EX-POST EVALUATION OF THE LOAN GUARANTEE INSTRUMENT FOR THE TRANS-EUROPEAN TRANSPORT NETWORK (TEN-T) PROJECTS

FWC MOVE/A3/350-2010

Prepared by:

Date	**30/01/2014**
Prepared by	**Anna Halvarsson, Ingrid Rydell, Marcus Holmström, Tsvetelina Blagoeva, Robert Bain**
Checked by	**Robert Bain**
Approved by	**Anna Halvarsson**
Version	**Final report**

Table of Contents

List of Tables

List of Figures

List of Acronyms

Abs	Administrative Burdens
ACTAL	The Dutch Advisory Board on Administrative Burden
AMVAB	Aktivitetsbaseret Måling af Virksomhedernes Administrative Byrder (Danish SCM)
ATO	Australian Tax Office
BAU costs	Business-As-Usual costs
BKI	Bürokratiekostenindex (Bureaucracy Cost Index/ Germany)
BTBM	Business Taxpayer Burden Model (US)
CAR	Cost-driven Approach to Regulatory Burdens (The Netherlands)
CC	Compliance Costs
CIT	Corporate Income Tax
Destatis	Federal Statistical Office (Germany)
DKK	Danish Krone
DRs	Data Requirements
EBIT	Earnings Before Interest and Taxes
EU	European Union
EUR	Euro
EUROSTAT	Statistical Office of the European Union
EU SCM	European Union Standard Cost Model
FSH	Food Safety and Hygiene Regulations
GDP	Gross Domestic Product
HMRC	HM Revenue & Customs (UK)
IA	Impact Assessment
IBFD	International Bureau of Fiscal Documentation
IFC	The International Finance Corporation
IN	Inspection Costs (CAR-methodology)
IOs	Information Obligations
IRS	Internal Revenue Service (US)
ITBM	Individual Taxpayer Burden Model (US)
NKR	National Regulatory Reform Council (Germany)
NNR	Board of Swedish Industry and Commerce for Better Regulation
OECD	Organisation for Economic Cooperation and Development
OHS	Occupational Health and Safety
OTS	Office of Tax Simplification (UK)
PIT	Personal Income Tax
PwC	PricewaterhouseCoopers
R&D	Research & Development
RCM	Regulatory Cost Model
SBBM	Small Business Burden Model (US)
SCM	Standard Cost Model
SECO	Swiss State Secretariat for Economic Affairs
SIROCCO	Scanning Instrument Regulations of other compliance costs
SKM	Standardkosten-Modell (German SCM)
SMEs	Small and Medium-sized Enterprises
SSC	Social Security Contribution
TCC	Tax Compliance Costs
TCR	Total Costs of Regulations (Sweden)

TCS	Total Cost to Serve (UK)
TER	Team Effektiv Regulering (Team for Effective Regulation, Denmark)
TIINs	Tax Information and Impact Notes (UK)
TY	Tax Year
VAT	Value-Added Tax

Executive Summary

This is an ex-post evaluation of the LGTT instrument, a product provided jointly by the European Commission and the European Investment Bank. The LGTT is an unfunded mezzanine debt instrument provided to Public-Private Partnerships (PPPs) in the transport sector (within the TEN-T network) to offset the early-period risks associated with demand uncertainty. The LGTT was jointly established in 2008 by the European Union and the European Investment Bank (EIB) where both partners share financial risk. The EIB provides a guarantee in the form of a contingent credit line, which may be drawn upon by the project provider during the first 5 to 7 years of operation, if the revenues generated by a project are not sufficient to ensure repayment of the senior debt, in case the actual revenues from the project fall below the forecasted level.

The purpose of this evaluation is to (1) assess the effectiveness, relevance and efficiency of the LGTT instrument to the delivery of the TEN-T projects and the achievement of the TEN-T policy objectives and (2) draw lessons learnt from the implementation of the instrument and contribute to a possible optimisation of the design of the financial instruments to be established under the next multi-annual financial framework (MFF) 2014-2020.

During the period 2008-2012, the LGTT has been signed by five motorway projects, one maritime project, and one high speed rail project. The total LGTT amount signed is EUR 517 million. At the time of this evaluation, none of the projects have used or drawn the LGTT.

The overarching conclusion of this evaluation is that the LGTT has had a positive impact where it has been applied, but not a sufficient effect to achieve its broader objectives.

On relevance

The LGTT relies on an assumption of a market failure due to private sector unwillingness to take on traffic risk in the ramp-up phase (the first 5-7 years). By mitigating this risk, the LGTT should contribute to fostering private sector participation in TEN-T infrastructure project development and to facilitating the development of user based PPP schemes. However, the LGTT had a very narrow application from the beginning – user based PPP schemes on the TEN-T network. During the financial crisis, its scope for application was constrained even further, as traffic-risk projects were postponed or abandoned and fewer (especially PPP) projects were developed. Both procurement authorities and private investors became more careful as averseness towards risks increased in general, especially tied to traffic risk which is inherently difficult to assess.

The key issue today is that governments are not promoting transport projects generally – the 'deal flow' of potential transport projects has slowed considerably following the financial crisis and economic difficulties. Not only is there an overall lack of potential projects, but PPP schemes are used to a lesser extent in general, making the market for the LGTT even smaller.

Private sector respondents have different views on the relevance of the LGTT; while some see value in the instrument, others deem the scope of the LGTT to be too narrow. The fact that the LGTT has never been used independently of EIB senior loans makes it difficult to isolate and assess the value of the LGTT as a stand-alone facility.

Overall, the link between market needs and the objectives of the LGTT needs to be clarified. There is no common understanding of what specific needs the LGTT is supposed to address and we have not found a comprehensive needs assessment underpinning the rationale and design of the instrument. For example, there is international research showing that traffic risk is not limited to the ramp-up phase, but persists well after, suggesting that that the "market failure" is optimistic or aggressive traffic forecasts, rather than underperforming projects. Given that markets evolve, needs assessments (and reviews) should be an on-going process. There is no evidence of particular "market failures" at the time of the development of the LGTT, although there were obstacles to financing transport infrastructure projects.

On implementation

LGTT projects must be transport infrastructure projects on the TEN-T network and be based on the revenues stemming totally or partly from traffic flows. As a consequence, the LGTT is particularly suitable for road transport projects, as compared to rail or port projects, due to the more straightforward treatment of traffic risk in this transport mode. To handle the narrow scope of the LGTT, the EIB has made adaptations to the instrument within its legal basis as an attempt to make it more applicable. It would appear that a pilot phase for the LGTT could have facilitated the roll-out of the instrument. On the other hand, the financial crisis coincided with the launch of the instrument, altering the context for potential transport projects significantly.

Stakeholder awareness – beyond the direct recipients – of the LGTT is relatively low. Stakeholders involved in PPP projects have a general understanding of the LGTT, but lack knowledge about the details of the instrument, and there even lower awareness of the instrument among the broader group of actors in the transport sector. As a result, the LGTT is perceived by many to be a complicated instrument with unclear value. The adaptations made by the EIB have further compounded the challenges associated with understanding how the instrument functions.

Although it can be expected that as a financial instrument partially financed by the EU budget, all information regarding the set-up and price of the LGTT should be available to the public, this is not currently the case.There is a general lack of transparency about the EIB's selection and evaluation procedures, and its cost calculations, what it charges for the facility and its costs of administrating the instrument.

On effects

It is difficult to establish clear attribution effects when it comes to linking the LGTT to its intended outcomes and impacts. The LGTT has helped to facilitate the financial close of some of the projects on which it was applied and has had a general credit enhancement effect, but the evidence of its direct effect on debt pricing and increasing the attractiveness of demand-based transport projects is inconclusive.

The cost of debt was reported by a number of respondents to be a secondary driver in the financing decisions taken during the turbulent times at the peak of the financial crisis. Credit availability and willingness to lend were important factors given the adverse market conditions, and several respondents reported that the LGTT helped maintain the attractiveness of the projects for investors. Three of the respondents on LGTT signed projects specifically pointed out that the LGTT helped support originally-intended debt to equity (D/E) ratios.

It is not possible to extrapolate the identified/confirmed outcomes to the larger intended impacts of the LGTT such as the acceleration of private sector investment in TEN-T financing or the development of more revenue-based PPP projects in TEN-T.

