

EU Support Mechanism to Promote Public Private Partnerships for Financing trans-European Transport Infrastructure

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Since the mid 80ies the Trans-European Transport Network (TEN-T) policy has been setting the framework for the development of infrastructure for the smooth functioning of the internal market within the European Union (EU). Public Private Partnerships (PPPs) have always been regarded by the EU as a key instrument to promote the TEN-T. In spite of this, until 2010, only a limited number of TEN-T projects had been delivered through PPPs. After the arrival of the economic recession, PPPs for financing the TEN-T became even more important due to the severe budgetary constraints endured by most member states. However, bank funding for large infrastructure projects has been substantially restricted in the last few years due to liquidity, maturity, and capital limitations of the major banks. To avoid this problem, the Commission of the EU has recently launched an initiative to promote EU support mechanisms, such as subordinated loans or senior debt guarantees, to facilitate the feasibility of PPPs for the TEN-T, and to make long-term project bonds more appealing for institutional investors such as pension funds or insurance companies. This research will evaluate the effects that the introduction of EU support mechanisms can have from several perspectives: 1) influence on the financial cost of the project, 3) the effect of the contingent liabilities assumed by the European Union 2), its effect on the incentives generated among the different stakeholders, and 4) its effect on welfare.

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1. Introduction

The Trans-European policy of the European Union (EU) has been promoting the development of infrastructure for the smooth functioning of the internal market and for ensuring economic, social and territorial cohesion and improved accessibility. This led in 1992 to the inclusion of a specific legal basis for TEN -T in the Maastricht Treaty. In 1996 the European Parliament and the Council adopted the first Guidelines defining the TEN-T policy and infrastructure planning. Several instruments of the EU budget have been set up to facilitate the implementation of projects. These instruments include the TEN-T regulation, the Cohesion Fund, the European Regional Development Fund (ERDF), and more recently the Connecting Europe Facility. In addition to these sources, the European Investment Bank (EIB) has provided loans to TEN-T projects complying with the requirements imposed by the EU. However, these instruments were insufficient to get these projects off the ground (Proost et al., 2011).

Public Private Partnerships (PPPs) have always been regarded by the European Commission as a key instrument to draw private financing to promote Trans-European Networks. PPPs are mostly implemented to circumvent budgetary constraints, and encourage efficiency and quality in the provision of public infrastructure (OECD, 2008). The latter objective is achieved through the integration of the life-cycle of the project including the design, construction, financing and operation phases. Using PPPs has become even more important in the last few years due to the severe budgetary constraints endured by the member states because of the economic recession. However, until 2010, only a limited number of TEN-T projects had been financed through PPPs: the Oresund Bridge, the Perpignan-Figueras rail, and the High-Speed line Paris-Bruxelles/Brussels-Köln-Amsterdam-London (PBKAL) (Steer Davies Gleave, 2011). Some reasons explain this lack of success. On the one hand, investment volumes in TEN-T projects are usually huge. On the other hand, undertaking cross border projects requires agreements among at least two member states that usually have different interests and legal frameworks.

This paper intends to explore to what extent the use of EU support mechanisms for credit enhancement—such as subordinated debt or senior debt liquidity guarantees—could effectively contribute to foster more efficient financial structures for PPPs by drawing long-term financing from institutional investors.

Apart from the introduction, this paper is divided into five additional sections. In section 2, we explain the evolution of the Trans European Transport Network. In section 3, we describe some experiences of government guarantees for infrastructure PPPs. In section 4, we identify the difficulties in Europe to raise long-term funding for PPPs. In section 5, we describe the Europe 2020 Project Bond initiative, which intends to promote some financial support in order to construct the Trans European Transport Network. Finally, in section 6, we analyze the consequences of implementing EU support mechanisms and get a set of conclusions.

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2. Financing Trans-European Transport Networks

History and evolution of the TEN-T

The Maastricht Treaty in 1992 established the legal basis for the development of the Trans European Policy. This was the first step of the European Union towards enhancing a common infrastructure policy aimed at ensuring coherence, interconnection and interoperability of the European infrastructure networks. In 1996 the European Parliament and the Council adopted the first guidelines towards the establishment of the Trans-European Networks for Transport (TEN-T). These guidelines included two planning layers: the definition of a global network of interest for Europe, and the definition of a set of "priority projects" to give special attention to.

The TEN-T policy was aimed at promoting the interconnection and interoperability of national networks across Europe. The network was composed by different infrastructure modes highways, high speed rail, conventional rail, airports, seaports, inland ports, and intermodal transport, as well as by different traffic management systems and information to users, and the positioning and navigation systems (Galileo System).

