PUBLIC - PRIVATE PARTNERSHIPS IN EMERGING MARKETS: CHALLENGES AND FUNDING OPPORTUNITIES

Iana OVSIANNYKOVA, PhD*

Abstract

We study the impact of global financial crises on structure of public-private partnership (PPP) funding during 2008-2012. The evidence in fact suggests that PPP funding changes essentially and lead to risks diversification by potential investors due to political and economic instability. As a result government has to take major project risks. Institutional investors will increasingly become major investors in the capital market, and hence potential investors for PPP projects. At the same time, the paper found that institutional investors today may play a significant role on the PPP market, which investment opportunities have essentially increased. The investment in the PPP projects is attractive for pension funds and insurance companies because PPP assets are equal to the duration of their long-term liabilities and ensure their long-term inflation hedge. In this way, we can assume that the investment in PPP via project bonds by institutional investors may be mutually beneficial decision for both the PPP development and the institutional investors' evolution.

Keywords: project finance, project bond, mezzanine finance, institutional investors

JEL Classification: E22, G23

1. Introduction

In connection with the global financial crisis and the risk aversion of investors, long-term credit market is experiencing a severe recession - to get a loan for a long-term investment project virtually impossible. At the same time, the emerging markets have a lot of projects that require long-term financing. The structure of financial markets of emerging regions is characterized by unavailability of financial instruments known developed financial markets. It narrows the possibilities of capital mobilizing for the

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* *Assistant professor Taras Shevchenko National University of Kyiv, Faculty of Economics, Department of Banking, Ukraine.*

creation and development of infrastructure such as transport, energy, housing, telecommunication, education and health. Infrastructure projects are most reliable for investments in financial and economic crises, because the infrastructure is the basis for economic growth and employment creation. It is necessary to involve in PPP financing conservative investors because they don't target on trading gains. In such circumstances, one of the most important ways to improve market expectations are expanding of the financial instruments list and attracting of institutional investors, such as pension funds, investment and insurance companies.

Previous studies have found that financial markets of emerging regions are poor that's why governments have to use wide range of PPP's instruments to activate investments in infrastructure projects (Bazylevich, 2009; Farquharson, Torres de Mastle and Yescombe, 2011). Inderst (2013) finds that financing of infrastructure investment requires private capital participation and underlines that institutional investors have to play a significant role in such projects. Although PPP projects are risky that's why financial markets have to offer special instruments for hedging such types of risks (Naumenkova and Gavrysh, 2013).

The remainder of the paper is organized as follows. Section 2 introduces public-private partnership: tendencies and challenges. Section 3 develops the idea of potential financial instruments and investors. Section 4 describes investment barriers and provides policy action to promote long-term investment in PPP.

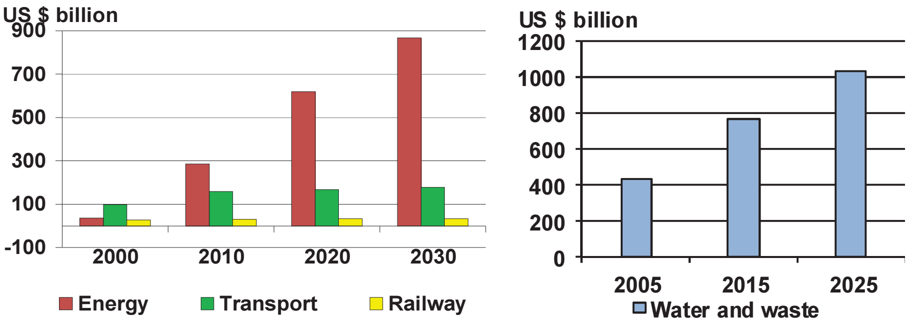
2. Public-Private Partnership: tendencies and challenges

There is an urgent need in financing of infrastructure projects (such as transport, energy, water and waste, education, health, etc.) around the world. The OECD countries and EU especially underline the importance of this problem. The OECD estimated global infrastructure requirements to 2030 to be in the order of US$50 tn (OECD, 2011) (Figure 1).