Besides the narrow scope of the instrument, important "failure factors" for not using the LGTT include constrained public finance reducing the pipeline of projects, a lack of greenfield projects and a lack of institutional capacity, political will or resources to do PPPs in some Member States. Also, given its current set-up, the LGTT is best suited to accommodate road projects, while it is less suitable for rail, waterborne and aviation projects.

Geographical distribution of the projects, being eligible for or having signed the LGTT, is also uneven. There is a lack of TEN-T projects eligible for LGTT in the central, eastern and northern European Member States. In these Member States, lack of institutional capacity, low political interest in PPP schemes or competition from Cohesion Policy funds are some of the explanations for the lack of LGTT eligible projects.

Given the small sample of projects signed with the LGTT and the substantial influence of contextual factors on the trends in the narrow range of projects eligible under the guarantee, it is reasonable to conclude that the LGTT has had a positive impact where it was applied, but not a sufficient effect to achieve its broader objectives - to attract more private financing to transport infrastructure projects and contribute to the completion of the TEN-T network.

On efficiency

There are no indications that the LGTT has had an important impact on the realisation of TEN-T priority projects. Given the narrow scope of the LGTT and the observed challenges in its implementation, it is reasonable to believe that the instrument will have only a limited effect on stimulating private sector participation in development of the TEN-T core and comprehensive network in the new financial framework 2014-2020. To some market participants it is unclear how the LGTT 'fits' with other developments such as the 2020 Project Bond Initiative.

On administrative efficiency

Value for money for project sponsors has been assessed qualitatively. Given the small sample of projects on which pricing was discussed, it is difficult to provide a straightforward answer to the question of whether the LGTT provided value for money and whether it was considered prohibitively expensive. The administrative mark-up applied by the EIB appears to vary significantly – although contradictory information and a lack of transparency make any formal assessment difficult.

Main recommendations

Before adapting the LGTT further or designing new financial instruments in this area, the obstacles to realizing transport infrastructure projects, and in particular through private financing contribution, as a result of affordability problems should be further investigated and better understood. The initial focus should be on stimulating the pipeline of projects. A thorough assessment of potential TEN-T projects with a view to conducting a mapping of the main risks and obstacles which hinder their development should be made. The

discussion of policy options for stimulating the realisation of projects should continue and lead to the development of the financial instrument best suited to facilitate this. As part of working on stimulating the pipeline of projects, the EC should investigate if there is demand for more capacity building with respect to knowledge and competence to implement PPP capacity schemes in Member States where these are underutilised.

Before adapting the LGTT further (e.g. extending its scope to cover different risks), it should be further investigated to what extent contractors, governments and public procurement authorities promoting PPPs require mitigation for other types of risk.
Assuming that the LGTT will continue to be available in the new financial framework 2014-2020, the evaluators offer the following recommendations on the future implementation of the instrument:

- As a product financed by the EU budget and implemented by a European institution, all aspects of information about the LGTT should be transparent, understandable and made available to the public, without hindering the commercial interests of the project company and the procuring authority. This could include, where applicable, the conditions on draw-down, pricing and calculation of the administrative mark-up.
- Consideration should be given to how the LGTT might fit better with corporate finance type structures. The demand for a product like the LGTT among stakeholders in the relevant sectors should be further investigated.

On the evaluation

The purpose of the evaluation has been to assess the effectiveness, relevance and efficiency of the LGTT instrument in the delivery of TEN-T projects and the achievement of the TEN-T policy objectives, as well as to focus on the learning element in order to contribute to the design of the financial instruments for the period 2014-2020. The evaluation is theory-driven and the general approach is Contribution Analysis. Our evaluation is based on multiple data sources: interviews, study visits, financial analysis and desk research.

1. Introduction

This is the ex-post evaluation of the Loan Guarantee for the Trans-European Transport Network projects (LGTT), carried out by Ramboll Management Consulting. In this chapter, we provide a short background of the LGTT instrument (see more in chapter 2) and present the purpose of the evaluation, as well as its methodology.

1.1 Summary of the chapter

- This is the ex-post evaluation of the LGTT instrument, a product provided jointly by the European Commission and the European Investment Bank
- The LGTT is an unfunded mezzanine debt instrument provided to project finance Public-Private Partnerships (PPPs) in transport infrastructure projects within the TEN-T network
- The LGTT has been part of the financial close of seven TEN-T projects
- At the time of this evaluation, none of the projects have used, or drawn, the LGTT
- The evaluation is theory driven and the general approach is Contribution Analysis
- The evaluation is based on several data sources: interviews, study visits, financial data and desk research
-

1.2 A short introduction to the LGTT

The LGTT is an unfunded mezzanine debt instrument provided to project finance Public-Private Partnerships (PPPs)[1] in transport infrastructure projects within the TEN-T network. The LGTT was jointly established in 2008 by the European Commission and the European Investment Bank (EIB)[2] where both partners share financial risk.

The EIB provides a guarantee in the form of a contingent credit line, which may be drawn upon by the project provider during the first 5 to 7 years of operation, if the revenues generated by a project are not sufficient to ensure repayment of the senior debt, in case the actual revenues from the project fall below the forecasted level.[3]

During the period 2008-2012, the LGTT has been signed by five motorway projects, one maritime project, and one high speed rail project, as summarized in the following table.

[1] There is no formal, widely-accepted definition of what a PPP actually is. The European Commission uses the following definition: *"PPPs describe a form of cooperation between the public authorities and economic operators. The primary aims of this cooperation are to fund, construct, renovate or operate an infrastructure or the provision of a service. PPPs are present in sectors such as transport, public health, education, national security, waste management, and water and energy distribution. At European level, they help implement the European Initiative for Growth and trans-European transport networks."*

[2] Cooperation Agreement of 11 January 2008

[3] Task specification to the ex post evaluation of the LGTT instrument, DG Move 2013-373

Table 1: Projects signed with LGTT

#	Project name	Country	Sector	Date of financial close / date of submission of final bid	Construction period starting date	Operating period starting date
1	A5 Autobahn Baden Baden	Germany	Road	03-2009	2009	2014
2	LGV SUD (Europe Atlantique)	France	Rail	06-2011	2011	2017
3	EIX Transversal C-25 PFP	Spain	Road	09-2010	2010	2014
4	Baixo Alentejo Motorway	Portugal	Road	02-2009	2009	2013
5	A8 Autobahn Augsburg - Ulm ITP	Germany	Road	05-2011	2011	2015
6	London Gateway Port (TEN)	UK	Maritime	12-2011	2010	2013
7	IP4 Amarante - Vila Real PPP	Portugal	Road	05-2008	2008	2010

It is important to point out that none of these projects have used, or drawn, the LGTT in practise yet. For more information on the design and technical set-up of the LGTT instrument, see chapter 2.

1.3 Purpose of the evaluation

The ex-post evaluation of the LGTT instrument has the following objectives:

1) Assess the effectiveness, relevance and efficiency of the LGTT instrument to the delivery of the TEN-T projects and achievement of the TEN-T policy objectives;

2) Draw lessons learnt from the implementation of the instrument since its establishment and contribute to a possible optimisation of the design of the financial instruments to be established under the next multi-annual financial framework (MFF) 2014-2020 through the Connecting Europe Facility and to the most efficient mode of delivery of the new financial instruments under that framework.

Hence, **this evaluation is both summative and formative**. It is a *summative* evaluation, in the sense that it looks at the results and impacts of the LGTT instrument, its value-for-money, and addresses the question of attribution (i.e. the extent to which observed impacts can be attributed to the policy evaluated).

It should be noted that the evaluation focuses on the contribution of the LGTT instrument to the implementation of the TEN-T projects, e.g. acceleration of the projects **to reach financial close** due to the LGTT facilities provided by the EIB, as none of the LGTT operations signed is yet physically completed and opened to traffic. Consequently, the LGTT has not yet been used, i.e. drawn, in any of the projects studied.

It is a *formative* evaluation because it also focuses on the learning element, and examines the delivery method, the quality of implementation, procedures, inputs, etc. in order to enhance the effectiveness, efficiency or utility of the LGTT. By doing so, it will contribute to the design of the financial instruments for the period 2014-2020.