In 2001, a study evaluated the degree of completion of the priority projects concluding that their pace was much slower than expected. Only 20% of the investment expected to be completed had been actually finalized. This study helped to define the new guidelines that were approved by Decision 884/2004/EC. These guidelines updated and extended the network and the projects to the new circumstances and the new member states that joined the European Union from 1996 to 2004.

The Green Paper: TEN-T: A policy review - Towards a Better Integrated Trans-European Transport network at the service of the Common Transport Policy (European Commission, 2009) acknowledged that there had been a lack of progress in certain areas. One of them was insufficient finance, most notably access to appropriate long-term private finance. The White Paper: Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system (European Commission, 2011A) says that Europe needs a “core network” of corridors, carrying large and consolidated volumes of freight and passengers traffic with high efficiency and low emissions. The cost of EU infrastructure development to match the demand for transport has been estimated at over €1.5 trillion for 2010-2030. The completion of the TEN-T network requires about €550 billion until 2020 out of which some €215 billion can be referred to the removal of the main bottlenecks (European Commission, 2011B).

EU Financial support to TEN-T projects

Since the mid-seventies, the EU has been implementing a set of structural funds instruments to channel EU financial aid to regional policy. In order to achieve economic and social cohesion among EU, structural funds seek to contribute to the correction of regional imbalances. As part of this regional community policy, transport infrastructure plays a crucial role, because it is considered one of the key elements for promoting regional development before the

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Maastricht Treaty. This development is funded by the European Regional Development Fund, ERDF.

The ERDF provides funding to foster productivity in the regions of the European Union with structural problems, especially those whose income per capita is below 75% of the average of the EU. While the ERDF has been used to fund a variety of initiatives such as schools, hospitals, programs for rural development, and similar measures, it has also been intensively used for funding infrastructure in the poorest regions. In fact, ERDF resources may be allocated to projects of the TEN -T to contribute to the economic growth and potential development of the poorest regions.

Table 1. EU tools of financial EU financial support to the TEN-T

Billions of Millions of €	1996-1999	2000-2006	2007-2013
Cost TEN-T	106,00	302,00	390,00
- New Member States EU12	5,00	27,00	72,00
- Old Member States EU15	101,00	275,00	318,00
Financial EU support	44,56	70,93	52,20
- TEN Line	2,23	4,43	8,01
- Cohesion fund	8,23	16,50	34,80
- ERDF	7,51	8,60	9,40
- EIB Loans	26,50	41,40	53,00
Funding Member States	63,40	231,10	285,00

Source: Commission staff working document TEN-T Policy Review – background papers (2010).

The new infrastructure policy introduced by the Maastricht Treaty created two additional financial instruments: the Cohesion Fund (CF) and the TEN budget line (TEN-T line). The role of the Cohesion Fund is to help the poorest EU countries to improve their macroeconomic indicators. The CF was mostly designed to help the poorest countries of the EU to keep on building infrastructure even as they were making efforts to reduce their public deficit. The CF is allowed to fund transportation and environmental infrastructure only. The EU allows the CF to co-fund up to 85% of the whole capital cost of the eligible infrastructure projects. The contributions of the Cohesion Fund have been an important source of funding for transport infrastructure for the least developed countries of the European Union (see Table 1).

The second financial instrument created by the Maastricht Treaty is the TEN-T line, which is included within the internal policies of the EU. All countries, regardless of their level of development, are eligible to receiving this funding. The budget allocation to the TEN-T line has

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been usually lower compared to the ERDF or the Cohesion Fund, and its co-financing rate is much lower. Consequently, this fund has not been as effective as the other two to promote infrastructure in Europe. Under the Financial Perspectives of the enlarged European Union for the period 2007-2013, the amount allocated to the TEN-T line was €8,013 million.

A key player for providing financing to infrastructure in Europe is the European Investment Bank (EIB). The EIB is a bank owned by and representing the interests of the European Union Member States, and it works closely with other EU institutions to implement EU policy. The EIB supports projects that make a significant contribution to growth, employment, regional cohesion and environmental sustainability in Europe and beyond. All the projects financed by the EIB must not only be bankable but also comply with strict economic, technical, environmental and social standards. The vast majority of financing provided by the EIB is through loans, but it also offers guarantees, microfinance, equity investment, etc. The EIB also provides expertise for sound and sustainable investment projects which contribute to furthering EU policy objectives.