In turn, the scientists calculate the significant amount of required investment for infrastructure development in Europe over the next 25 years. It is over EUR 4 trillion or EUR 350-450 billion annually. Accordingly to the survey results of the European Commission, annually EUR 9.1 bn was spent only on energy projects during 2005-2009, of which EUR 5.8 bn for electricity and EUR 3.3 bn - extraction and transportation of natural gas. The experts estimate annual demand for investment in this sector to 2020 in amount of EUR 14 bn.

Figure 1

The average investment requirements for infrastructure in OECD countries to 2030, US $ bn



Source: author's calculation based on data from the OECD

Typically, this projects are large-scale that complexity its implementation solely by government or private company. That's why Governments around the world are attempting to stimulate the economic growth due to attracting private investment in infrastructure. Under these conditions, the tool of public-private partnership (PPP) is becoming important among government circles of these countries and widely using of all infrastructure initiatives. Despite the complexity of implementing this model and some skepticism about its efficiency and justification, the PPP is becoming a part of the political debate, including in the strategies of development and regulation, especially in the developing countries.

The public-private partnership is an evolutionarily new stage of relations between state and privet enterprises, because it can overcome limited capacity of state and local governments to finance social and infrastructure projects. This tool differs in scale and highly efficiency of resources use, inclines to innovations, implements the advantages of private ownership to improve the quality and efficiency of the public management of infrastructure.

Currently the PPP is used by almost all governments around the world, because it is a primary factor in accelerating socio-economic development, improvement quality of life and the environment, optimization of financial, human and other resources for the implementation of the significant projects.

The public-private partnership can be seen as an instrument of state regulation of the economy and improvement the management of state property, as an approach of harmonizing relations between public authorities and the private sector through its involvement in the providing of public services. Thus, it can be used efficiently and implicitly accelerate sustain economic growth.

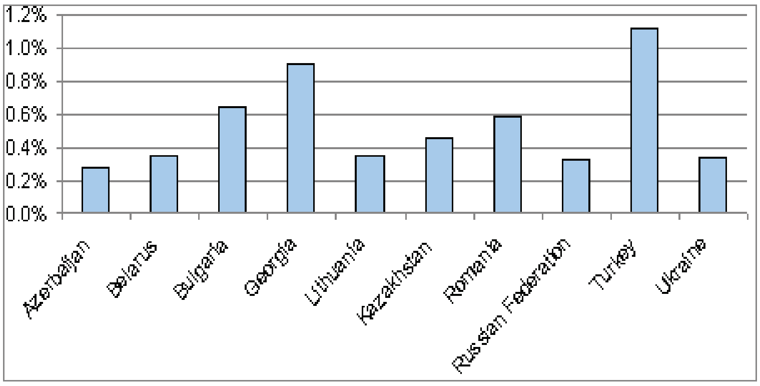
The development of the public-private partnership in all regions of the world, its widely spread in various fields and industries gives reason to assume this form of interaction between the public sector and the business as a characteristic feature of the modern economy. According to Dealogic, global investments in the PPP and number of deals are increasing every year, on average $50-90 bn per year or approximately 0.1% of world GDP. The PPP market constitutes 25% of the total project finance market, i.e. every fourth project in the world is realized on the basis of public-private partnership.

Recently, the countries of the Eastern Europe and the CIS (Poland, Hungary, Russia, and Kazakhstan) also began actively developing and implementing the public-private partnership to accelerate the economic growth. According to experts of the European Commission, Ukrainian investments needs constitute now more than EUR 140 bn. However, investment attractiveness of Ukraine PPP projects is comparatively quite low. The average level of private participation in infrastructure (PPI) in Ukraine is 0.33% of GDP, while in Turkey the figure is 1.11% of GDP (Figure 2).

There is an apparent discrepancy between the required and available investment. The financial market conjuncture is changed and conditions to attract long-term financial resources are stiffened due to the global financial crisis which has affected the project financing market, and as a result the mobilization of the necessary financial resources is significantly aggravated.

Figure 2

The average level of PPI investment in emerging markets in 2008-2013, percent of GDP



Source: author's calculation based on data from the World Bank

The potential problem with recently decreasing investments involved in the PPP implementation is obvious. The Table 1 provides statistical evidence of the PPP financial structure reflection on the changes. Generally, the ratio of debt to equity particularly differs from the pre-crisis practice and the state share or international financial institutions (IFIs) participation expectedly increases in the PPP projects during and after crises period.

