Investing in the Nation's Infrastructure- the Role of Institutional Investors & Public-Private Partnerships

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Introduction

According to the American Society of Civil Engineers (ASCE), infrastructure is the foundation of the economy and every society needs infrastructure to thrive[1]. Infrastructure supports and facilitates commerce and daily activities of Americans which in turn boosts productivity. ASCE conducts an assessment of infrastructure every four years in which the nation's infrastructure are categorized as dams, bridges, inland waterways, ports, railroads, transit, public parks and recreation, schools, aviation and energy assets. A grade from A to F is given to describe the current state of the nation's infrastructure. This grade is based on capacity, condition, funding, future need, operation and maintenance, public safety, resilience and innovation. America was given an overall grade of D+ in 2013. This grade indicates that on average; most of the infrastructure are in poor conditions and are at risk of failure. In order for the nation to maintain its status as the leading global economy, the state of infrastructure must improve. It is estimated that a total investment of about $3.6 trillion is needed by 2020 to fix the nation's infrastructure[1]. With declining tax revenues and budgetary constraints, the Federal government will need to employ strategic and innovative ways to bridge this funding gap. This situation provides a unique opportunity for institutional investors seeking stable returns over an extended period of time.

How Did We Get Here?

There are many political and socio-economic factors that have influenced the degradation of infrastructure in the US. For example, consider the country's roads. The Highway Trust Fund (HTF) was established in 1956 to finance the bulk of highways and mass transit facilities in the country. Due to the fund's importance, it has a split classification of both discretionary and mandatory which allows outlays to exceed revenues generated[2]. This has been the case in the past decade since revenue for the HTF mainly from excise taxes on the sale of motor fuels, trucks, trailers, truck tires and other special vehicles has been on the decline. The Federal gas tax has remained unchanged at 18.4¢ since 1993. As a result, inflation has also limited the purchasing power of the revenue being generated. Also, there is a growing number of fuel-efficient vehicles on the roads today which means that less revenue is being realized from gas taxes. This has contributed to an unsustainable trend characterized by a continuing

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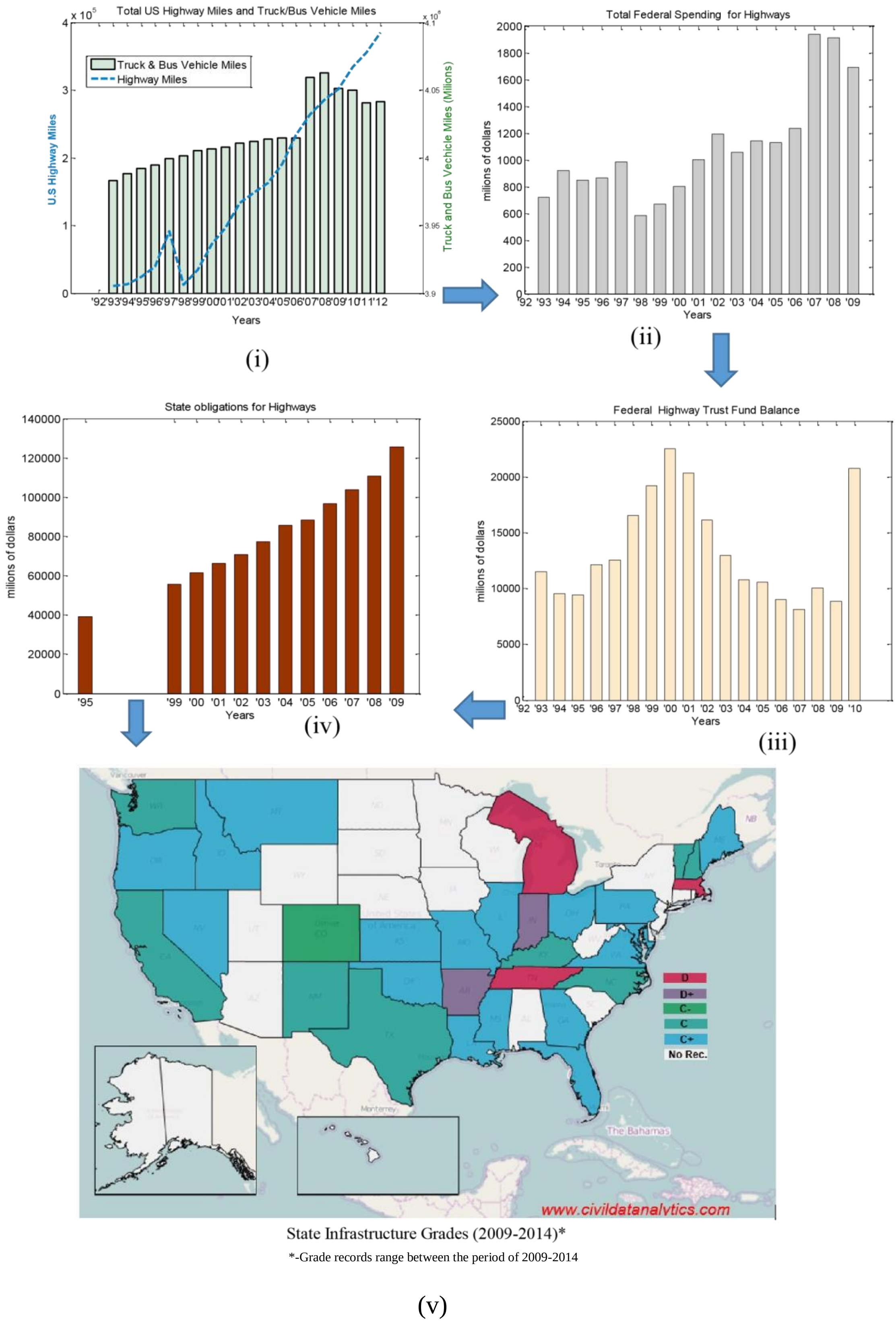

