, or closing loopholes on corporate profits held abroad – Congress could decide. However, for the NIB to work over the long run, the new funding must be dedicated, i.e., not subject to the annual budget appropriations.

Meanwhile, existing funding for interest on the existing \$4 trillion in Treasuries would simply be paid to the NIB as holders of those securities, rather than to private owners who held them earlier. Thus, **no new Federal Debt would be created by the operations of the NIB!**

Q: Exactly how would the NIB monetize its Treasury holdings?

A: In the same way as any commercial bank creates money when a customer comes in for a loan (some 95% of America's money supply is created this way; see Credit Theory of Money in Glossary below). When a borrower brings in an acceptable infrastructure loan request, the NIB would create a dollar deposit in the borrower's name (an NIB liability) ready for use, and accept from the borrower a matching loan note (an NIB asset). The total in loans provided by the NIB in this way would not exceed its paid-in capital of \$4 trillion, unless its 1:1 monetization ratio is increased by Congress.

Q: Why does the NIB need to become a deposit money bank, accepting deposits of companies and individuals?

A: Because of the manner in which the NIB creates working capital, the NIB would also need to be incorporated as a deposit money bank. That would allow deposits to re-fill after borrowers withdraw their cash to spend on infrastructure projects. Accordingly, the NIB would also be subject to Federal Insurance Deposit Corporation, and Office of the Comptroller of the Currency, rules and requirements.

Q: What interest is charged on loans, and why is a Federal Guarantee needed?

A: The NIB would charge a rate of interest on infrastructure loans similar to the long-term Federal bond rate, i.e., a lower rate than the private capital market charges for P3 projects. The lower lending rate would reduce project expenses, and thus raise the benefit-cost ratio of infrastructure projects funded by the NIB. Loan interest fees, in turn, would fund the NIB's operating expenses, with some money to be set aside for loan-loss

provisions. In the rare event of default on a loan that cannot be met through NIB loan-loss provisions, a Federal Guarantee on all NIB loans would step in to cover the loss.

Q: Who will be permitted to apply for loans to the NIB?

A: Currently, states and local governments own 87 percent of America’s publicly held infrastructure (see Glossary of Terms below), so it makes sense for states and local governments to have a lead role in determining which public infrastructure projects will be built with NIB funding. (Meanwhile, the private sector would continue to seek funding from private banks for improvements to the fixed assets it owns – electric power generation, telecommunications, seaports, and the like.)

However, if there is an acute public need in a particular field or geographic area (e.g., to: define authority across state lines, propel scientific research, create jobs, reduce poverty, improve education standards, or prevent a devastating reduction in economic production), the NIB could assist in the creation of a public entity to supply infrastructure that the marketplace has failed to deliver (three examples are: affordable housing, especially in areas where new labor input is needed; broadband connectivity to customers in rural areas; or funding for critical commuter rail in the Northeast Corridor, where 20% of the nation’s GDP is produced).

Q: What types of infrastructure loans would be emphasized?

A: The NIB would consider loans for everything from:

- large scale integrated projects that span across sectors (like a rail/truck-ferry/power-corridor improvements along a major trucking highways),
- or across states (like new urban transit systems for the nation’s Capital and along the Northeast Corridor, or a new water system connecting the entire nation),
- to the very latest technologies (like national integrated passenger high speed/magnetic levitation rail), and include:
- urban re-development plans (to transform cities into modern, productive, energy-efficient, educational, and cultural centers),
- regional development (promoting high-potential production centers in the South, North, East, and West),
- rural development (through high-speed internet connectivity, affordable housing, and sustainable agriculture and improved local production techniques),
- to the very latest in cutting edge science (like climate change technologies, healthcare research, or fusion energy).

Just like the FDR New Deal, WWII, and Kennedy Space Program mobilizations that came before, every new infrastructure deal could be put on the table for consideration. The NIB would have the scale – a revolving fund of \$4 trillion – and the technical and mobilization capacity to make all new growth possibilities happen.

Q: How will competing project loans be evaluated?

A: Based on an engineering, economic, and environmental cost-benefit analysis of each project over the project's lifetime. A 2017 study commissioned by the Treasury Department illustrates how cost-benefit analyses are computed. That study identified 40 top-ranking transportation and water projects across America that would cost a total \$350 billion and, for every \$1 invested, would return up to \$7 back into the economy over the lifetime of the projects. By using this selection method, loans will go into the geographic and infrastructure areas where they are needed the most, aimed at maximizing economic growth and social welfare, and thus will be insulated from political considerations.