Table 1

The PPP financial structure during 2006-2012, percent

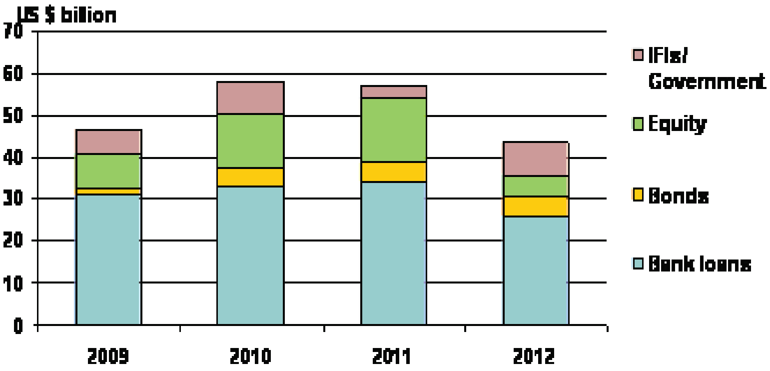
Source of Finance	2006	2007	2008	2009	2010	2011	2012
Debt	79	73	73	59	56	67	66
Equity	15	21	18	19	16	17	22
Grants/ IFIs/ Government	6	6	9	22	28	16	12
Ratio of debt to equity	19	29	25	32	29	25,5	33,5

Source: author's calculation based on data from the Infrastructure Journal

Reduction of the loans availability, the main source of PPP financing globally, and sudden tidying of the lending conditions, has led to a marked increase of the debt financing cost. Therefore, the structural weaknesses in the banking sector have caused growing discrepancy between the amounts and terms of available funding especially for long-term financing. As a result, leverage ratio of the total PPP financing has decreased that cause the actively participating of the IFIs in the PPP due to its possibility to provide financing in crises period (Figure 3).

Figure 3

The amount of investments in PPP projects by source of financing in 2009 – 2012, US $ bn



Source: author's calculation based on data from the Infrastructure Journal

3. Potential Financial Instruments and Investors

The financial structure of the PPP varies depending on the area of its implementation. According to Eurostat's, share of equity in PPP projects undertaken in education and health is only 6%, while in the public utilities and transport infrastructure it reaches approximately 20%. In developed countries, social infrastructure projects primarily are implemented via borrowings, an average 20% are bonds. Loans are more common financial instrument for economic infrastructure projects - about 75% of total borrowings.

In practice, governments use different financial instruments depending on financial market evolution. Farquharson, Torres de Mastle and Yeskombe (2011) state that the most common financial instruments for PPP projects in developed countries are stocks and bank loans, also sometimes bonds, corporate loans and mezzanine capital investment. In turn, the emerging markets frequently use stocks and IFIs loans, occasionally bank loans and guarantees, and very rarely - bonds and mezzanine capital. The potential problem for these countries is to mobilize the private capital for PPP projects implementation, especially long-term financing in the post-crisis period. This situation is accounted for poor economic development, high cost of funding and high project risks due to countries instability.

Thus, bank lending, especially syndicated, remains an essential part of the PPP debt financing and plays primary role in its funding. Based on the above we can assume that current changes in banking regulation due to "Basel III" may affect the ability of banks to carry out PPP long-term financing. The new liquidity coverage ratios require higher spreads that force the European banks to reduce risky assets, including long-term investments in PPP projects.

Nowadays the substantial increase of required investment for the infrastructure development accounts for activation of finding potential investors and available funding.