Figure 1. Unsustainable Highway Infrastructure Funding Scenario[14]

underinvestment and growing spending gaps in surface transportation infrastructure including highways, bridges, and transit systems. The situation can be summarized in the figure shown. It can be deduced from Figure 1 that even though additional miles are being added to the national road network yearly, truck and bus usage has also increased steadily over the years putting pressure on the existing infrastructure (i). As a result, road degradation is accelerated leading to increased spending on roads as evidenced by the total spending for highway infrastructure in (ii). This increased Federal spending has also led to a situation where the outlays from the Highway Trust Fund exceed revenues (iii). Increased spending on infrastructure also has impacts on State governments as their obligations for highways also keeps rising over the years (iv). This results in a scenario where infrastructure is underfunded leading to conditions which are below standards (v) and may even put citizens at risk in some cases.

The economic ramifications of this situation are numerous. For instance, bridges and roads in poor conditions lead to increased vehicle operating costs, damage to vehicles and added rehabilitation costs. It is estimated that if the current deficient surface transportation trends persist, it will cost Americans $3 trillion by 2020 [4]. On July 15, 2014, the House of Representatives approved a short-term fix to prevent the fund from becoming insolvent in August 2014. This would have resulted in the loss of about 700,000 jobs [3]. In order to ensure infrastructure is in a good condition to support growth and development, the Federal government must provide long-term and sustainable financing solutions. The gas tax cannot be the only source of revenue used to fund highway infrastructure projects since consumption projections based on an ARIMA model indicate levelling off in the next few years (Figure 2). Car manufacturers are also adapting to changing market trends involving a shift towards fuel-efficient vehicles, electric vehicles, car-sharing programs and alternative transportation choices for most millennials. This means that gas consumption may not rise significantly within the next few years.