Q: How will states and local governments repay their loans?

A: Numerous studies have shown that well-targeted public infrastructure projects improve private productivity, super-charge economic growth, create new better-paying jobs, and thus lower income inequality. One such calculation covers the period during which the RFC was in operation – then GDP grew 3%/year faster than the factors going into its production (see Glossary for a definition of Total Factor Productivity), while another measure of income inequality was cut by one third.

Broad-based economic growth, in turn, provides new tax receipts that improve the ability of state and local government to repay their infrastructure loans. As proof, all four National Infrastructure Banks in the past experienced near universal loan repayment, and either broke even or turned a profit by the time their charters expired.

Q: How will the National Infrastructure Bank (NIB) be incorporated?

A: The NIB will be a public bank, chartered in accordance with Article I, Section 8 of the Constitution, which gives Congress the authority to “collect taxes... coin money ... and provide for the general welfare of the United States...”

After further discussions, it may be incorporated under the "Government Corporation Control Act (GCCA)," as the Reconstruction Finance Corporation used to be, and the Federal Deposit Insurance Corporation and Export Import Bank are now. Or, it may be set up as an independent Agency controlled by Congress, as the Federal Reserve Board is today (the President can exempt select Agencies from the GCCA. Meanwhile, the 12 Regional Federal Reserve Banks are private corporations, with member commercial banks owning their stock, and earning dividends, but not voting or controlling their operations). Or, it may be an “independent establishment” of the Federal Government, Executive Branch, as defined in section 104 of Title 5, United States Code.

Q: Who monitors/audits the NIB?

A: Like other public agencies, the NIB will be fully transparent, maintaining financial statements using generally recognized accounting principles, conducting annual audits, and reporting to: the Congress, the General Accounting Office and the Comptroller General. Also like other public agencies, it will have an independent Internal Ethics Office

that monitors the Bank's loan selection process, and efficacy of all infrastructure loans made.

Q: What is the governance structure of the NIB?

A: The NIB will be run by a Board of 25 Directors – mostly experienced engineers, but including Labor, State and Local, and Consumer representatives – who will sit for staggered 5 year terms. Directors will appoint from among themselves a President, who will assemble a staff with experience in: engineering, banking, management, heavy construction, government regulation, and other scientific fields; and who will assess for Board consideration and approval: the feasibility, riskiness, productivity, and cost effectiveness of all loan applications.

Q: How will NIB infrastructure loans be coordinated with the work of Federal Government Departments?

A: Currently, the Federal Government and States share responsibility for the ownership, funding, and regulatory control of public infrastructure. The Federal Government spends about \$45 billion per year on the infrastructure that it owns – such as veterans hospitals and the air traffic control system – and about \$80 billion per year on matching grants for state and local infrastructure – mostly for highways and urban transit. Meanwhile, Federal regulations on safety (everything from air and water quality control to commercial bank deposit insurance) and natural monopolies (e.g. power generation, and telecommunications) form an even greater sphere of the Federal Government's influence over infrastructure.

All of the above are administered through the Departments of – Transportation, Energy, Housing and Urban Affairs, Federal Aviation Administration, United States Army Corp of Engineers, National Aeronautics and Space Administration, Nuclear Regulatory Commission, Environmental Protection Agency, Bureau of Reclamation, and Federal Communications Commission – each enforcing their respective sets of laws passed by Congress and administrative rules.

The National Infrastructure Bank will maintain expertise, and work alongside, all Federal agencies and, over time, if deemed desirable, can assume their roles in funding publically owned infrastructure projects. Most importantly, however, the NIB will form a Technical Advisory Service to share information among loan applicants on: best project design and implementation practices (including from the Global Infrastructure Forum), US regulatory and institutional requirements, effective risk-allocation policies; and to assist loan applicants in moving projects through the regulatory process. Along the way, the NIB will report to Congress on Federal institutional hurdles that slow infrastructure project approvals (e.g., the current 6-year review period for building a new road).

Q: How will the NIB and local governments work with private firms to deliver Inclusive, Green, Sustainable-Resilient, and Technology-Driven Infrastructure?