Recently, many countries started to search for alternative financial instruments through implementation the international experience of developed countries, and conducting extensive research of the financial market and its opportunities. The US and the UK carefully studied experience of Canada as a leader of bond applying in the PPP projects. The US create federal program called Transportation Infrastructure Finance and Innovation Act (TIFIA) with fund in US $ 1 bn a year, which provide tranche on subordination basis (about 49% of project costs). Later, there was launched state program SAFETEA-LU (Safe, Accountable, Flexible, Efficient, Transportation Equity Act: a Legacy for Users) that activated bond issue for PPP projects – Private Activity Bonds and Build America Bonds. The European Commission, in turn, assessed existing financial mechanisms of funds rising and identified innovative financial instruments to support the PPP development. "Project bond initiative" was introduced throughout the European Union as a result of this research. Russia and India also started to develop actively the bond market. Therefore, use of project bonds in the PPP funding apparently has become worldwide and has increasingly attracted attention of potential investors. Managers of the PPP projects can mobilize private investment through issuing project bonds as an additional tool or alternative to the traditional bank lending.

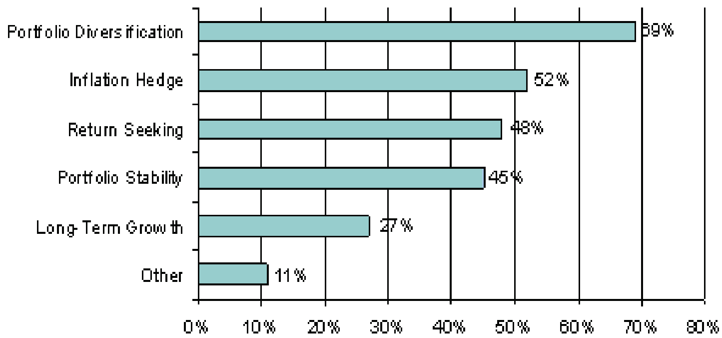
The launch and promotion of the project bonds will essentially improve the investment attractiveness of the local PPP projects and especially contribute to involving international investors. Thus, capital market will raise more dynamic, which also will lead to the institutional investors' activation and their development.

According to OECD research, institutional investors, with over US$75 tn in assets held at the end of 2010 in OECD countries alone, could be key sources of capital, financing long-term, productive activities that support sustainable growth, such as infrastructure projects. (OECD, 2011; Inderst, 2013). For example, Ukrainian institutional investors had corporate bonds in amount of 64.5 bn UAH (or approximately US $10 bn) for the period 2006-2011. And the bonds share in the investment portfolios was on average 25.5%.

Based on the analysis, infrastructure investments have a lot of attractive characteristics for institutional investors, namely stable and predictable income with lower risk, sufficient recovery rates low correlation to other traditional asset, contribution to social development. In principle the long-term investment horizon of pension funds and other institutional investors should make them natural investors in less liquid, long-term assets such as infrastructure (OECD, 2011). According to the Macquarie Infrastructure & Real Assets, the primary reasons why institutional investors choose the infrastructure assets are portfolio diversification (69%) and inflation hedge (52%) (Figure 4).

Figure 4

Reasons for institutional investors to fund infrastructure projects



Source: Rubin (2013)

Moreover, financial gap significantly increases the role of mezzanine investment in the infrastructure funding. This relatively new financial instrument has all necessary features for inclusion in the list of project financing tools, as well in the PPP financing.

The economic scientific literature defines a lot of mezzanine financing instruments, including subordinated loans, preferred stocks, loans from shareholders, convertible bonds, bonds with warrants and others. The cost of mezzanine maintenance do not exceed essentially the cost of equity, that's why it can reduce the weighted average cost of capital and, consequently, increase the value of the business.

Lots of private equity funds specialized in mezzanine financing all over the world, about 100 funds focus on European countries. European private equity funds mobilized capital in the amount of EUR 81 bn. over the past 10 years (SCM, 2013). So we can assume the existence of significant potential for financing large-scale PPP projects. In addition, recently IFIs and investment banks that specialize in Eastern Europe have been created mutually such funds. Last year, EBRD, EIB (European Investment Fund), Franklin Templeton Investments and other institutional investors, banks and private investors from Europe and the US launched a regional mezzanine fund Darby Converging Europe Fund III, the amount of which is EUR 250 mln. The Fund provides mezzanine finance in Central, Eastern and Southern Europe to support the local financial market, the introduction and implementation mezzanine financing tools, the development of corporate governance standards of investment companies.

In this discussion, the current situation has led to the emergence of new forms of financing in the capital market via non-bank financial institutions, such as unlisted infrastructure funds.