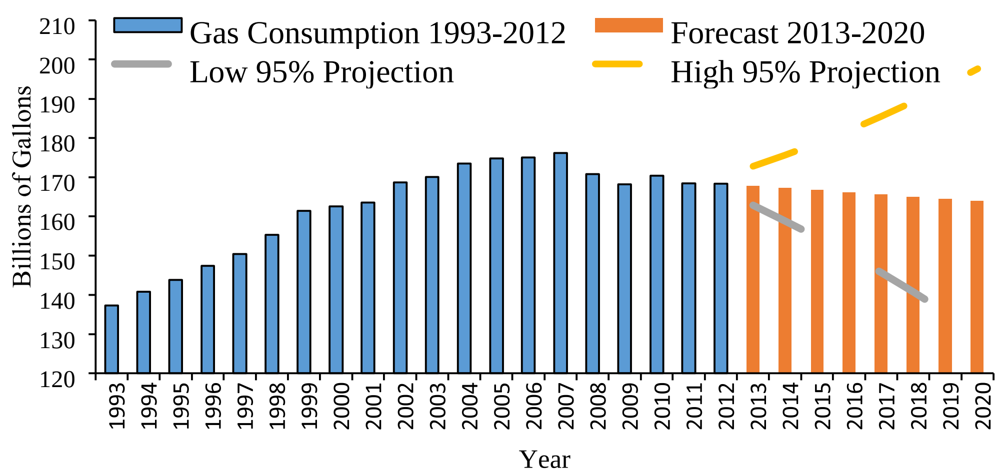

Figure 2. US Gas Consumption Projections [14]

Increased Private Sector Participation

It is clearly evident to all stakeholders that the infrastructure sector requires increased investment to maintain and improve existing assets as well as develop modern infrastructure. In recent times, there have been calls for increased private sector participation in infrastructure development due to strained government resources. Regardless of the skepticism that is widely expressed with private sector investment in public projects, there are so many merits that must be taken into consideration.

First, the reality is that the public sector has a lot of budgetary constraints and increased investment in infrastructure may require cutting spending on other government programs. As such, private investment in infrastructure will give the public sector some level of flexibility in budget allocations and will allow the government to spend on other sectors such as education. Secondly, the private sector is profit-driven and so companies employ the latest technology and innovative solutions to boost their profit margins. Partnership between the government and public sector will ensure efficiency and will allow budgets to stretch further to meet the needs of the public [10]. In summary, partnership with the private sector allows the public sector to share financial and operational risks in accordance to which entities can best manage specific risks.

Why Institutional Investors should be interested in Infrastructure Development

Currently, there is a growing need for national infrastructure development and maintenance and this may present an ideal opportunity for institutional investment. A few firms have alternative investments in their portfolios and these may occasionally contain infrastructure assets. However, this is a sector that needs further consideration by investment managers and institutional investment funds around the world, especially in the US.

Conventional project delivery involved borrowing from banks and issuing bonds to repay loans. However, due to the new ‘Basel 3’ rules, banks view lending for infrastructure projects as less attractive. This is where institutional investors come into play. Part of the $50 trillion in assets managed by pension funds, sovereign funds and other institutional investors globally [5] can serve as a major source of capital for delivering public infrastructure.

Volatility in the markets have made traditional asset yields very unpredictable and so investment in infrastructure assets presents a viable alternative that has the capability of guaranteeing stable long term returns; which is what pension funds, mutual funds and insurance companies all seek. Concession periods for most revenue generating infrastructure assets such as toll-roads, toll-bridges, and airports last for long periods and as such will ensure returns for funds over a long period of time. A key point to note is that, infrastructure asset investment can act as a hedge during inflation and unfavorable market conditions. An explanation for this is that infrastructure assets are less correlated with other assets other and in most cases generate revenue through user-fees which are often inflation-linked [6].

The general public and the private sector have raised concerns about private participation in infrastructure projects; especially in transportation. There have been projects in the past where contracts had to be renegotiated or concessionaires file for bankruptcy because of overly optimistic demand and revenue forecasts. A recent example is the Indiana Toll Road where overly optimistic traffic forecasts forced ITR Concession Company to sell itself to the highest bidder to offset its debt [7]. These cases, among a few others tend to deter fund managers from including such assets as part of their investment portfolios. However, public infrastructure projects which have been operational for some time with well-established demand and limited competition will provide stable and appreciable returns in the long run and will be a good place for fund managers to test the waters by playing the role of equity investors for maintenance and expansion projects. In these type of projects, demand and operational risks are reduced since the project has been in use for some time which provides a good basis for accurate modelling and future flow predictions.

