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Public-Private Partnerships: a focus on Energy Infrastructures and Sustainable Growth

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Policies for enhancing investment in infrastructures, energy and TLC should become one of the central pillar of the new European "Growth Compact". However, because of the budget constraints of the Fiscal Compact, the involvement of private capital markets and, more generally of global long term savings, is absolutely needed.

Demand for long term investment in project financing will grow globally at very high rates. After 2012 slowdown, **in 2013 there were 548 worldwide Project Finance deals (+30%)**, for a **total volume** (debt plus equity) of **US$ 280 bn (+51%)** and a **debt volume of US$ 234 bn** (+53%)[1].

As the world population continues to grow, emerging markets become industrialized, developed markets need to replace aging infrastructure, and all the world must face the transition to a low carbon economy the need for project financing will continue to grow. A huge amount of financing, then, is going to be needed at the global level. It has been estimated that **over 50 trillion US dollars** in capital investment will be required for energy, roads, water, airports, porrs, teecommunications and rail **between 2010 and 2030 in OECD countries**.[2]

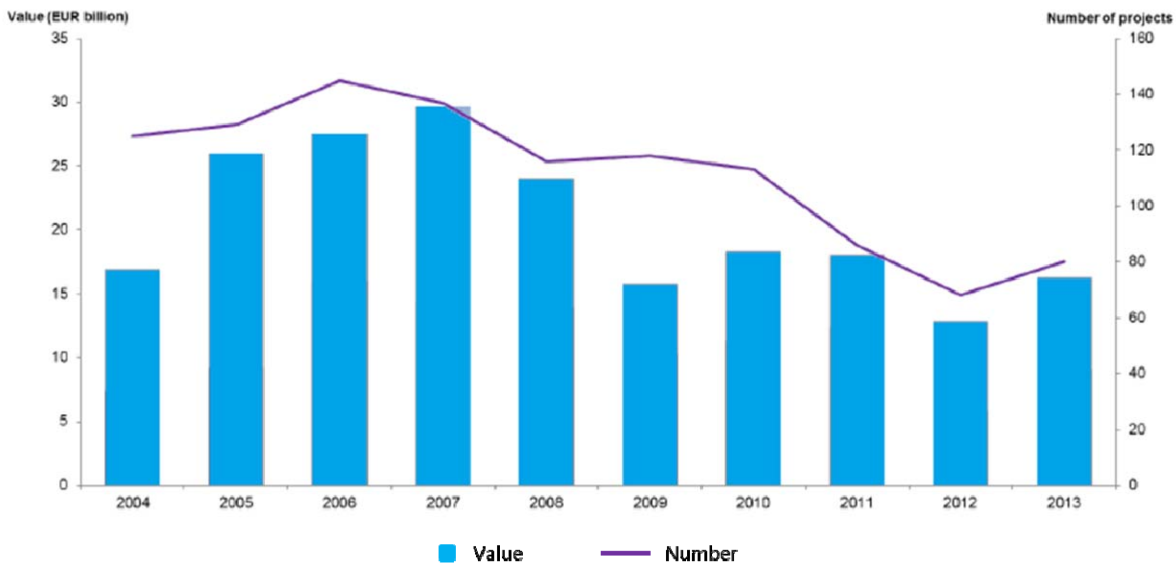
[1] Source: Infrastructure Journal, *" Global Project Finance Infrastrucutre Review 2013"*.
[2] Source: OECD, "*Infrastructure in 2030: Telecom, Land Transport, Water and Electricity*", 2011.

Then, the demand for long term capital investment in infrastructures and real economy is going to grow, while the supply of long-term savings may not keep up with the demand. This means higher costs and more competition on the global financial markets to attract saving to finance investments. **There is therefore a general need to increase** the worldwide share of financing for **long-term investment (LTI)** at the expense of the short-term financial and speculative investment.

This is the reason why countries all over the world should create **the best and most favorable conditions for foster LTIs** with strong positives externalities for the economic growth and the human well-being. Among these conditions, I would like to highlight **a good and stable political and regulatory framework**, with reasonably low regulatory and bureaucratic costs, **a reliable judicial system** and efficient and technologically skilled **public administration** and government services.