This relatively new player in the project finance market allows investors to have better access to a broad portfolio of infrastructure assets and allocate the risks among others. Such infrastructure funds have certain advantages over traditional investors. They have a low correlation to the market changes, low liquidity, at the same time they attractive in terms of profitability.

According to the Strategic capital management report, the share of unlisted infrastructure funds as a percentage of global infrastructure transaction volume was roughly 13%, i.e. in 2012 about US $120bn of capital was deployed by institutional investors through unlisted infrastructure funds managed by specialist infrastructure investment firms (SCM, 2013).

Thus, this form of innovative financing will develop and amount of infrastructure investments will increase due to the constantly increasing investment needs in significant investment to fund new or existing PPP projects. The first major regional private infrastructure fund recently was created by Macquarie Renaissance with US $ 630 mln assets, focused on investment in infrastructure projects in Russia and other CIS countries. Among the major shareholders of the fund are the IFC, EBRD, the Eurasian Development Bank, Russian State Corporation "Bank for Development and Foreign Economic Affairs (Vnesheconombank)", Kazakh Kazyna Capital Management, Macquarie Capital Group and Renaissance Capital. In addition, Merrill Lynch also created the infrastructure fund that focuses on investments in Russia infrastructure - Merrill Lynch Russian Infrastructure Basket – with capital of US $500 mln. Earlier, several funds specialized in investment in the infrastructure and logistics of emerging markets was established, namely Ukraine, Russia, Turkey, CIS countries and Southern Europe.

Despite the increasing of the number of market participants and the amount of infrastructure investments in the emerging market regions, the number and volume of transactions are still low. The problem is a low attractiveness for new entrants to the industry and lack of incentive for the additional cash flows. The mezzanine investments and capital investments are very small in the emerging market regions, and venture capital investment is almost absent. There is very limited participation of domestic institutional investors both private and public funds. In addition, the domestic bond markets are underdeveloped and volatile.

4. Investment barriers and policy action to promote long-term investment

Institutional investors can play a more active role in infrastructure projects financing. But they didn't very active in PPP investment. According to S&P, institutional investors sourced about 18% of (only) global project finance in 2012, this compared to 63% by banks and 10% by governments (S&P, 2013). It has been estimated that less than 1% of pension funds worldwide are invested in infrastructure projects, excluding indirect investment in infrastructure via the equity of listed utility companies and infrastructure companies (OECD, 2011).

There are many different obstacles to institutional investors' participation in the financing of PPP projects, the main ones are listed in Table 2.

Table 2

The obstacles to institutional investors' participation in the financing of PPP projects

Aspect	Obstacles
Government support	- Lack of regulatory base for the long term investments; - Regulatory instability, political risks; - High cost of trading in the procurement of PPP; - Inefficient guarantee system for PPP projects; - Poor policy about infrastructure needs
Investors possibilities	- Lack of experience; - Insufficient scale of domestic investors; - Regulatory restrictions; - Short-term oriented investors
Investment climate	- PPP assets are perceived in the market as too risky; - The market fragmentation; - Underdeveloped financial market and its instruments; - Imperfect tools of risk management and guarantees; - Non-transparency in the infrastructure sector; - Lack of data of PPP projects; - Interests dissonance between PPP project partners.

Therefore, the removing of such obstacles is possible due to implementation transparent, clear and long-term management and organization of PPP sector. Significant investment will be made solely if investors can earn sufficient income adjusted for risk, and if there are appropriate conditions of access to capital.

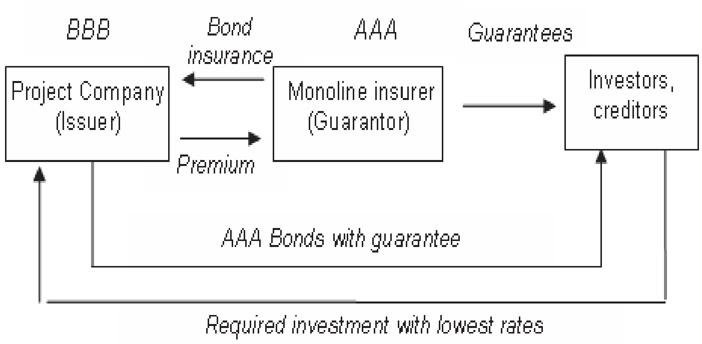
In sum, attracting of institutional investment in the PPP and ensuring sustainable success in the long-term investments are solid base for overcoming several obstacles. Project bonds are different from other assets, their issue requires detailed data and risks assessment due to high advanced cost, lack of liquidity and long-term nature of PPP assets, so it is additional cost, which usually lacks most investors.