It is essential to note that infrastructure investment need not be limited to toll-roads alone but can include schools, energy and water provision services, public buildings and even broadband infrastructure. For example, let say there is the need for new water treatment plant in the community. The total cost of the project is estimated to be $10 million, however due its prior fiscal obligations government can only finance up to $1 million a year. It would take government 10 years to provide needed capital for this project, while in meantime public will be lacking this essential service. Partnerships with the private sector enable governments to provide assets for public use within schedule since the private sector can come up with part of the funds needed to develop the project. Increased private sector participation will also promote and efficiency because the private sector has a greater stake in the success of the project and there is also an incentive to innovate.

The Way Forward

The importance of infrastructure development to economic growth is highlighted in an IMF Study (IMF's October 2014 World Economic Outlook) where an increase of 1% of GDP in infrastructure spending for advanced economies raises economic output by 0.4% in the first year and 1.5% in the four years after the increased infrastructure investment [12]. Infrastructure development will also play a vital role in the nation's economic recovery as studies have shown that a $1.3 billion investment in infrastructure will lead to the creation of 29,000 jobs [13]. In these trying times when the government is trying to limit budget deficits, public infrastructure can be provided efficiently with cooperation from the private sector.

To encourage investment in infrastructure by pension funds and other private institutions, local government entities which specialize in innovative infrastructure investment must be established by all States. These entities, with support from Congress will mainly be responsible for providing expertise on private investment for the provision of public infrastructure that addresses each State's unique needs. States can follow the examples of Michigan, California and Virginia [9] which have dedicated PPP units which can serve as a nexus between the private sector and government on PPP agreements. These units are responsible for ensuring accountability in such joint contracts and their presence can go a long way to boost investors' confidence in partaking in public infrastructure and service delivery. There must be tax incentives for institutional investors who decide to invest in public infrastructure. A similar suggestion has already been outlined in the President's Budget for Fiscal year 2015 [8] in the form of America Fast Forward Bonds Program.

In conclusion, institutional investors and private funds which seek to invest in public infrastructure must have infrastructure project expertise on board as part of a research team which will analyze viability of investments. Since data on infrastructure projects may not always be comprehensive to be used solely as a basis for decision-making, these experts will be invaluable as they will provide in-depth industry knowledge during value-for-money analysis. These experts may also be utilized as in-house consultants during the entire life-cycle of projects.

When due diligence is done before public-private partnership deals are finalized, it can be a win-win situation for all parties involved. Many opportunities for investment abound in public infrastructure assets and as such institutional investors must be encouraged to consider them as part of their investment portfolios. They can be a major source of stable cash flow over an extended period of time.

Case Study- Indian River Inlet Bridge Project in Delaware

After having spent about $20.8M on preparation works, plans to build Indian River Inlet Bridge were halted as engineers noticed uneven settlement at approach ramps in 2007. The Delaware Department of Transportation (DelDOT) moved forward in 2008. hiring another company to design-build the current bridge (costing about $150M), but filed a lawsuit in 2011. against the original bridge design firm and its geotechnical subcontractor for "geotechnical errors". In 2013, DelDOT received a settlement of about $5.25M.

This event underscores the importance of innovative financing approaches in infrastructure delivery. With increased private sector participation, design and maintenance risks can be transferred to the private sector. This will give the private sector partners more incentive to ensure designs are accurate to avoid any future unexpected financial loss and litigations. DelDOT stands to benefit immensely if it plans to explore alternative financing approaches in the near future considering its constrained fiscal resources.

Public-Private partnerships may bring about increased complications in contract negotiations but its benefits cannot be overlooked. In these times of government spending cuts and tight budgets, increased involvement of the private sector in public infrastructure delivery may be the key to providing solutions to our nation's infrastructure needs. The flow chart in Figure 3 illustrates briefly the public-private partnership approach.