A: In several ways. First, in the design phase, the NIB can assist regional planning agencies in identifying sets of infrastructure projects that best address local economic and social needs. To maximize local feedback, needs and objectives could be surveyed, and the costs, benefits, and tradeoffs of alternative projects compared in public discussion settings. Second, in the project implementation phase, the NIB could assist with best value procurement practices (see Glossary below), and local project management enhancement. And third, the NIB could assist local governments in integrating their approved policies (e.g., to promote sustainable urban development, or protect the environment) into infrastructure loans, as desired.

Q: The NIB is expected to create \$4 trillion in new money. Will that interfere with the policies of the Federal Reserve (FED) to control inflation and reduce its balance sheet?

A: Actually, the operations of the NIB would complement those of the FED quite nicely. The FED is currently in the process of reducing its balance sheet by \$2 trillion, and will do so by selling its Treasuries to commercial banks in exchange for dollars (or accepting dollars for expiring Treasuries), and then taking those dollars out of circulation. As a consequence, interest rates will rise. If the FED operates too quickly, private sector borrowing could falter on account of the higher interest rates, and a recession could occur. However, if the NIB simultaneously creates aggregate demand by lending money into the real economy as infrastructure loans, this could offset the negative effects of the FED's balance sheet reduction. Similarly, if NIB operations cause the economy to overheat, and CPI inflation to rise, the FED could accelerate the pace of its balance sheet reduction to cool the economy back down.

Q: Similarly, would the operations of the NIB interfere with Fiscal Policy over the foreseeable future?

A: The Congressional Budget Office projects that, under current laws, the Federal Budget will incur deficits totaling \$10 trillion over the next ten years, and thus will need to issue net, new Treasury securities totaling \$10 trillion. NIB capitalization would not interfere with that process, because the NIB will only take in EXISTING Treasuries, and is precluded from purchasing new ones. However, should the NIB wish to extend its capitalization by borrowing from capital markets (as its statute allows), and should that borrowing compete with open market operations to finance the budget, then the Federal Finance Bank (created for this purpose) could take offsetting measures to smooth out the government securities market.

Q: How does the NIB compare to other current infrastructure bank proposals?

A: Currently there are three other bills in Congress to create infrastructure banks, as outlined below:

- Rep. Rosa DeLauro (D-CT-3) National Infrastructure Development Bank Act of 2017 (HR 547) calls for appropriation of \$5 billion per year for five years, and the raising of \$500 billion from interest subsidized “American Infrastructure Bonds” to fund up to half of the cost of infrastructure projects. The other half must come from dedicated revenue sources (including public-private partnerships) that securitize the infrastructure project obligations, with no government guarantees provided.
- Rep. Peter DeFazio (D-OR-4) A Penny for Progress (HR 1664) would provide \$500 billion for transportation infrastructure, to be funded by the issuance of 30-year bonds, to be repaid by raising the gasoline tax by 1.5 cents in 2017, and indexing it thereafter. Rebuilding America’s Airport Infrastructure (HR 1265) would generate user fees to fund airport renovations by removing a cap on passenger facility charges. And Unlocking the Harbor Maintenance Trust Fund (HR 1908) would provide \$18 billion to dredge coastal and inland harbors, to be paid back by increasing port user fees.
- Rep. John Yarmuth (D-KY-3) A Bill to create an Infrastructure Bank (expected introduction in January 2019) would also authorize the Federal Government to sell \$300 billion in 40-year “Rebuild America Bonds” to finance repair of aging infrastructure. The bonds would earn 2 percentage points more than 30-year Treasuries, to attract investment by pension funds.

All three proposals suffer from the following disadvantages vis a vis the NIB: they are too small to fund all of America’s infrastructure needs; they all rely on the issuance of new bonds, which will raise the level of the Federal Debt and compete with government securities market operations to fund the ongoing Federal deficit; and, to the extent they do not provide a government guarantee, they may not attract pension money that requires a AAA bond rating.

By comparison, the National Infrastructure Bank has none of these disadvantages. Rather, it:

- Has the scale - \$4 trillion to start, with room to expand later if needed – to finance ALL of America’s infrastructure needs,
- Monetizes existing Federal debt to create working cash to fund infrastructure projects,
- Creates no new Federal debt,
- Does not rely solely on unpredictable user fee models to securitize loans, and
- Follows a model that worked successfully – 4 times in the past – to build almost all of our nation’s infrastructure.

The reality is that only a sufficiently large National Infrastructure Bank, dedicated to long-term lending for infrastructure, that does not raise Federal debt, is proven capable of rebuilding American infrastructure.