1.4 Methodology of the evaluation

The overarching framework of the evaluation is the intervention logic, presented in chapter 2.4, which specifies what outputs, outcomes and impacts the LGTT is supposed to achieve and how. The data collection and the following analysis are structured to investigate the link between the LGTT activities and outputs, in order to:

a) Establish how the LGTT has been implemented
b) Assess whether there is any evidence supporting the view that expected outputs, outcomes and impacts of the LGTT have been achieved
c) Assess whether there is any evidence supporting the view that the LGTT has contributed to the outputs, outcomes and impacts

It is important to differentiate between attribution and contribution, where attribution indicates a direct link between activities and outcomes and contribution deals with the likely influence or change generated by the LGTT. In evaluation theory and research, the latter approach applied is labelled "Contribution Analysis[4]", and is particularly useful in complex programmes and environments with multiple stakeholders and other influencing factors, characterised by an absence of baseline, quantitative indicators, or possible counterfactual situations. Contribution analysis is the approach used in this evaluation.

Data collection relies on interviews, field visits and desk research. The interviews, field visits and desk research have been used to produce so called "performance stories", i.e. to establish why it is (and why it is not) reasonable to assume that the LGTT has contributed to the observed outcomes and whether the observed outcomes are appropriate.

Several analytical strategies to address the complexity of the evaluation have been applied and are explained in short in the following chapter. Wherever possible, we have triangulated sources**:** comparison of evidence from different stakeholders and/or data sources (for instance the views the European Commission, the EIB and the private partners on specific issues). We have also strived to compare projects, although the complexity of the projects makes them more or less unique due to differences in setting, time frame, Member State, etc. Data on the projects have been structured and processed in a project database to support comparisons where possible. Indicators and descriptors were compared in order to understand needs, successes and issues based on projects characteristics. In an attempt to discuss a counterfactual situation as well as to investigate the practical implementation of the LGTT, we have studied projects that have signed the LGTT as well as projects that have not and asked the project stakeholders to assess hypothetical counterfactual cases. For example, respondents involved in projects that have signed the LGTT have been asked what would have happened without it and respondents involved in projects that have not signed LGTT have been asked what would have happened had it been signed. The desk research on the infrastructure finance markets has been an important source of information on how trends in the finance markets as well as the global economic context have influenced the implementation and development of the LGTT instrument.

Within the overarching framework, the evaluation will answer the 19 evaluation questions provided by the European Commission (for evaluation questions, see Appendix 1). In short, these questions deal with:

- The *relevance* of the LGTT: has the instrument been designed in a way to address key risks preventing financial close on the European market? (Chapter 2)

[4] Mayne, John, (2001). Addressing attribution through contribution analysis: using performance measures sensibly. The Canadian Journal of Programme Evaluation, volume 16, Nr. 1 p. 1-29

- The *implementation* of the LGTT: has there been a need to adapt the instrument? Have communication and awareness raising actions been efficient? (Chapter 3)
- The *effects* of the LGTT: has the instrument had an impact on financial close and senior debt? (Chapter 4)
- The *efficiency of the* LGTT: what are potential outcomes with instruments other than the LGTT? (Chapter 5)
- The *administrative efficiency* of the LGTT: is there a correlation between pricing and use of the instrument? How are projects identified and how does communication between the EIB and the EC work? (Chapter 6)

1.4.1 Data collection

Interviews

A considerable number of stakeholders have been interviewed as part of the project (61), with many interviews covering several projects. The interviews covered a broad range of stakeholders: private sector, financing community and government agencies and the interviewees were asked to address several themes:

- Financing of infrastructure in Europe: trends, risks, market failures
- Macro-economic situation and recent developments
- General trends of transport infrastructure financing
- General trends of Public-Private-Partnerships (PPPs)
- Characteristics of traffic risk
- TEN-T projects, the special category of TEN-T projects defined as "Priority Projects" as well as other TEN-T projects
- The LGTT instrument (design, implementation, outputs, outcomes, impacts)
- Specific projects signed with the LGTT instrument
- Specific projects which have not used the LGTT instrument (different reasons)
- Specific projects in the pipeline, not yet signed, where the final financial structure has not yet been decided upon

Table 2: Groups of interview respondents

Group of interview respondents	No. of interviews
European Commission staff (DG MOVE and DG ECFIN)	5
INEA staff (former TEN-T Executive Agency)	3
EIB staff	14
National public procurement authorities for PPPs in transport	9
Equity providers: **Project providers (sponsors)** – participants in transport sector PPPs	17
Debt providers: **Public and private investment and commercial banks** providing lending for PPPs in the transport sector	13

In total, 61 interviews (including country visits) have been conducted. In many cases, interviews have covered several projects.

The sample of projects

The sample of projects used in this evaluation has been provided by the European Commission. The sample, originally consisting of 49 projects, includes transport infrastructure projects from all over Europe, covering different transport modes, payment mechanisms (e.g. availability based schemes, toll roads) and other characteristics. The projects' status differs considerably: some reached financial close before the LGTT was operational, some were abandoned for e.g. environmental reasons, some are postponed, some are not on the TEN-T network, some are not project finance (e.g. corporate finance), etc. The evaluation thus relies upon data on 39 of these 49 projects. The remaining ten projects in the list were removed from the sample for various reasons, in agreement with the European Commission.

Desk research

The desk research activities were two-fold:

- *Review of publications related to the context of the* LGTT
  Transport infrastructure, PPPs and Project Finance. This included review of policy documents, both publicly available and documents provided by the EC and EIB. A complete list of the sources used is available in Appendix 2.

- *Review of project-specific data*
  The project specific data were assembled based on the project-related documentation provided by the EIB and EC, as well as based on information collected from the InfraDeals transaction database[5] and via web search queries for the individual projects.

[5] InfraDeals is an online research and intelligence tool for infrastructure investment and finance community, containing data on more than 6000 global infrastructure transactions. See http://www.infra-deals.com/public/sales/

Table 3: Overview of data sources

Evaluation criterion/ Question short	Desk research			Interviews		
	Projects	Markets	Other	EU[6]	Providers	Others[7]
Relevance (design)						
Determinants of financial structure choice (incl. cost of senior debt)		X		X	X	X
Key risks and market failures preventing financial close		X		X	X	X
Effectiveness (response)						
"Failure" factors for not using/difficulty in using the LGTT	X			X	X	X
Potential outputs with instruments other than the LGTT					X	X
Effectiveness (effects)						
Impact on financial close	X				X	
Impact on senior debt	X				X	
Signalling effect on providers and commercial banks					X	X
Contribution to TEN-T priority projects	X			X		
Administrative efficiency						
Administrative mark-up	X			X	X	
Pricing and use of the LGTT	X			X	X	
Project screening	X			X	X	
Implementation						
Project screening	X		X	X	X	
Communication and awareness raising actions			X	X	X	X
Communication between the EIB and the EC			X	X	X	
Communication in case of non-availability of the LGTT	X			X	X	
Flexibility of LGTT to project requirements	X			X	X	

1.4.2 Challenges in the data collection

The data collection faced some challenges:

- Detailed data on the financial structure of project finance deals is often "commercial/in confidence".
- Respondents from the EIB and the private sector have been reluctant to share project data on LGTT and/or TEN-T projects referring to the sensitive and/or confidential nature of the information they would have to provide in order to answer the interview questions. A number of projects are in the process of negotiating their financial structure or restructuring their existing one and the evaluator has been told that any information provided on the finances of the project could influence the negotiations.

[6] European Commission, The Innovation & Networks Executive Agency (INEA), European Investment Bank
[7] Public and private banks active in financing of transport infrastructures, procuring authorities, construction companies etc.

- Private sector respondents' opinions could also affect their on-going relationship with the EIB.

However, the interviews cover several different stakeholder groups. This reduces bias in the analysis, especially when combined with the data collected through desk research. In addition, as described in the following section, by conducting interviews on a sufficiently diverse sample which includes different transport modes in different Member States (MS), we have collected a broad range of opinions about the role of the LGTT, which will help underpin the objective evaluation of the instrument.

2. Relevance of the LGTT

This section provides an assessment of the relevance of the LGTT instrument – how the instrument corresponds to needs. We will focus on the following issues:

- What was the context when the LGTT was first designed; what were the financing needs and obstacles the instrument was set up to address?
- Have the identified needs and obstacles changed since the LGTT was designed?
- How does the instrument correspond to current needs and obstacles?
- Is the LGTT relevant given the market needs?