3. Government guarantees for infrastructure PPPs

Some countries have already implemented government support mechanisms to enhance senior debt for financing large infrastructure projects through PPPs. However, up to date, the scholarly literature has scarcely quantified the economic benefits stemming from the implementation of these mechanisms. Irwin (2007) conducted a thorough compilation of government guarantees and their effects in mitigating risks in infrastructure projects. The author provides some examples of the implementation of guarantees in different places. In addition to this, some authors have conducted specific analysis about the implementation of certain government support approaches in specific PPP programs. Carpintero and Gómez-Ibáñez (2011) evaluated the role of the 'Government Commitment for Subordinated Contribution' in Mexico. This is a debt service liquidity guarantee to help the ultimate PPP contractor to pay back the debt service in case the cash-flow of the project should prove insufficient. Abdel Aziz (2007) and Brown (2007) described the results of the implementation of the Transportation Infrastructure Finance and Innovation Act (TIFIA) program in the USA. This program provides Federal credit assistance in the form of direct loans, loan guarantees, and standby lines of credit to finance surface transportation projects of national and regional significance. Vassallo and Sanchez Soliño (2007) analyzed the experience of subordinated public participation loans (SPPLs) in Spain. These are government subordinated loans with variable interest rates. If ultimately the revenues are much higher than expected, the government will receive higher interest rates, while the PPP contractor will have less profit.

Guarantees may trigger large payments by the government in the future if the circumstances intended to trigger such payments ultimately occur. This is the reason why one of the main concerns regarding fiscal support for infrastructure PPPs is the accurate evaluation of the level of risk that governments ultimately take on. The simplest way to approach the government exposure to these guarantees is to calculate the present value of the expected contributions to

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be paid by the government during the lifespan of the contract. The present value of these flows is the value of the contingent liability that the government is assuming because of the guarantee. Lewis and Mody (1997) show some examples of methodologies to estimate those contingent liabilities in Colombia and the Philippines. A similar methodology has also been implemented in the United States of America in order to allow for the risk assumed by the government in awarding loans and guarantees (USDOT, 2011). Since the enactment of the Federal Credit Reform Act (FCRA) in 1990, Federal Agencies have been required to set aside capital reserves to cover the expected long-term cost to the government in advance of issuing a direct loan, line of credit or loan guarantee.

4. Difficulties in Europe to raise long-term funding for PPPs

PPPs have become even more difficult to finance in the last few years because of the difficulty of raising long-term funding. Bank funding is currently constrained due to several reasons: 1) liquidity, maturity and capital limitations of the major banks; 2) the low volume of syndications; and 3) a marked reduction of the average amount each bank is prepared to commit for each transaction. For this reason, banks are nowadays highly selective on deals and focusing somewhat more on national markets. Moreover, capital markets are currently providing little senior debt as practically no new transactions are being underwritten by monoline insurers and there is low investor appetite for non-guaranteed project bonds. These factors together have hindered the use of PPPs for financing large infrastructure projects after the arrival of the economic recession.

The liquidity bubble in the early 2000s allowed commercial banks to be very aggressive in terms of loan pricing and long term facilities. However, the 2008 credit crunch reduced their influence over the market, and project sponsors and their financial advisors started to explore new sources of funding, from bridge financing to project bonds (Chen, 2009). Since the arrival of the financial crisis, European commercial banks are required to have higher regulatory capital and liquidity standards, whilst most of their economies faced the problem of sovereign debt. The current crisis is demonstrating that European commercial banks could have to rethink how they finance long-term investments in the future (Standard & Poor's, 2012). It is expected they will continue with infrastructure project finance, but not with so much volume as before. The new regulatory framework under Basel III and the new economic capital regulation for commercial banks will shrink their capability for long term investments.

Capital markets used to play an important role in financing large scale projects through senior bond issues. However, since the credit crunch in 2007-2008 there has been less appetite for credit risk and an increasing pressure on commercial banks' balance sheets under the new regulatory framework, along with the future implementation of Basel III (Rosales and Vassallo, 2012). Monoline companies used to provide credit enhancement for capital markets deals. However, after the credit crunch in August 2008 there have been few deals guaranteed by these companies, and it appears that they will not be active for a long time, at least until there is a clear picture about the financial industry regulation. Additionally, the sovereign debt crisis

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in western economies is resulting in the increased demand for the financing of infrastructure projects under PFI/PPP schemes (Moody's Investor Service, 2011).