Really essential problems for the most potential issuers from emerging markets are entering into international markets and getting the high rating. Prior to 2008, there was an active bond market for international PPP projects. These bonds benefitted from a guarantee, or 'wrap', provided by monoline credit insurers. The financial institutions were guarantors for Project Company that issued bonds and in that way was created 'wrapped bonds' (Figure 5) In addition, the bonds got higher investment grade due to guarantor and its excellent reputation that helped to sold securities profitably. Thus, investors could rely upon the credit rating of monoline insurer due to its guarantees to return investment in full. However, the crises had led to reducing in such operations and de-escalating of monolines activity in project finance market. Hence, investors ceased investing in large-scale projects via project bonds.

In this discussion, it should be noted some advantages of wrapped bonds. This financial tool attracts investors due to suitable conditions, risk transference to insurer, unaffected credit history and creditworthiness, ensuring bond sale, decreasing securities volatility and increasing their liquidity.

Figure 5

Traditional scheme of project bond insurance



Source: author's view

In this case government's support is apparently necessary, because it may raise the credit quality of project bonds, i.e. the credit rating of senior debt. Also government can adopt the 'monoline model' with special state development bank or fund. In this way, PPP projects will be more likely to attract the required financial resources in both domestic and foreign capital markets. According to 'Freshfields' research, which was mainly based on attitude of experts from leading infrastructure companies in the world after the introduction of 'Project bonds Initiative' in the European Union, mostly half of investors interpret bond rating 'BBB' as sufficiently attractive investment. (Freshfields, 2013). Also the S&P rated the majority of PPP projects (54%) as investment grade 'BBB-' and above (S&P, 2012).

It should be noted that the bonds payments and collateral are the most appealing factors that determine their credit rating. In world practice there are different ways to enforce project bonds, including letter of credit, provision formation, state or municipal guarantee, risks insurance, pledge of receivables, interest in the secured property and property security rights, etc. (App. A).

Based on these data we can conclude that almost all countries that use project bonds, provide tax allowance to the Project Companies and government guarantees to borrowers for mobilizing financial resources. Also, almost all countries have common insurance as the way to ensure project bonds and risk reduction, thus enhancing the investment grade of the project.

5. Conclusion

Our empirical evidence put forward the idea that the implementation and development of project bonds and mezzanine financing instruments in the emerging markets, including Ukraine, will lead to the emergence of new high-quality form of financing and financial instruments and expand the range of potential investors, which greatly simplify the process of attracting investments in PPP projects. Therefore, government should take adequate measures to promote long-term investment for great effect. Thus, it will generate a chain reaction: development of institutional investors will activate the stock market, and accelerate the development of public-private partnership and sustain economic growth.

Appendix A
Table A1

The features of project bonds in international practice

Country	Name of the financial tool	Issuer	Tax allowance	Tool of security			
				Pledge of receivables	State guarantee	Assigned receivables	Insurance
Canada	Project bond	Project Company	+	+	+	-	+
USA	Project bond secured by incomes; bond with general liabilities	Project Company, Government / Municipality	+	-	+	-	+
United Kingdom	Project bond	Government / Municipality	-	+	+	+	+
France	Project bond	Government / Project Company	+	+	+	+	+
India	Project bond	Government / Municipality	+	-	+	-	-
Chili	Infrastructure bond	Project Company	+	-	+	-	+
Kazakhstan	Infrastructure bond	Government / Project Company	+	-	+	-	-
Kenya	Infrastructure bond	Project Company	+	-	+	-	+

Source: Partnerships British Columbia; Ministry of finance of India; HM Treasury; Deloitte; Farquharson, Torres de Mastle and Yescombe (2011); Inderst (2013)

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