2.1 Summary of main findings

- The link between market needs and the objectives of the LGTT needs to be clarified. There is no common understanding of what specific needs the LGTT is supposed to address and we have not found a comprehensive needs assessment
- Most of the private sector respondents interviewed have not been able to identify particular "market failures" at the time of the development of the LGTT Nevertheless, there are obstacles to financing transport infrastructure projects
- The LGTT had a very narrow application from the beginning – even more so during the financial crisis
- With respect to the current relevance of the instrument, the messages received from the private sector are mixed:
- Some respondents see value in the instrument
- Other respondents deem the scope of the LGTT as too narrow
- The fact that the LGTT has never been used independently of EIB senior loans makes it difficult to assess the value of the LGTT alone

2.1.1 The link between market needs and the objectives of the LGTT needs to be clarified

The LGTT relies on an assumption of a market failure. The economic term market failure refers to a situation where the market fails to supply the demanded quantity of a product – that the equilibrium of supply and demand is not met. It is difficult to work with the term market failure regarding transport infrastructure since the "market" includes both private and public agents and demand is hard to estimate and forecast since it depends on availability of different modes of transport, availability of public transportation, consumer behavior as well as the economic cycles. In any case, main stakeholders point towards an insufficient number of traffic infrastructure projects being realized given a) the estimated demand b) the EU transport policy[8] which is in line with the Europe 2020 growth strategy[9] and strives to support mobility and economic growth and job creation while becoming more sustainable.

The main issue for the underdevelopment of transport infrastructure projects singled out is the assumption of unwillingness of the private sector to take on traffic risk in the ramp-up

[8] *"Roadmap to a single European transport Area - Towards a competitive and resource efficient transport system",* COM (2011) 144

[9] *EUROPE 2020 A strategy for smart, sustainable and inclusive growth*, COM (20101) 2020, Brussels, 3.3.2010

phase. Risk averseness in itself is not a market failure. It may well be a perfectly rational response to difficulties in forecasting traffic. Also, recent research, for example on Australian projects, shows that traffic risk persists well after the ramp-up phase (as it is defined). Although the research mentioned is based on Australian data, it is important to investigate if the same is true for European projects.[10]

As it is difficult to confirm the existence of a market failure, in the strict sense of the term, behind the unwillingness of the private sector to take on traffic risk and finance transport infrastructure project, it is much more productive to instead discuss obstacles to realising transport infrastructure projects.

The overall objectives of the LGTT are generally known and accepted: that the LGTT is supposed to support the completion of TEN-T network and facilitate private sector investment in TEN-T financing. However, there is no common understanding of what specific need the LGTT is supposed to address among main stakeholders. There are also several different interpretations among stakeholders of *how* the LGTT is supposed to help deliver TEN-T projects:

- "The LGTT is to protect senior debt from losses"
- "The LGTT is to lower the cost of senior debt"
- "The LGTT is to bring discipline to the market for demand-based projects"
- "The LGTT is to enable financial close"

These contrasting views suggest that there is some confusion about which mechanisms the LGTT is supposed to work through.

2.1.2 The LGTT had a very narrow application from the beginning – even more so during the financial crisis

Changes in the market and the advent of the financial crisis have affected the suitability of the design of the LGTT. During the period that the LGTT has been in place, the number of PPP-project deals has slowed down significantly, almost coming to a stop in the European transport infrastructure market. The volume of projects has decreased overall and the public procurement authorities have changed course from traffic risk projects towards availability schemes, making the number of projects suitable for LGTT very small. Banks have generally become more risk averse due to the financial crisis and less keen to provide long-term lending due to the requirements of Basel III.[11] In some countries banks have problems with their own credit rating as well as liquidity, negatively affecting their possibility and/or willingness to lend, in particular long-term.

Given the strongly diminishing number of traffic risk based PPPs the market for LGTT quickly became and has continued to stay very narrow and limited. However, among the small number of projects included in this evaluation that were both eligible and suitable for LGTT, the instrument has largely been used.

[10] Bain, R., Meaney, A., Dixon, P., & Davis, C., (2012), *Disincentivising Overbidding for Toll Road Concessions*, Oxera (for the Australian Department of Infrastructure and Transport), September 2012, Sydney.

[11] Basel III is a comprehensive set of reform measures designed to improve the regulation, supervision and risk management within the banking sector. Largely in response to the credit crisis, banks are required to maintain proper leverage ratios and meet certain capital requirements. (sources: Investopedia and Financial Times Lexicon).

2.2 The policy context of the LGTT

A well-functioning transport system has been at the core of EU policy making since the very beginning. Ever since 1958 and the entry into force of the Treaty of Rome, the common transport policy has focused on eliminating barriers between Member States and contributing to the free movement of individuals and goods, as part of the efforts to create a fully functioning internal market and to support growth, jobs and EU competiveness. The Trans-European Transport network (TEN-T) policy has been important to support the development of a fully functioning internal market. TEN-T was first given legal basis in the Maastricht Treaty.[12]

In 1996 the European Parliament and the Council adopted the first Guidelines defining the TEN-T policy and infrastructure planning. Since then, the TEN-T policy has targeted EU funding to support the development of transport infrastructure projects of common European interest through the TEN-T guidelines, setting the rules on which projects are eligible for EU funding.[13]
The general rules for granting Community financial aid in the field of Trans-European Transport and energy networks are laid down in the TEN Regulation.[14]

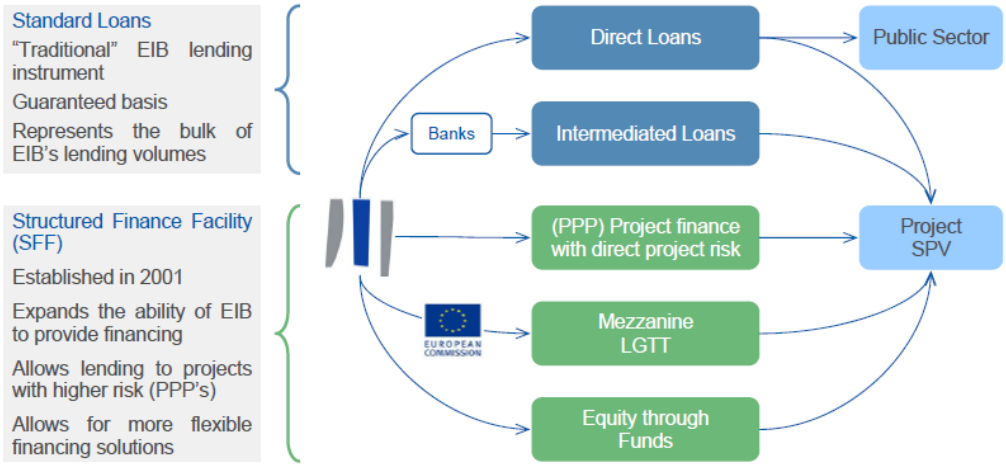
There are several instruments to support the realisation of the TEN-T network. Studies and projects to develop transport infrastructure within the TEN-T network can get co-financing from the EU budget. During the most recent multiannual framework 2007-2013, the following Community instruments were available:

- Grants from the Trans-European transport budget (TEN regulation)
- Grants from the Cohesion Fund budget, in the countries eligible for its intervention
- Grants from the ERDF[15], mainly in Convergence[16] objective regions
- Loans, guarantees and technical assistance from the European Investment Bank (EIB) – including the LGTT instrument that was designed in 2008 to accelerate and implement TEN-T infrastructure projects

The EIB has a portfolio of instruments to finance transport infrastructure projects (see below). Among these, the LGTT and the equity infrastructure fund, the Marguerite Fund, are the only ones partly financed by the EU budget. Another financial instrument, the Project Bond Initiative,[17] was added to the EIB portfolio in 2013 and will also partly be financed by the EU budget.