Of course, much more is needed, at least in Europe, for enhancing project finance, especially PPPs. **In 2013 there was a partial recovery** of the European Market, **with 80 PPP transactions** which reached financial close (68 in 2012) and an **aggregate value of €16,3 bn** (€12,8 bn in 2012, +27%).

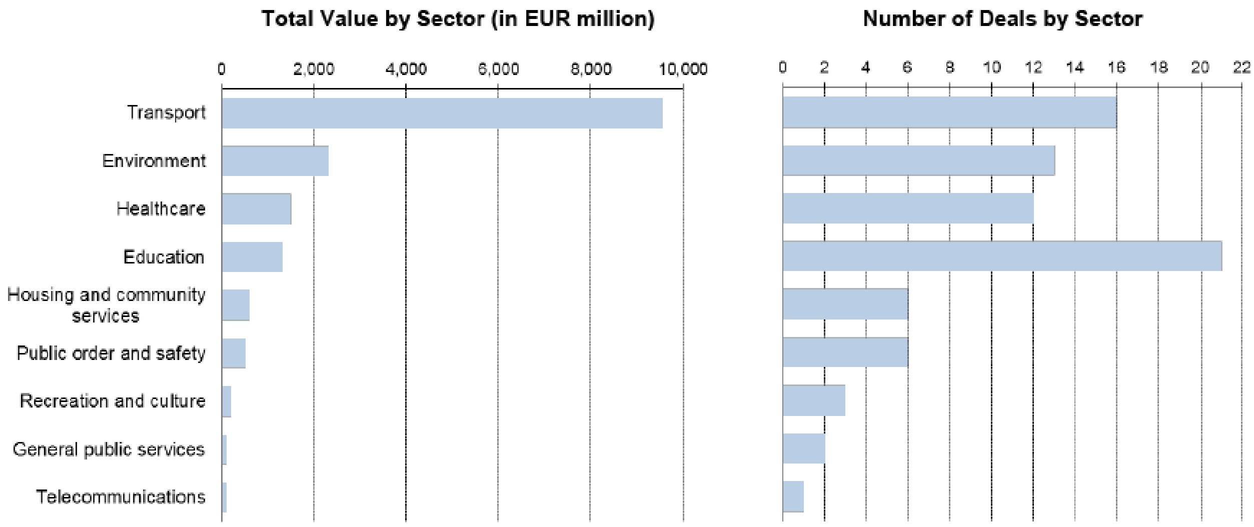
Fig. 1 – European PPP market 2004-2013 by value and number of projectss



The UK remains the largest PPP market in Europe, but Italy is becoming the second one in value terms **(€4,4 bn)** thanks to two very large projects - **BreBeMi motorway** (**€2,3 bn)** and the Milan Eastern Ring Road (**€1,8 bn) –**

which have reached the final close in 2013. With respect to **sector breakdown**, the transport sector remains the most important in value terms, but **environment** (in particular, energy and renewables) **has experienced a significant "vitality" in 2013**, and now it represents the second market in value terms and the third one in terms of number of deals. The importance of the environment and energy sector is therefore increasing. Actually, the European PPP market is worth **€2,3 bn** with 13 transactions closed in 2013, compared to 4 closed in 2012. However, as you know, the PPP market in the environment is still highly concentrated in UK (10 of the 13 transactions closed in 2013 were made in UK).

Fig. 2 – European PPP market: sector breakdown by value and number of transactions



Source: EPEC (2014), *Review of the European PPP Market in 2013.*

Yet, the difficulties are still huge. **Historically 90-95% of all project financing debt globally had been funded by banks**. In particular, European banks still have around two thirds of the global market in this sector. But, after the crisis, the European banks have significantly scaled back new credit initiatives. This is due to the effects of Basel III and EBA rules and to the rising cost of funding. New Basel III stability ratios, in particular, do not favor long term investment, requiring higher spreads. European banks are reducing risk-weighted assets, the denominator in their capital ratios, rather than increasing equity, the numerator. Moreover, the new liquidity ratios, which are very important for project financing, do not help; similarly, long dated floating swaps, which are required to go over the waves, will have higher spreads.