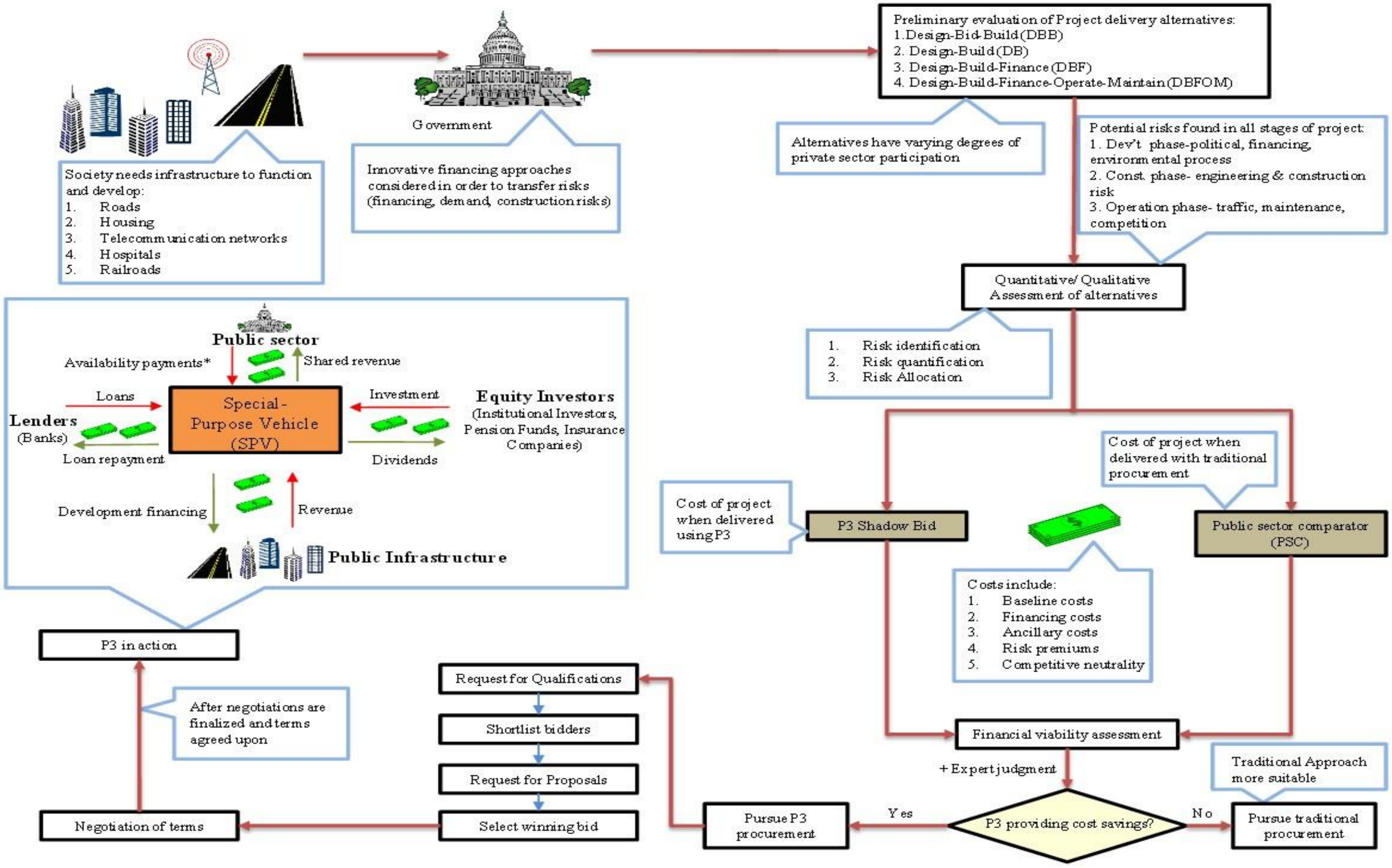

Figure 3. Flow chart of Public-Private Partnership arrangement in financing infrastructure projects

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