[12] Treaty on European Union, OJ C 191, Article G.
[13] Decision No 1692/96/EC of the European Parliament and of the Council of 23 July 1996 on Community guidelines for the development of the trans-European transport network, substantially amended several times and latest through a recast by Decision No 661/2010/EU of the European Parliament and of the Council of 7 July 2010 on Union guidelines for the development of the trans-European transport network.
[14] Regulation of the European Parliament and the Council (EC) 680/2007 on the general rules for granting Community financial aid in the field of the trans-European transport and energy networks. The Regulation (EU) 670/2012 of the European Parliament and of the Council modified the TEN Regulation in relation to (a) the change of the risk sharing pattern from pari passu to the Portfolio First Loss Piece (PFLP) and (b) establishment of the Europe 2020 Project Bonds Initiative.
[15] The European Regional Development Fund (ERDF) is one the EU structural funds. The ERDF aims to strengthen economic and social cohesion in the EU by correcting imbalances between its regions. The ERDF finances, for example, direct aid to investments in companies and infrastructures linked notably to research and innovation, telecommunications, environment, energy and transport (source: European Commission: Regional policy – Inforegio).
[16] In Convergence objective regions, GDP per capita is less than 75% of the EU (source: European Commission: Regional policy – Inforegio).
[17] Regulation (EU) No 670/2012 amending Decision No 1639/2006/EC establishing a Competitiveness and Innovation Framework Programme (2007-2013) and Regulation (EC) No 680/2007 laying down general rules for the granting of Community financial aid in the field of the trans-European transport and energy networks

Figure 1: Overview of financing instruments offered by the EIB to PPP projects[18]



Source: EIB

Financing from the EU budget to transport infrastructure projects of European interest is normally seen as a catalyst to the implementation of a project as the total amount of Community aid may not exceed 10 % of the total investment cost. Financial instruments financed by the EU-budget, such as the LGTT, aim to create a 'leverage (or 'multiplier') effect' for the EU funds[19] far exceeding the direct financial contribution itself. According to a study by The Centre for European Policy Studies (CEPS), the relatively small amount of EU-budget resources (1.3%) that is allocated to financial instruments enables the EIB Group and other lenders to multiply the original budget contribution by a factor of up to more than 30 in the form of loans.[20]

[18] EIB (2012), Connecting Europe Facility – Forms of financing, priorities and synergies between the sectors ; PPP presentation retrieved from : http://www.europarl.europa.eu/document/activities/cont/201204/20120424ATT43833/20120424ATT43833EN.pdf

[19] Commission delegated regulation 1268/2012 of 26.10.2012 on the Rules on the implementation of the Financial Regulation (Regulation (EU) 966/2012). Article 140 (6), OJ L 298/1

[20] CEPS (2012), 'The use of innovative financial instruments for financing EU policies and objectives: Implications for EU and national budgets.

Between 1996 and 2013 the distribution of EU finance to the TEN-T network has had the following spread:[21]

Table 4: EU funding to the comprehensive TEN-T network (EU 27, 2020 Horizon)

Trans-European Transport Network	1996-1999 EU 27	2000-2006 EU 27	2007-2013 EU 27
Cost (EUR billion), TEN-T Basic Network			
New Member States (EU 12)	5	27	72
Old Member States (EU 15)	101	275	318
TOTAL	106	302	390
Community contribution			
Programme TEN-T	2.2	4.4	8.0
Cohesion Fund + ERDF (Convergence objective regions)	15.7	25.1	44.2
EIB loans and guarantees	26.5	41.4	53.0
Total Community contribution			
Grants	18.1 (17%)	29.5 (9.8%)	52.2 (13.4%)
Loans	26.5 (24%)	41.4 (13.7%)	53.0 (13.6%)
Other resources (national)	63.4 (59%)	231.1 (76.5%)	285 (73%)

Table 5: EU funding to TEN-T Priority Projects (excluding Galileo, 30 Priority Projects, 2020 Horizon)

TEN-T Priority projects	1993/96-1999 EU 15	2000-2006 EU 27	2007-2013 EU 27
Cost (EUR Billion), TEN-T 30			
New Member States (EU 12)			16
Old Member States (EU 15)			138
TOTAL TEN-T 30	32.7	93.7	154
Community contribution			
Programme TEN-T	1.4	2.8	5.4
Cohesion Fund	3.8	7.0	12.3
ERDF	1.5	4.8	4.7
EIB loans and guarantees	9.8	16.1	25
Total Community contribution			
Grants	6.6 (20.3%)	14.6 (15.6%)	22.4 (14.5%)
Loans	9.8 (30.0%)	16.1 (17.2%)	25 (16,3%)
Other resources (national)	16.2 (49.7%)	63 (67.2%)	106.6 (69.2%)

[21] http://ec.europa.eu/transport/themes/infrastructure/ten-t-funding-and-financing/doc/funding_figs.pdf

2.3 Technical set-up of the LGTT

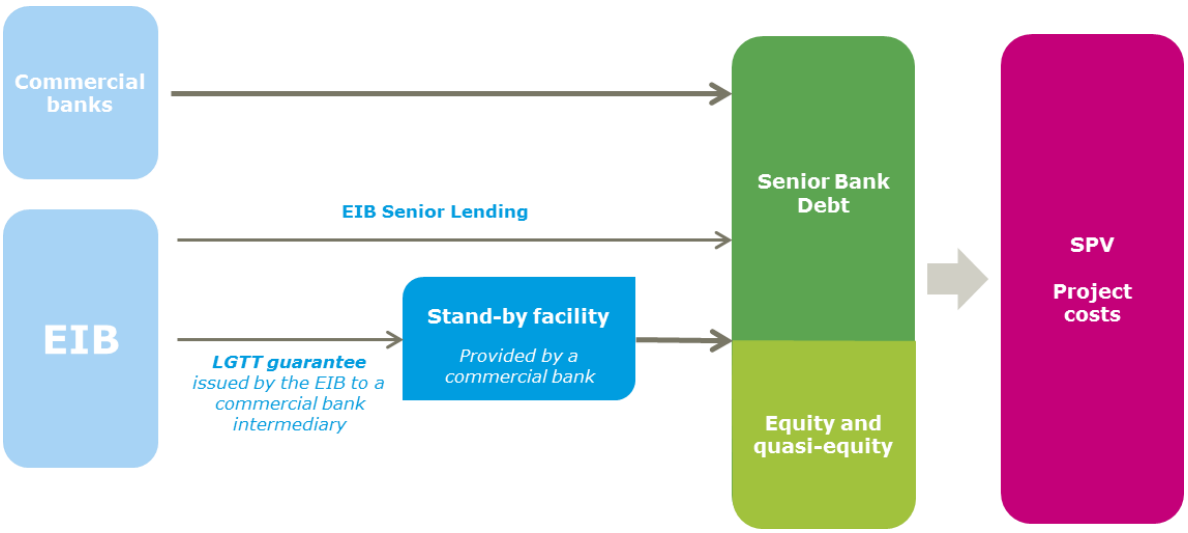
The LGTT is an unfunded mezzanine debt instrument provided to project finance PPPs in transport infrastructure projects within the TEN-T network. The LGTT was jointly established in 2008 by the European Union and the EIB[22] where both partners share financial risk.

The EIB provides a guarantee in the form of a contingent credit line, which may be drawn upon by the project provider during the first 5 to 7 years of operation, if the revenues generated by a project are insufficient to ensure repayment of the senior debt.[23]

The LGTT is not in competition with other instruments offered by the EIB or the market. There is no other instrument that specifically gives partial-protection against volume/revenue risk during ramp-up, unless a procuring agency offers some form of downside risk-sharing in specific concession agreements. According to our respondents, the alternative ways of producing the credit enhancement effect of the LGTT is additional subordinated debt or equity. Alternatively, a state guarantee similarly provides credit enhancement, as observed in France.

The LGTT has the form of an EIB guarantee to commercial banks which undertake to provide a stand-by liquidity facility (SBF) to be drawn by the project company in case of unexpected shortfall of revenue from the project during the first 5-7 years of operations in order to cover the service of its senior credit facilities. All repayments to be made on the outstanding amounts of the SBF (on a cash sweep basis) are in principle subordinated to the senior loans underpinned by it. If at the end of the availability period of 5-7 years there are still amounts outstanding under the SBF (interest, interest accrued and principal), the EIB guarantee is called upon by SBF providers to reimburse them and thus the EIB becomes a subordinated lender to the project. Amounts due under the LGTT rank junior to other debt and are to be repaid either on a cash sweep basis based on the post senior debt service available cash (default solution) or on a fixed reimbursement profile of the LGTT debt. There is also the possibility that the EIB funds the LGTT credit line directly to the borrower. The figure below describes the contractual structure of the instrument and illustrates the subordinate position of LGTT with respect to senior debt.

Figure 2: Technical set-up of the LGTT



Source: Ramboll Management Consulting

[22] Cooperation Agreement of 11 January 2008
[23] Task specification to the ex post evaluation of the LGTT instrument, DG Move 2013-373

To qualify for the use of the LGTT instrument, and infrastructure project must satisfy several conditions.