The **project finance bank market is still open for new financings**, but tenors and amounts have been significantly scaled back during the crisis. Given liquidity conditions in the loan syndication market, few banks are willing to take material underwriting risks; “club” transactions are currently thus the norm execution.

The two ECB LTRO operations have temporarily eased the liquidity crisis. But they could not do much for medium and long term financing of the economy. **Solvency II** does not help the holdings of infrastructure assets by traditional long term institutional investors such as **life insurance and pension funds.**

The LT players still active on the field are in Europe th**e large development banks** (EIB, EBRD, KfW, CDC and CDP), but they cannot make it alone.

I suggested many times during the last years that, to support PF and PPP initiatives, **ECB may take into consideration a 6-9 years LTRO** especially dedicated to long term investment with public guarantees (in exchange of long term collaterals!including the best guaranteed PFIs). On the equity side I suggested to replicate the success story of the Marguerite Infrastructure Fund by creating new funds for energy, infrastructures and innovation.

The EU and Member States should support PF and PPP with **tax incentives**, **guarantees and other initiatives. Public guarantees should particularly provided to reduce regulatory non-financial risk**. Tax incentives, to increase the attractiveness of the initiatives, may serve both growth and fiscal consolidation objectives, up to the point at which the incentive does not overpass the new fiscal revenues directly produced by the new investment promoted by the incentives, net of substitution effects.

Public guarantee schemes and/or tax incentives are necessary even for the success of the European **Project Bond Initiative** (PB). Project bond market date back in the mid-1990’s. Issuance grew significantly via Triple-A wraps from monoline insurers (up to 26 billion globally). The market collapsed in 2008 with the demise of monolines and has since recovered (16 billion in 2011). Many notable transactions were executed in 2010 and 2011 with tenors as long as 25 years and investment grade project bonds have priced in the 200 to 400 basis points range (comparable to bank debt cost, but with longer investors).

There are, generally, two types of project bonds: Those which are directly issued by the project companies (as it is the case of the EU project bonds); and those which are issued in the US directly by “Municipalities” and by “Public Authorities”, with strong tax rebates. During the 2008-2009 period, under Obama Recovery Plan, 200 billion dollars of Build American Bonds (BABs) have been issued. In the US the project bonds issued directly by project companies, without tax rebates, are fewer, worth less than 3 billion dollars. Then, the success story of the Obama’s BABs is due to the strong tax rebates granted to this kind of project bonds.

A special credit-enhancing guarantee by the EIB is provided in the Project Bonds initiative launched by the EU Commission. The project eligible to be financed by the PB guaranteed by the EIB are now limited to Ten-T, Ten-E and NGN. I strongly support the extension of guarantees and fiscal incentives also to other European LTIs with strong positive externalities for growth and competitiveness.

Project finance assets typically involve a strategic asset with certainty of demand and price that comes with a long-term off-take contract or revenue agreement; these attributes result in a stable and predictable cash flow. The long tenor of contract, such as power purchase agreements in power projects or long term concession agreements in infrastructure projects, give rise to lengthy and stable revenue streams. Moreover, several studies have shown that ultimate recovery rates for project finance loan market are significantly higher than corporate loans and relatively stable across economic cycles. Consequently, a new market of EU project bonds and the scaling back of bank lending to this sector translates into an important opportunity for institutional investor’s involvement, particularly given the long duration nature of project/infrastructure asset. Today, institutional investors, already finance (directly or indirectly) about 40% of project financing initiatives. Infrastructure bonds represent an “asset class” which matches well long term liabilities held by life insurance, pension funds and SWFs.