Glossary of Terms

Infrastructure – Economists define infrastructure as large, capital-intensive natural monopolies such as: highways; mass transit; water and sewer lines; airports; seaports; and rail, electric-power, and telecommunications systems (the latter-four are generally privately owned). The US National Accounts defines infrastructure as capital assets that are government-owned, including highways, roads, bridges, schools, airports, and public parks. At present, states and municipalities account for 87% of all publicly owned infrastructure, with the Federal Government owning the remaining 13%.

Public Good -- In economics, a public good is one that can be accessed by any person, where that person's use does not reduce availability to others. Examples of public goods include: knowledge, official statistics, national security, clean air and water, flood control systems, lighthouses, street lighting, and the internet. **Social goods** are defined as public goods that could be delivered privately, but are usually delivered by the government for various reasons, including **social welfare**, and are generally funded via taxes. It may be possible to recoup the costs of some public goods (e.g., maintenance fees for lighthouses that service ships entering a port can be bundled with port fees), but not others (e.g., maintenance fees for street lighting cannot practically be assigned to any given beneficiary).

Money Creation – [There are three theories outlining how money is created](#): (1) The currently prevailing *financial intermediation theory* says that banks collect deposits and lend these out, for which they are required to maintain an adequate capital-to-loan ratio in order to avoid a potential financial crisis. (2) The older *fractional reserve theory* says that while individual banks do not create money, the banking system as a whole is able to do so through the process of multiple deposit expansion (the “money multiplier”). And (3) the [credit theory of money](#), outlined by Joseph Schumpeter a century ago, holds that each individual bank creates money through its accounting operations, and does so whenever an individual successfully applies for a loan.

(There are three empirical proofs that the credit theory of money is the correct model describing how commercial, deposit money banks operate: (a) a controlled test of bank accounting software showed that when a loan is made, a cash deposit of the same amount, ready for use, is also made; (b) the Federal Reserve's expansion of the money supply following the 2007-08 financial crisis did not pass through to commercial banks by the full money multiplier, because there was no commensurate demand for credit from businesses and individuals; and (c) a case study of Credit Suisse illustrates that a bank can create deposits as a means for satisfying capital-adequacy ratios, even during a financial crisis.)

The proposal here is that the National Infrastructure Bank will operate in the same way as any commercial bank, namely: that it will create deposits, ready for use, equal to each infrastructure loan as it is made, subject to the limit that the sum of all loans will not exceed its paid-in capital of up to \$4 trillion (a monetization ratio of 1:1).

Outsourcing – is an agreement in which one company hires another company to be responsible for an existing internal activity. Government can outsource by handing over control of public services to private companies. Reasons for outsourcing include: reducing and controlling operating costs, and streamlining time-consuming activities, including by accessing world-class technologies. Generally, outsourcing contracts can be broken if the service provider is not performing as promised.

Procurement is the process of acquiring goods, services, or works from an external source, often via a tendering or competitive bidding process. **Best value procurement (BVP)** is a procurement system that looks at factors other than price, such as quality, expertise, or latest technological advance, when selecting vendors or goods. It incorporates a comparison of the costs and benefits of alternative project designs. **The Federal Acquisition Regulation (FAR)** is the principal set of rules in the Federal Acquisition Regulations System regarding government procurement in the United States. It governs the "acquisition process" by which agencies of the Federal government acquire goods and services by contract, with appropriated funds.

Public Private Partnership – A Public Private Partnership (P3) typically involves a private entity financing, constructing, and managing a public project in return for a promised stream of payments (directly from government or indirectly from users) over the projected life of the project. These contracts are generally of a very long duration (some lasting 75 years), and become broken only if the private entity goes into bankruptcy, or local government decides to buy out the remaining contract in order to bring the service back in-house (that occurs about one quarter of the time).

Total Factor Productivity (TFP) is calculated as the ratio of the change in output to the change in a combination of inputs (labor hours, capital services, energy, materials, and purchased services). The TFP statistic thus describes the efficiency gains (or losses) associated with growth (or decline) in output that are not a result of changes in measured inputs. Efficiency gains are observed to occur most prominently when a National Infrastructure Bank is in place, because new infrastructure improves private sector assets and makes their output more productive. That, in turn, makes it possible for economic growth to accelerate, even under conditions of full employment, without resulting consumer price inflation. As measured, TFP grew by an average of 3% per year during the 1950s when the RFC was in place, slowed to about 2% per year from 1960-2004, and has hovered at only 0.3% per year since then.

Where is the money?