The LGTT projects must be:

- TEN-T projects and comply with the TEN-T Guidelines and EU law (the compliance with the TEN-T Guidelines is assessed by DG MOVE);
- Totally or partly, based on the revenues stemming from traffic (revenues, tolls or other user-charges based income). The private sector (the project provider) takes the risks related to the revenues or losses generated by that infrastructure project;
- Financially viable; the financial viability is assessed by the EIB. The EIB assesses, inter alia, the traffic forecasts and the related revenues obtained based on the traffic scenario;
- A TEN-T project with an appropriate level of private financial participation and a revenue exposure related to traffic risk within defined prudential limits.[24]

The EIB is mandated to carry out risk, financial, technical and legal due diligence for projects applying for the guarantee and evaluate them in accordance with its "usual rules and criteria, including, inter alia, the quality of individual proposals, the creditworthiness of the borrowers, acceptable terms and conditions, and market demand." [25]

2.3.1 Capital contribution

The capital contribution to the LGTT instrument for the 2007-2013 financing period was initially set at EUR 1 billion, split evenly between the Commission and the EIB, intended to support up to EUR 20 billion of senior loans.[26] The amending Regulation 670/2012 reallocated EUR 200 million of the EU contribution to the Project Bond initiative and another EUR 50 million to grant funding.[27] The total EU contribution to the LGTT therefore currently stands at EUR 250 million.

When applied to a specific project, the stand-by liquidity facility guaranteed by the LGTT can amount to up to 20% of the senior debt of the project, with a maximum ceiling of EUR 200 million pursuant to the rules governing the EIB's Special Activities operations, of which LGTT is part.[28] Under its Special Activities operations, the EIB can accept exposure to higher financial risks than under its normal lending activities.

2.4 Intervention logic of the LGTT instrument

The overall purpose of the LGTT is to support the realisation of the TEN-T network by providing a loan guarantee facility, backed by the EIB, to the private sector (project providers), to enhance the credit rating of the senior debt by reducing traffic risk. However, there are different interpretations of the workings of the LGTT and how it is supposed to help deliver TEN-T projects.

[24] Decision 661/2010/EU
[25] Regulation 680/2007, Annex.
[26] Regulation 680/2007, Annex.
[27] Regulation 670/2012, Annex 1
[28] European Parliament (2012), Financing instruments for the EU's transport infrastructure, p. 55.

The analysis of the collected data shows that the objectives for the LGTT have developed over time and there are different and even contrasting opinions as to what the LGTT is supposed to achieve.

One EIB respondent stated that the LGTT is aimed at protecting senior debt from losses, so that it addresses the market gap by giving incentive for senior lenders to engage in transport project financing hence facilitating access to senior debt for project providers. Lower cost of debt is a collateral benefit for the providers (and hopefully procuring authorities as project providers may reduce their price). However, it is yet to be determined whether the benefits of the LGTT ultimately flow to the public or private sector.

According to an EC respondent, the objective of the instrument is to find additional banks that are willing to provide financing to provide comfort/certainty to senior lenders. The point is to get a subordinated credit line that gives comfort to senior lenders and ultimately, attract them to participate in the deal.

Other EC respondents pointed out that the policy envisaged that by supporting the development of PPPs through resolving the financing gap in traffic risk projects, grants from the TEN-T budget would be freed up for other projects which would be less financially viable, allowing the private market to bring investments in those infrastructure projects that are viable on a commercial basis. Nevertheless, as highlighted by several EIB officials, the LGTT is a market instrument and does not have the power to "make" projects, it is offered to suitable and eligible projects which decide to use it based on its merits.

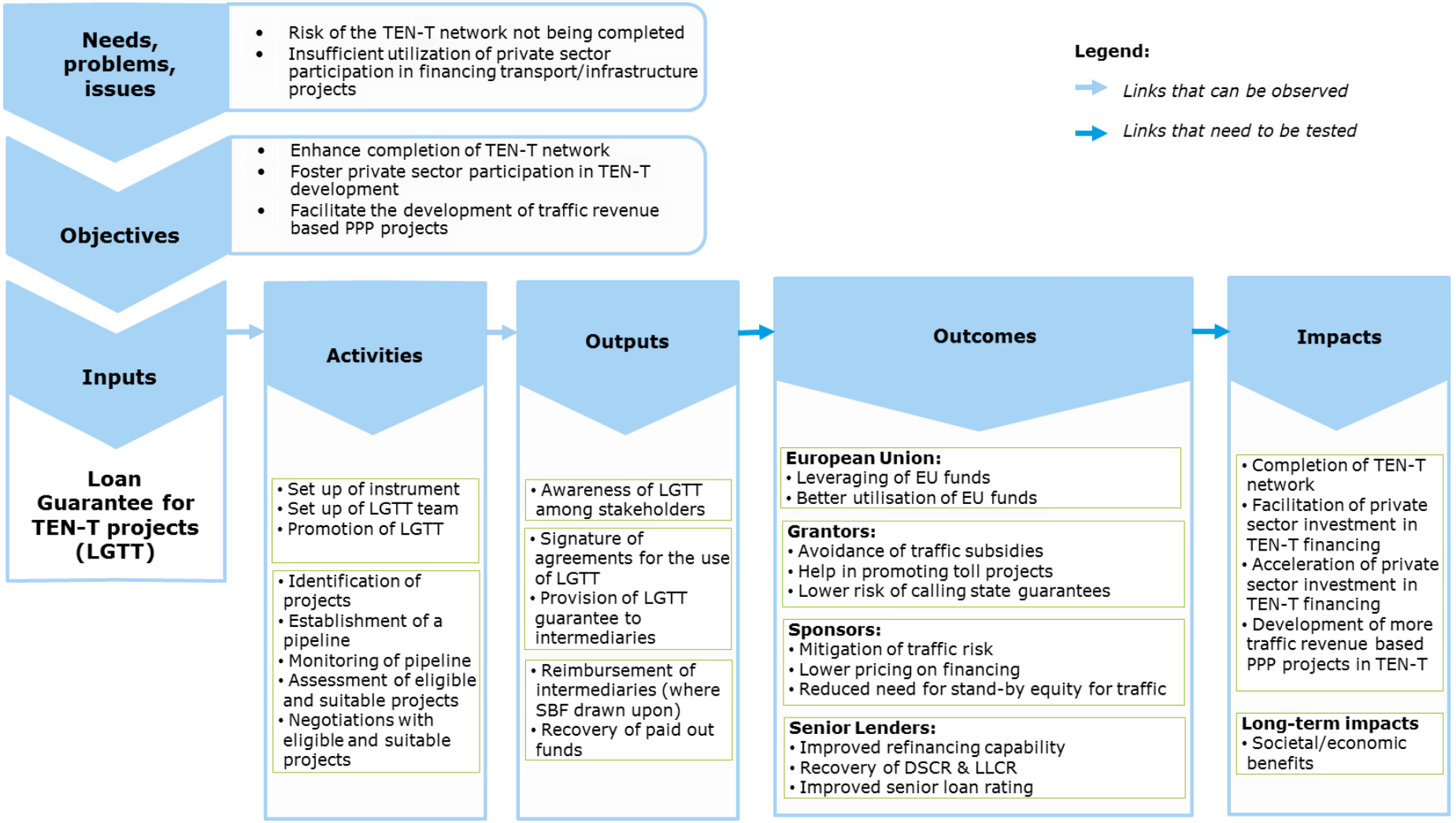
The procuring authorities decide which risks to take on and which to transfer. Thus it cannot be expected that the LGTT, by virtue of its design and implementation would encourage the usage of demand based PPPs to promote the delivery of the TEN-T-network.

In addition to the possible credit enhancement effect of the guarantee mechanism, EIB respondents also discussed that the LGTT is meant to counter traffic risk by bringing discipline to the market for demand-based transport projects. As projects that want to benefit from the LGTT need to be assessed by the EIB, the argument here is that the LGTT will address the optimistic bias in the traffic forecasts prepared by the private sector. However, there is no evidence to suggest that the EIB's traffic forecasts are sufficiently conservative to "correct" the optimism bias in the forecasts of the private sector, so it is yet to be determined whether this "disciplining" effect actually takes place.

The data also suggest that the instrument has been adapted to project-specific circumstances and that the EIB has actively looked at alternative ways of deployment to make it more attractive to a broader portfolio of projects; particularly given the changing landscape for transportation PPPs across Europe post-2008.