Under Solvency II, the determination of capital requirements depends on the specific categorization of the respective infrastructure investment, which does not further distinguish between, e.g., different sectors or the specific investment type (e.g. PPP or project bond), even though these investments may not have the same risk. Finally, the decision to invest in infrastructure will also strongly depend on whether solvency capital requirements adequately reflect the risks inherent in the respective investment[3]. Since the default curve and the expected recovery rates are typically much better for infrastructure bonds than for corporate bonds, it is crucial to stimulate a regulatory effort to introduce a more favorable capital requirement for infrastructure bonds. This would help to create an attractive asset class which could be placed between government bonds (zero weighted) and corporate bonds.

Otherwise, European insurers may be forced to withdraw capital from any inadequately or unclassified infrastructure investments. Presumably this would not only negatively affect insurer's investments, but also national infrastructure construction and maintenance in general.

The involvement of institutional investors in the project bond market, moreover, is still looking for an execution model to invest in infrastructure assets. Material institutional participation in project finance will evolve differently by region/currency, and manner of execution needs to be reconciled with certain key attributes of project financings. There is still limited number of asset managers with skill set and system to manage project bonds.

The long term institutional industry, however, is wary that the challenge is coming ahead. But, to facilitate the transition, we have to act both on the equity side (considering the process of private and public deleveraging) and on the debt side, especially in the first years of the PFIs, i.e. during the construction phase. More generally, to give a strong boost to LTIs in Europe we need to rephrase the regulatory framework (Basel III, Solvency II, accounting rules and EBA norms) that - as today - penalize LTIs. It is not a question of easing the financial stability framework, but to find fine-tuning solutions which assure financial stability and at the same time help the financing of economic growth, without which financial stability, as a whole, could tomorrow itself be at risk.

The definition of a new regulatory framework more friendly to LTIs is suggested by the Jacques de Larosière and Mario Monti Reports. It is also

[3] Gatzert and Kosub (2014), "Insurers' Investment in Infrastructure: Overview and Treatment under Solvency II", *The Geneva Papers on Risk and Insurance - Issues and Practice* 39, 351-372 (April).

suggested in five recente EU Commission's Communications. This general consensus is still waiting to be translated from words into deeds. The time to do so is now.

PPP in the energy sector - Energy Efficient Buildings European Initiative (E2B EI)

In recent years the European Commission has repeatedly stressed the importance of a long-term strategy for mobilising investment in the renovation of the national building stock improving their energy efficiency[4]. In this framework, the Energy-efficient Buildings (EeB) PPP has been launched in the aftermath of the crisis (it is in fact part of the "*European Recovery Plan*") to innovation and research in key sectors and to support SMEs activities.

The Energy-efficient Buildings (EeB) PPP provides a financial envelope of EUR 1 billion to boost the construction sector by researching methods and technologies to slash the energy consumption and CO2 emissions of new and renovated buildings. EeB PPP involves financial support from the NMP (Nanotechnologies, Materials and Production technologies), ICT (Information and Communication Technologies), Energy, and Environment (including Climate Change).

The initiatives hold many advantages for industry, notably:

- giving renewed confidence to invest in long-term research even when faced with short-term economic problems;
- providing a central role for industry, including SMEs.

The Inframed's experience

Finally, as former Chairman and now Vice-Chairman of **InfraMed's** (*Fund for Infrastructure and for the Mediterranean*) Investment Board, let me add a few words about it. Inframed has proved to be a successful experiencedesigning a pathfinder investment vehicle that supports energy infrastructures and

[4] See for instance, COM(2013) 225, "REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL - Financial support for energy efficiency in buildings", "the Energy Performance of Buildings Directive (2010/31), Energy Efficiency Directive (2012/27).

promotes sustainable growth in emerging Mediterranean countries[5], nothwistanding some relevant geopolitical risks that investors nust face in most of these countries.

InfraMed was inspired by the vision of the Long-Term Investors Club, which **promotes long-term, sustainable, non-speculative investments** anchored into the "real economy", notably the infrastructures. The **Long-Term Investors Club inspired the Marguerite** Funds, dedicated to the European Union countries, and InfraMed, which invests in the twelve countries on the southern and eastern shores of the Mediterranean.

