Innovations In Financing Infrastructure Investments

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Abstract.
Infrastructure is one of domains that over time will require more and more money and spending. That is due to growing urbanization, increasing prosperity and demographical changes. Therefore, the article relates about the investment trends in infrastructure and about the international institutions' estimation regarding the infrastructure investment by 2025 – 2030. Due to the financial and sovereign debt crisis there have been developed new instruments and techniques in order to finance infrastructure investments. Thus, the article aims to present the main instruments and incentives that aim to direct financial resources to long-term infrastructure investments that were used for many years and to describe the new forms of instruments that have been developed as a result of external factors.

Key-words: investments, infrastructure, investors, investment incentives, urbanization, economic growth.

JEL: H40, L90, O40

In periods of time characterized by low economic growth, authorities and policymakers show an increasing awareness and interest in the need to strengthen the infrastructure base. That is because the infrastructure serves as a catalyst for the entire economic growth. Notwithstanding the difficulties of capturing the precise effect of infrastructure development on macroeconomic growth, it is undeniable that infrastructure is essential to increase the productivity of labor and capital and the competitiveness and growth of a country. Higher infrastructure spending and investments trigger growth in the short and in the long run. In the short run, because investments increase the aggregate demand and activate the classic multiplying factors on gross domestic product. In the long run, because an efficient infrastructure system, particularly network infrastructure like projects related to transport system, put a country in a favorable position to be connected with important procurement markets and with markets where to sell products and services [6].

Investment trends in infrastructure

An important element of infrastructure spending is financing. It presents great opportunities to engage the private capital. Among investment sources are infrastructure funds, pension funds, and other types of investors that allocate their financial resources in order to have benefits.

There are few infrastructure elements like transportation and social infrastructure which are based on government finances. For advanced economies, particularly in Western Europe, government debt burdens have reached such high levels, that the authorities started to reduce the resources for future public infrastructure spending. Therefore, there is a need in alternative investment funds.

Private investors may be called upon to finance infrastructure investments, even for traditional public sector projects. Private investment in capital projects can free up public sector budgets and also provide more revenue to the government as a result of an increase in the local tax base. Already, many financially constrained governments are engaging in public-private partnerships, although they do add to future liabilities. In contrast, debt burdens have remained

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more stable in recent years in emerging economies, leaving more space for future government spending on infrastructure. However, emerging economies' governments typically have higher borrowing costs than advanced economies because of poorer credit histories and less certainty about future stability [7].

In the whole world, infrastructure investments are expected to total more than $9 trillion by 2025, a value that will double in comparison with 2012. At the same time, the pace of growth is likely to ease slightly, but spending still should increase by more than 6,5% a year into the medium term. According to the estimations of international institutions, there are expected to be the following changes by 2025 - 2030:

- the manufacturing sector (petroleum refining, chemicals, and heavy metals) will grow at annual rate on 8% worldwide. These sectors will be especially essential to support the economic development.
- the manufacturing sector will represent 21,3% of global infrastructure spending.
- the extraction sectors share of the global infrastructure market is expected to grow at an annual rate of 5%. Extraction activity will vary across countries and regions. Due to the discovery of new reserves, for example, the US, Canada, and Brazil will likely increase their share of global oil output over the coming decade, while the shares of Saudi Arabia and Russia will decline.
- the total global infrastructure investment needs for transport, electricity generation, transmission and distribution, water and telecommunications will reach 71tn dollars. This represents about 3,5% of the annual world GDP from 2007 to 2030 [3].
- Europe will need between 1,5tn euro and 2,0tn euro of infrastructure investments. In the time period between 2011 and 2020, there will be following investment needs:

  - ✓ for the implementation of the Trans-European Transport Network (TEN-T) program – about 500bn euro;
  - ✓ for Energy distribution networks and smart grids – 400bn euro;
  - ✓ on Energy transmission networks and storage – 200bn euro;
  - ✓ for the upgrade and construction of new power plants - 500bn euro.

It is important to remark that these estimations do not take into account the financial needs for the development of social infrastructure [2].

- The United States of America's investment needs will increase from 1,7tn dollars to 3,6tn dollars [4].

However, these estimations may be affected by unexpected global events or disruptions.

New instruments available for financing infrastructure investments

For a long period of time, the traditional capital structure used for infrastructure investments was based on a simple combination of bank loans and equity provided by corporate sponsors and developers. Therefore, the investors provided only a limited equity and – for most initiatives – the ownership of the investment project was represented by industrial sponsors, the suppliers or the operation and maintenance agents. But, this practice has changed in the past few years. The first signs of this change became evident starting from the second part of 2000s when an increased risk appetite of institutional investors coupled with a favorable environment of low interest rates redirected the financial resources from investors other than banks and industrial sponsors. This new interest for infrastructure was equally important on the equity and the debt side.

This situation has changed very rapidly in the past few years. The post-Lehman crisis first and the emergence of the Eurozone sovereign debt crisis later has reduced the availability of cheap debt financing. Also, the banks that were more active in providing infrastructure finance loans have progressively withdrawn from the market in response to balance sheets problems and to the need to increase their capital base as required by the more stringent Basel III and European Banking Authority requirements. The new market situation is then experiencing lower credit availability, higher spreads and shorter maturities.