A graphic interpretation of what the LGTT is intended to achieve is presented overleaf.

Figure 3: Intervention logic



2.5 Needs and obstacles to realise the TEN-T network: drastic changes following the financial crisis

To reach the goal of a fully functional and EU-wide multimodal TEN-T 'core network' by 2030, with a high quality and capacity network by 2050,[29] "unprecedented volumes of investment"[30] will be required according to the European Commission. According to EIB estimates, over EUR 1 000 billion of investments will be needed to fulfil the priority targets of the Europe 2020 objectives in the energy and transport sectors.[31]

The LGTT began to be discussed between the EC and the EIB in November 2003 on the proposal of the EC, as a measure to provide targeted support to a particular type of infrastructure projects: PPP projects in financing phase which are based on projected income from user-charges (tolls, fares, etc.) on the TEN-T network.[32] From the start, the LGTT instrument was designed to target a very small sector.

According to a majority of the respondents interviewed over the course of this evaluation, access to finance for transport infrastructure projects around the time of design of the LGTT was readily available, with plentiful liquidity on the market. Some even argue that the LGTT was not relevant at the time of its design, given the favourable market conditions at the time. The scene changed drastically due to the financial crisis beginning more or less the same time as the cooperation agreement between the EC and the EIB in respect of the LGTT was signed (January 2008). Risk averseness among private investors increased in general, especially tied to traffic risk which is inherently difficult to assess.

The financing of infrastructure is to a large extent determined by its economic characteristics which contain a number of inherent challenges to investors: large up-front sunk costs, followed by a low marginal cost for each additional user. Combined with the long average lifespan of infrastructure projects, this poses significant challenges both for private and public investors. The former need to recover their costs, while the latter need to ensure that essential infrastructure services are made available in sufficient amounts and on equitable terms, while also being provided efficiently.[33]

2.5.1 Obstacles preventing financial close of infrastructure projects at the time of designing the LGTT

Respondents agree there was plentiful liquidity in the financial markets prior to the financial crisis. Many of the respondents characterise the period prior to the introduction of the LGTT, which more or less coincides with the start of the financial crisis, as one of a credit boom, where bank lending was inexpensive and plentiful, and risk attitudes were very lax, with plenty of banks willing to lend to greenfield toll road projects.

Most of the interviewed private sector respondents have not been able to identify particular "market failures" preventing financial close on transport infrastructure projects at the time

[29] European Commission (2011), Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system. COM (2011) 144 final.
[30] Regulation (EU) No 670/2012 of the European Parliament and the of the Council of 11 July 2012 amending Decision No 1389/2006/EC establishing a Competitiveness and Innovation Framework Programme (2007-2013) and Regulation (EC) No 680/2007 laying down general rules for the granting of Community financial aid in the field of the trans-European transport and energy networks. OJ L 204/1, Recital 3.
[31] Jennet, N. (2011) in TEN-T Days 2011: Connecting Europe: Putting Europe's economy on the move – Conference Report, p.56.

[33] EIB (2010), Financing infrastructure – A review of the 2010 EIB Conference in Economics and Finance, p.13

of the development of the LGTT. In fact, all respondents almost unanimously agree that prior to the financial crisis there was plentiful liquidity in the financial markets and while some banks did not participate in traffic-based PPP financing, there was a sufficient number of banks willing to invest in such deals.

Still, in 2005 a report concluded that at that time there was a need for a credit-enhancing measure to fill a gap created by the lack of long term lending for transport projects.[34] Respondents involved in the development of the instrument reported that despite the "plentiful" liquidity on the market for infrastructure investments, at the time when the LGTT was developed it was observed that developers found it difficult to cover the traffic risks at affordable prices.

Traffic risk is difficult to assess as there is a strong risk of over estimation due to mis-alignment of incentives between the procuring authority and the bidder. According to respondents from the EIB and the EC, the main obstacle to financing at the time when the LGTT was developed was that the market was unwilling to take on the traffic risks in the early years of operations (the ramp-up) phase. This reluctance may well be interpreted as a rational assessment based on the historic difficulties of successfully executing traffic-based projects rather than an actual market failure.

Demand for transport infrastructure is influenced by competing modes of transport, demographic shifts, economic conditions, the cost of the facilities to end users, convenience, individual preference, speed, and a number of other, often interrelated factors that make accurate demand forecasting difficult at best and result in traffic risk. In addition, traffic forecasts are inherently susceptible to optimism bias as demonstrated in a series of Standard & Poor's reports (from 2002 to 2005) on traffic forecasts in user fee-based toll road schemes. Of the 104 different projects, actual traffic was, on average, only 70 percent of the forecast, with a large majority of projects not reaching 90 percent of the forecasted traffic.

One of the reasons for such overestimation is that some bid evaluation and concession award criteria used by governments throughout the world actually incentivise the submission of over-optimistic forecasts. A typical example might be to award a toll road concession to the bidder offering the largest upfront payment to the state.[35] To justify a large payment, the project needs to be able to demonstrate strong economic performance and this means high toll revenues. High toll revenues, in turn, derive from strong projections of demand. So bidders submit offers based on the highest traffic numbers they can justify. This scenario has been frequently observed internationally – most recently in Australia[36] and the issue was mentioned by several of the interviewees, including a representative from the German VIFG.[37]

The public sector can also be incentivised to inflate projections of demand for a project, e.g. in order to achieve a politically-desirable benefit/cost ratio. The challenge for PPPs is to structure the evaluation and award criteria for a transport concession in such a way that realistic – not optimistic – demand projections are rewarded.[38] Otherwise, there remains a danger that any financial instrument designed to address project underperformance will

[34] Interview with respondent from the EC involved in the development of the instrument

35 Similarly perverse incentives operate when concession award is based on the lowest public sector contribution to a project from the state.

36 See http://www.robbain.com/Toll%20Roads.pdf

37 VIFG is a state owned company which collects tolls on federal roads in Germany and finances motorway construction.

38 A twin objective might be to reward bidders who are genuinely long-term private sector partners, rather than short-term players looking for quick, upfront profit-maximisation.

simply assist those who have submitted the most optimistic forecasts in the first place and, in so doing, have won the concession contract – possibly on an unsustainable basis.

Several studies[39] as well as a number of respondents refer to an overestimation of traffic volumes in many bids as a way to win the bidding competition, with bad precedents of this in several European countries such as Spain, France and Greece, where banks had bad loans.

One respondent (financial sector advisor) claims that ramp-up traffic risk became an issue around the time of the financial crisis when data from several unsuccessful projects in Australia and Europe[40] emerged. Several respondents involved in deals that were closed around the time of the introduction of the LGTT report that they were not convinced initially of the value of the instrument, but considered it on the behest of the EIB.

According to the Mid-term review of the LGTT carried out by the EIB in 2011, revenue uncertainty and volatility during the short to medium term of project operations (also known as ramp-up phase) are the main obstacles that projects face when trying to raise cost-efficient debt financing. The LGTT is meant to facilitate their financial close by guaranteeing repayment of the senior debt during the ramp-up phase of a project.[41] The argument is that once the project has survived its initial "ramp-up" period, it would normally be able to produce sufficient cash flows to service its debt and make appropriate returns to shareholders, and thus the LGTT counters the initial traffic risk while relying on the long-term perspective of the project being financially viable. However, both the mentioned research on Australian projects and interviewees suggest that even post ramp-up, projects often struggle to reach the forecasted traffic levels.

The desk research and data collection carried out in the context of this evaluation did not identify a comprehensive needs assessment carried out prior to the development of the LGTT. Neither desk research nor interviews have unravelled a common understanding of what specific needs or obstacles prevent the realisation of the TEN-T network in general and reaching financial close in particular.

2.5.2 Obstacles preventing financial close of infrastructure projects during the financial crisis

The scene for transport infrastructure projects changed drastically in course of the financial crisis beginning in 2007-2008, at the same time as the LGTT agreement was designed. All interviewed public and private sector stakeholders agree that the financial and economic crises have changed the landscape for transport infrastructure and private sector risk appetite. This has reduced the already narrow group of TEN-T PPP projects, making the market for LGTT even smaller. The challenges of large up-front costs and difficulties to assess traffic risk remain accompanied with a decrease in PPPs, reinforced reluctance to take on traffic risk and increased risk averseness among private investors in general.