InfraMed itself is a public-private partnership. With the exception of the Egyptian investor, all sponsors are public institutions or private institutions with a clear public mandate. At the same time, the management company is a private company to guarantee the independence of the investment decision-making.

Today the fund is 50% disbursed and 60% invested. We anticipate InfraMed to be fully invested next year, as initially planned. All projects are public-private partnerships. They comply with the environmental, social and governance guidelines of European Investment Bank. **All projects support sustainable growth**, and the majority of the portfolio is in **energy infrastructure**.

To give concrete examples, InfraMed holds 20% of the Turkish port of Iskenderun, has invested 100 million dollars in the Egyptian Refining Company and is the main shareholder of the Jordanian Tafila wind farm. The next planned investments include a high efficiency natural gas-fired power plant in Turkey and some further renewable energy projects in Jordan.

I would like to mention the **Tafila wind farm project** as a particular example of how a vehicle like InfraMed can play a significant role in developing energy infrastructure to support sustainable growth. Jordan put in place a legal framework for renewable energy in July 2011, and shortly after pre-qualified 34 wind, photovoltaic and concentrated solar energy projects. However no deal was closed for almost two and a half years, as it took a lot of effort to translate a

[5] InfraMed was designed by CDP, Caisse des Dépôts of France and the European Investment Bank, together with partners from the Middle East and North Africa region, namely Caisse de Dépôt et de Gestion of Morocco and the private investment bank of Egypt EFG Hermes. The main shareholders are CDP and Caisse des Dépôts with 150 million euros each. InfraMed is a 385 million euros fund launched in May 2010 and has been operational since 2011.

legal framework into the first bankable transaction. In September 2012, InfraMed decided to invest in one of the pre-qualified projects in its development phase. The fund elected to take 50% of the shareholding of the company, assuming the development risks and playing an active role in the structuring of the transaction. These efforts paid off. Last November, InfraMed closed the financing of the first utility-scale renewable Independent Power Producer in Jordan and the Middle-East.

Completing the development of this project is in itself a remarkable achievement. The 117MW wind farm will respond to Jordan's pressing energy needs while adapting to its lack of fossil fuel resources, its water scarcity, but its abundance of wind. Each year from 2015 on, Tafila will produce 400GWh of energy and will displace 235,000 tons of carbon dioxide. This means the project will increase the country's power capacity by 3% and account for 10% of Jordan's 1.2GW renewable energy target for 2020.

The financial leverage of this investment is significant, at nearly seven times, as the 32 million euros InfraMed ticket permitted the launch of a 220 million euros project.

However the highest impact of the Tafila project for Jordan is the execution of the country's first ever power purchase agreement. This PPA now serves as the template for the many renewable energy projects that were awaiting a contractual model. Shortly after the closing of the Tafila project, a long pipeline of renewable energy projects was unlocked. In March, the government signed deals to build 12 solar-run power plants with a total capacity of 200MW. The cost of the 12 projects stands at $560 million.

In April, the ministry of energy signed memoranda of understanding with six companies to build wind-operated power plants in the Kingdom. The government has announced recently that it will soon choose four more companies to build 50MW solar-run power plants each. In a separate tender, the ministry is receiving bids for further renewable energy plants. Under this tender, whose deadline is on May 15, the government will select four companies at the end of this year and each will build a 100MW renewable energy power plant. As you can see, an entire renewable energy sector is being built upon the pathfinder investment achieved by InfraMed, which played in Tafila the very role for which it was created.

What are the lessons learnt from InfraMed's success and what is the way forward?

The international community recognizes that the main bottleneck to greenfield infrastructure projects in frontier countries is the lack of bankable projects. More projects would be implemented if credible entities promoted them at an early stage. Traditional funds are reluctant to play that role, as early stage development is riskier and more time and resource consuming than mature projects. The InfraMed model, now proven, is filling that gap, by addressing the development phase of projects through active involvement, and by providing significant amounts of early equity.

In short, InfraMed defines itself as an early, active and patient equity investor in large and complex projects in African and Middle-East countries where there is an equity funding gap.