The recent studies on infrastructure investments in Europe indicate a progressive decrease of the difference between the cost of debt and the cost of equity. This situation limits on one side the convenience to start new infrastructure development and, on the other side, forces industrial sponsors to find alternative funding solutions to move on the projects already initiated [5]. Such alternative funding solutions that aim to overcome the problem of credit retrenchment are presented bellow.

Vendor Loans. These loans have the similar structure to the ones used for acquisition financing and leveraged buy-outs. This vendor loan is usually accompanied by a relatively low sponsor backed-to-backed guaranteed advanced payment. Therefore, the investment contract usually includes contractual terms where delay and performance penalties are directly compensated with the agreed loan repayment.

Co-sponsoring with other contractors. In this case, the contractor may be willing to participate to some extent in the entrepreneurial risk with other project sponsors, assuming in turn a portion of equity of the investment project. In order to do so, the first contractor should be financially sound or has to be a cash generating company or to be able to easily get access to bank credit.

Pure financial investors in equity for infrastructures. In the past few years, the presence of pure financial investors in the equity of an infrastructure investment project was almost absent. There is an alternative fundraising like Greenfield infrastructure funds that usually participate in the development of infrastructure projects from the design phase and then bear the entire construction risk. But the amounts available from these funds are still very limited compared to the infrastructure funding needs. However, there is a growing interest of investors for these types of funds. Usually, the investors interested in Greenfield funds are institutions looking for long-term, inflation- linked assets that are able to match the typical structure of their liabilities. Such institutions are:

- *pension funds* – the researchers show that even though the pension funds engage in infrastructure investments, their participation in this process is quite low.
- *insurance companies* – according to the statistics, there are around 200 insurance companies worldwide engaged in infrastructure investments. The majority of these companies are located in Europe and the USA, with Asia representing about 20% of them. Their typical investment strategy is to commit funds to unlisted infrastructure funds managed by external advisors, followed by direct investments in infrastructure projects. Insurance companies typically invest in primary equity.
- s*overeign wealth funds* - 56% of sovereign wealth funds are willing to direct their resources in infrastructure investments.

Debt capital market. Even nowadays, the most used source of financing for infrastructure investments are bank loans. Besides them, project bonds are also quite popular. They are entitled to design, build and manage an infrastructure project. However, funding on debt capital markets is still quite limited.

Due to the progressive retreat of banks from lending, that was caused by the change of regulatory environment (especially, the enactment of Basel III rules regarding the net stable funding ratio) and to an increased interest by institutional investors for long term infrastructure investments, there appeared new financing instruments that rapidly gained ground particularly in Europe. These new instruments imply banks to cooperate with institutional investors in channeling debt funds to infrastructure. Although the market is still in an early stage of development and information is very limited, the practice seems to indicate three alternative financing instruments that enable institutional investors to approach long-term infrastructure investments [1]:

The partnership/co-investment model

In the partnership/co-investment model, an institutional investor invests in infrastructure loans originated by a Mandated Lead Arranger (MLA) Bank. The fund provision is regulated by a set of eligibility criteria and the MLA Bank retains a pre-agreed percentage of each loan in its loan portfolio. With this co-investment, an institutional investor can build a portfolio of infrastructure loans and can rely on the servicing of the loans in the portfolio provided by the originating bank. The bank can extend the partnership to more institutional investors. This practice showed very good results in France and Belgium, where such partnership/co-investment models where made between banks and insurance companies.

The securitization model

After the beginning of the recession period in late 2008, the market for securitization has been undergoing a clear downward trend. Still today, most securitizations are launched with the purpose to generate collateral to be used for refinancing purposes at central banks. This strategy is particularly evident in the Eurozone, where the institutional investors showed an increased interest. The advantage of this model is that these kind of loans structured as bonds can be tailored to the specific needs of the investors. This practice is already implemented in France, where a commercial bank has just structured a mechanism that enables institutional investors to invest in infrastructure loans. This bank has created a securitization vehicle that allows investors to invest directly in infrastructure loans structured as bonds.

The debt fund model and direct origination of infrastructure loans by institutional investors.

This model is probably the easiest way to approach the infrastructure market for institutional investors, even for the less sophisticated ones and those without a specific, dedicated team to invest in infrastructure assets. In the debt fund model, an investor provides funding to a resource pool (the fund) managed by an asset manager. The strategic asset allocation is defined since inception and allows the investors to select the fund that best suits their investment needs and interests. The success of this model requires a strong deal flow. While debt funds can represent an important way to convey institutional investors' money to infrastructure, the drawback is that - compared to partnerships or securitizations - they are based on fixed and pre-agreed investment criteria, while the other two alternatives have more possibility to adapt the financial structures to their needs. However, the market for debt funds is still very young and undeveloped. Therefore, the information available on the trends is very scarce. The few countries that have already implemented this new financing instrument are Germany, France, and the United Kingdom.

In conclusion we may state that the financial crisis, its consequences on the sovereign debt, the reforms of capital requirements for banks and insurance companies and increased levels of market uncertainty have strongly reduced the availability of financial resources for infrastructure development in spite of long-term investment needs worldwide. However, the new developed financing instruments show that the market didn't stop. It adapted to the new conditions and developed new alternative sources in order to assure the needed capital for infrastructure investments.

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