5. The Europe 2020 Project Bond initiative

From the beginning of the TEN-T policy, the EU and the EIB have promoted mechanisms to encourage the use of PPPs for financing priority projects. In 2008, the European Investment Bank (EIB) received the mandate of the Commission to launch the "Loan Guarantee Instrument for Trans-European Transport Network Projects" (LGTT). This is a stand-by liquidity facility intending to improve the ability of the borrower to service senior debt during the initial operating period or "ramp-up" phase of the overall project and of its initial traffic revenue. The risk capital for this guarantee is jointly provided by EIB and the European Commission in favor of commercial banks which will provide stand-by liquidity facilities in addition to the usual project funding instruments. The stand-by liquidity facility can be drawn by the project company in case of unexpected reductions in traffic income of the project during the initial ramp-up period of operation in order to assure service of its senior credit facilities. The facility, funded by commercial banks, benefits from a guarantee from the EIB and is available for draw down in the initial ramp-up period only (availability period, up to 7 years, but no longer than the ramp-up) after construction of the project is completed.

In addition to this measure, the EIB issued a paper identifying how the various stakeholders could possibly contribute more effectively to the planning and financing of TEN-T infrastructure assets (European Investment Bank, 2008). Some of the measures recommended by this paper were: promoting national measures to provide relieving in current market conditions including government guarantee/lending facilities for key infrastructure investments; developing of capital markets throughout the EU to finance Infrastructure; facilitating the issuance of TEN-T project bonds; and, establishing equity funds to finance TEN-T Infrastructure.

In response to that, the EU launched a consultation paper on the so-called Europe 2020 project bond initiative (European Commission, 2011C). This initiative, which is framed in the Europe 2020 Strategy for smart, sustainable and inclusive growth, intends to provide new EU support mechanism to project companies issuing bonds to finance large-scale infrastructure projects. The Commission's key role will be to provide guarantees or loans to enhance the credit quality of privately issued project bonds. The support would be available during the lifetime of the project, including during the construction phase, which is usually the riskiest part of a project, but would not exceed 20% of the senior debt of the project.

Project Bonds are financial securities designed to be appealing to long-term financial markets such as pension funds and insurance companies. In order to achieve this goal, the European Union will design mechanisms to mitigate the debt-service risk of bond-holders through credit enhancement approaches.

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Specifically, EU Regulation 670/2012 defines Project Bonds as “a joint instrument by the Commission and the EIB which provides added value as a Union intervention, addresses sub-optimal investment situations when projects do not receive adequate financing from the market, and provides additionally. It avoids distortion of competition, aims to secure a multiplier effect and aligns interests in the form of a credit enhancement. The risk-sharing instrument for project bonds shall:

- a) take the form of a debt instrument or a guarantee granted by the EIB with the support of a Union budget contribution in favor of financing provided to projects in the field of ICT and broadband, complementing or attracting financing by Member States or the private sector;
- b) mitigate the debt service risk of a project and the credit risk of bond holders;
- c) be used only for projects whose financial viability is based on project revenues.”

The EIB should become a creditor to a project, the EIB’s rights shall rank behind the debt service of the senior debt and ahead equity. The EIB facility shall not exceed 20% of the total amount of the senior debt issued.

The Project Bonds require stable cash flows with little traffic risk and avoidance of construction risk. This makes this type of financing more feasible for brownfield projects or refinancing once passed the ramp-up period (the period when a new infrastructure consolidate the traffic). It is necessary that the projects are technically, economically and financially viable.

The purpose of the consultation launched in 2011 was to get market participants' and decision makers' feedback on the chosen mechanism and its essential terms and conditions, to gauge demand for the initiative in terms of market volumes and the depth of the investor base. The most relevant results of the consultation were:

- a) 60% of stakeholders thought that the chosen mechanism would attract private sector institutional investors to transport, energy and ICT.
- b) 19% of respondents believed that the guarantee would both facilitate and accelerate the conclusion of financing packages.
- c) An absolute majority of stakeholders agreed that minimum rating of A- is sufficient to attract investors.
- d) Several investors stressed that they do not merely look at ratings, but also at the general legal framework of the jurisdiction of the project, the exact contractual arrangements as well as the quality of the financial package.
- e) 50% of answers stated that a credit enhancement of 20% of outstanding senior bonds would be sufficient (10%) or would depend on other factors (40%) and should be decided on a case-by-case basis.
- f) 50% of stakeholders expected lower financial costs and (or) longer maturities.

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- g) 50% of stakeholders thought that a single entity acting as creditor controller would be essential.

On July 31 2012 the 2012-2013 pilot phase of the Project Bond initiative was published. It envisaged up to €20 million for key strategic infrastructure projects. If the pilot is successful, it will be followed by an operational phase during 2014-2020 through the instrument "Connecting Europe" for transport, energy and ICT.