I remember saying at the official launch of InfraMed on 26 May 2010 that InfraMed was the prototype of a family of financial instruments. Now, With InfraMed soon to be fully invested and having already demonstrated the high impact it can achieve, we are thinking of expanding the model into Sub-Saharan Africa. We are currently designing InfraAfrica, which will replicate the InfraMed approach across the whole African continent. We are also setting-up InfraAfrica Development, an impact equity fund which will specialise in the missing link in smaller infrastructure, i.e. the projects too expensive to be supported purely by grants but too small to attract international players and project financing.

Institutions like CDP have to be on the forefront of innovation and promote catalyst instruments that leverage public finance with larger amounts of private investments within public-private partnerships. In this respect, we want to draw on our success with the InfraMed pilot fund as one way to support energy infrastructure and sustainable growth.

Main conditions needed to mobilize private investment in PPP

PPPs in the energy sector come in different shapes, sizes and structures and are used mainly in generation and transmission. The methodology used varies, depending on the place, the government and the specifics of the operation; therefore each one is tailored to the needs and circumstances given at the time when the partnership is created.

In emerging markets, Governments still need the support of private resources and experience to build up and manage all kinds of infrastructures in the energy sector. On the contrary, in advanced countries - with the development of liberalized energy markets - PPPs mainly focus on Energy Efficiency projects that still require a strict collaboration between private and public sector.

As the Inframed experience has shown, Long-Term Institutional Investors, in close collaboration with financial institution and private companies, could play a key role in supporting PPP initiative in several fields. The strong collaboration of private and public-private bodies in realizing PPP projects is crucial in order to overcome the negative consequences of financial crisis, to reduce credit and public budget constraints, and to increase the benefits, in terms of efficiency, of long-term strategic projects. But at the same time, we need to promote better conditions in order to mobilize private investment in PPP. Among these conditions, I would like to emphasize:

a. Political stability. A good and stable political framework is the first requirement. An unambiguous political commitment to PPP process is also needed to allow operators to act without unwarranted interference or obstruction.

b. Certainty of legal framework. A clear, stable and consistent legal framework is essential to give the right incentives to the operators.

c. **A favorable framework for private investment**. A robust institutional framework ensuring transparent models and standards, low (or reasonable) regulatory and bureaucratic costs, easy concessions' procedures and absence of delays, an efficient and technically skilled public administration and government services, fair and timely procurement and management process may dramatically improve the attractiveness of private investment.

d. Favorable rules for PPP and PF. A broad set of supportive rules, which include regulatory and accounting standards, is necessary to improve the efficiency of PFI and PPPs instruments. Institutional roles and responsibilities should also be clear. In this respect, the PPP specific law recently introduced in Egypt and the similar legislative initiatives being in progress in Jordan and Lebanon could represent good examples.

e. **Favorable taxation system**. A friendlier taxation system not discriminating long-term investment should be considered. This could involve also tax incentives in order to stimulate equity as well as debt financing.

f. Independent and effective judicial system and regulatory authorities. A reliable judicial system is fundamental to guarantee effective, transparent and impartial mechanisms for disputes resolution.

g. A balanced risk allocation between public and private sector is also needed in order to ensure a correct risk management of PPP projects. Some macroeconomic risk factors, such as exchange and interest rate risks, should be allocated to the public sector. On the other hand, not every risk not controlled directly by the private sector can be exclusively managed by public sector. In this respect, a well-developed insurance sector supporting private partners is a key requirement to favour PPP market and projects.

Concluding remarks

To conclude: *it is crucial to establish some basic conditions to foster long-term PPP's initiatives.*

The **development of both national financial and insurance markets** is crucial to favour PPP agreements and at the same time to create general condition to attract private capital. A balanced risk allocation mechanism must be implemented with the aim to allocate to each partner, the public and the private one, only that part of risk which is able to manage.

Moreover, the adoption of favorable political, institutional and legal framework, the improvement of regulatory framework supportive to PPP investments, and the introduction of new financial instruments, like international equity funds, project bonds, and guarantee schemes, will give a great contribution to the economic and social development of our countries.