Currently, there are €230 million available to be used between 2014 and 2016. Of them, it is envisaged to allocate €200 million to transport infrastructure. This mechanism is expected to benefit projects with similar financing needs and, thanks to synergies between the sectors, should produce greater benefits in terms of market impact, administrative efficiency and resource utilization.

6. Some reflections about EU project bonds

In this section of the paper we provide some preliminary reflections about the advantages and drawbacks of promoting projects bonds through credit enhancement in the European Union from four different points of view: 1) their influence on the financial cost of the project, 2) the effect of the contingent liabilities borne by the European Union, 3) its effect on the incentives generated on different stakeholders, and 4) its effect on social welfare.

Before analyzing each one of the previous aspects, it is crucial to identify the effects that this guarantee will have on risk allocation, performance of the project, and appetite of potential lenders. If EU support approaches are provided, three effects are expected to happen:

1. The project will likely be appealing to be funded through long-term project bonds that could be acquired by institutional investors. These bonds will be likely cheaper and longer-term than bank loans. This will imply lower financial costs of the project, which will lead to lower fees to users and/or a more efficient use of public funds to taxpayers.
2. In exchange for that advantage, the EU through the EIB will be bearing part of the financial risk of the project through stand-by liquidity guarantees or subordinated debt. The EU will be assuming certain contingent liabilities that might emerge in the future, particularly if projects do not work as expected as a consequence of, for instance, an economic recession. The contingent liability to be borne by the EU will depend on the price the EU sets up to the guarantee or subordinated debt. If the price of the guarantee gets closer to its market value, the EU will mitigate its potential losses, but in exchange will see increasing the global financial cost of the project.
3. The fact that the EU provides guarantees can help avoid some inefficiency. First, the EU is supposed to provide support only to socially viable projects. Second, the fact the EU is providing support can be regarded by international financial markets as a safeguard that the contracts will be fulfilled, which can help to reduce the risk perception from financial markets. Moreover, the fact that the EU is present in the deal can enhance a more sensible risk allocation approach.

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The financial cost of the project will be the average of the different financial sources employed: equity, senior debt and subordinated debt. The financial cost of a project being funded through a combination of long-term project bonds, EU subordinated debt and private equity is expected to be lower than the traditional way to do it through a combination of banking loans and private equity. This fact will be accentuated in the future because as we mentioned earlier the new banking regulations penalizes much more long-term loans through a greater requirement of economic capital for banks. This fact will hinder bank financing for megaprojects up to the point of preventing PPP projects from being developed through PPPs.

The financial cost of the project will depend on the financial price that the EIB decides to set up to these guarantees. If their price is the market price, the financial cost of the project will be higher, but the contingent liability borne by the EU through the EIB will be lower. The EU should avoid taking on much risk on projects whose revenues are directly tied to the performance of the economy because in case of recession, the guarantees might be likely triggered all together just at the worst time. Finding the optimal trade-off between the price of these guarantees and the level of contingent liability to be reasonably bearable by the EU deserves to be investigated in the future.

A key aspect to be studied as well is the incentive that EU guarantees will provide on different stakeholders. If these incentives go in the right direction, the social value of the project will increase. At first glance we can identify six different stakeholders: national governments, private promoters, equity holders, financial institutions, users and taxpayers. Users and taxpayers are the most important ones, but unfortunately they have little influence on the project. National governments have an incentive for the project to be delivered at the lowest cost so they are supposed to be in favor of this measure. The fact that one of the lenders for the project is the EU or the EIB can help national or regional government to be more demanding in the design of contracts and stricter in the application of the legal framework.

Equity holders will be interested in reaching the greatest leverage for the project so they will be favorable to be provided the largest EU guarantee in order to increase the percentage of debt. In their turn, institutional investors will also have an incentive to have the greatest guarantee in order to achieve the best rating for the bonds they buy. However a large guarantee can produce moral hazard problems insofar as lenders will have little incentive to pay much attention to the performance of the contract because they will feel safe with the UE guarantee. In order to avoid the problems described above, the EU should fix a maximum limit to this guarantee and also a minimum percentage of equity to be provided by private sponsors to the project. This percentage will be fixed depending on the specific characteristics of the project.

At the end of the day, the key aspect to design the EU guarantee correctly will be to maximize value for money for society over the life-cycle of the project. Two aspects will be crucial for value for money. The first one will be to determine to what extent the financial cost savings achieved with project bonds would offset the contingent liabilities borne by the EU through the EIB. The second one will be to evaluate to what extent EU credit enhancement approaches

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would bring about a more efficient outcome as a consequence of a better risk allocation approach.

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