Significant decrease in PPPs

PPPs in general have decreased substantially since the economic and financial crisis starting in 2008 and so have PPPs in the transport sector. Data from the EIB shows that the market for PPPs has contracted significantly in recent years. From the all-time high point of about

[39] See e.g. Bain 2009

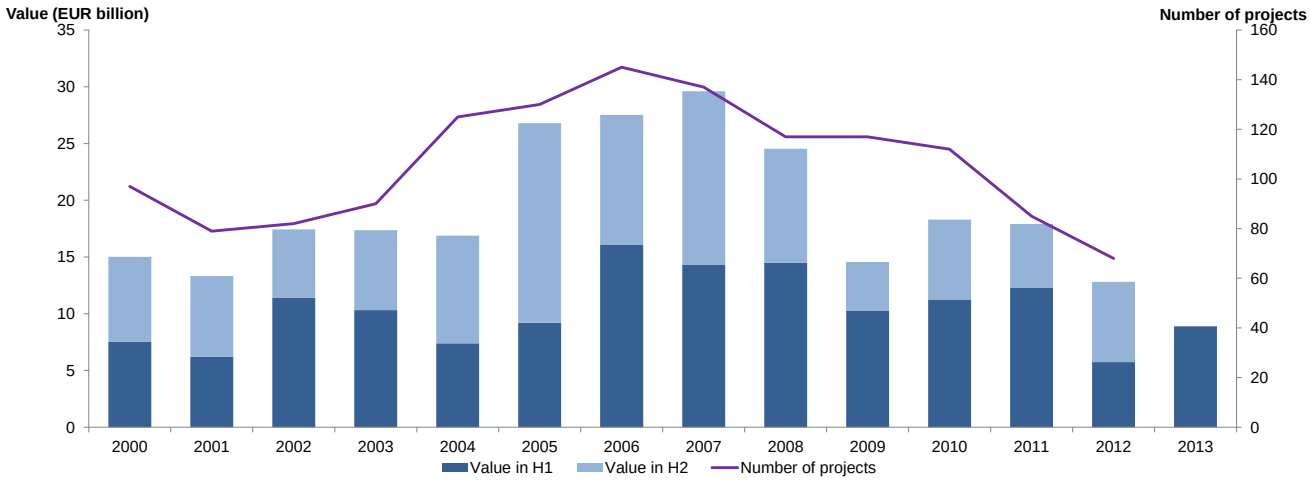
[40] Bain, R., Meaney, A., Dixon, P., & Davis, C., (2012), *Disincentivising Overbidding for Toll Road Concessions*, Oxera (for the Australian Department of Infrastructure and Transport), September 2012, Sydney.

ll Managementes the subordinate position

140 PPP deals in 2006 and almost EUR 30 billion worth of PPP deals in 2007, in 2012 the numbers were significantly lower - only 66 deals with financing requirements of less than EUR 12 billion[42] and the transport PPP deals haven't fared much better.

Figure 4 below clearly shows that while the PPP market grew steadily until the mid-2000s in terms of project numbers, it has declined since then; most notably in 2009 and as confirmed by the most recent updated on PPPs by EPEC, even more so in 2012 when PPP market activity across Europe in 2012 totalled around EUR 13bn, a 40% fall since 2011.[43]

Figure 4: European PPP project developments during the 2000's[44]

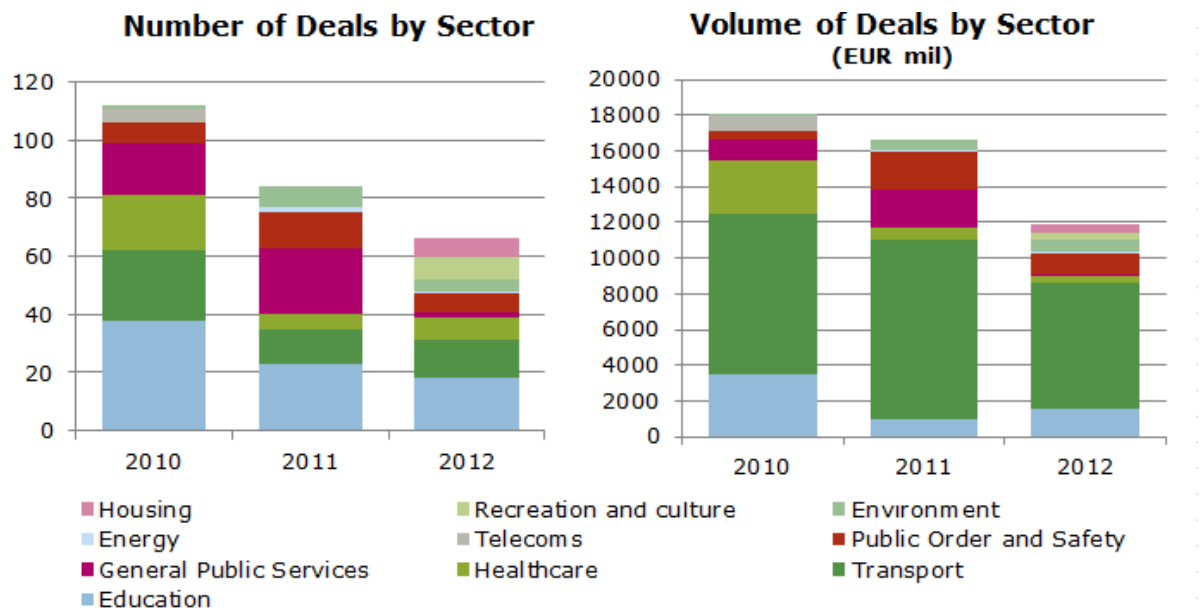


Source: EPEC (2013)

In terms of PPP activity by country, the UK has been the most historically active one. In terms of activity by sector, **Error! Reference source not found.** overleaf presents the number of projects procured via a PPP scheme between 2010 and 2012. While transport remains the dominant sector for PPP deals, the data shows that the numbers and volumes of deals have decreased significantly. The EUR 7 billion invested in transport PPPs is half the amount invested in 2005, which according to estimates of the EIB came to EUR 15 billion.[45] The reasons for this trend are explored in the following section.

[42] EPEC (2013), Review of the European PPP Market 2012. March 2013
[43] EPEC (2013) "Market update: Review of the European PPP Market, First half of 2013", http://www.eib.org/epec/resources/Market%20Update%20First%20half%20of%202013.pdf
[44] The data should be treated with caution, as it is incomplete. Please see EPEC (2013), section "Data Collection and Methodology" for specifications of the data.
[45] EIB (2012), PPP and financing in Europe: Recent trends and EIB involvement.

Figure 5: European PPP Activity in 2012 by Sector



Source: Ramboll, based on EPEC statistics published in EPEC Market update 2010, 2011 and 2012

Additional factors reducing availability of long-term financing for transport infrastructure

While the recent economic and financial crises bear the blame for the suboptimal investment conditions for PPP infrastructure projects, several additional factors have contributed to the reduced availability of long-term financing - e.g. the disappearance of monoline insurance companies that provided guarantees for capital market issues, as well as the regulatory requirements under Basel II & III, as well as the Solvency II Directive,[46] which alter the incentives and costs of financial institutions to participate in the market for long-term financing.[47]

2.5.3 The financial sector dealing with infrastructure before and after the financial crisis

As discussed above, the financial crisis has had rippling effects throughout the global and European financial markets, including the markets for PPP financing.

According to a 2011 study on PPP financing by Demirag et al.,[48] prior to the credit crunch, senior debt was generally provided by investment or commercial banks and for larger projects by a bond issue. With the financial crisis, bank finance has become virtually the main source of finance, yet bankers have become more risk averse in their lending,[49] and the number of active PPP lending institutions has decreased.

[46] Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II); OJ L 335/1.
[47] Financial Stability Board (2013), Financial regulatory factors affecting the availability of long-term investment finance.
[48] Demirag et al., (2011), Risks and the financing of PPP: Perspectives from the financiers, The British Accounting Review 43, pp. 294–310.
[49] Bailey, S., Asenova, D., & Beck, M., (2009). UK public private partnerships and the credit crunch: a case of risk contagion? Journal of Risk and Governance, 1(3), 1–11.

As explained by one private sector respondent, already prior to the crisis there were some banks which categorically refused to lend to demand revenue based infrastructure (example given was KfW in Germany), but there were many other banks which were willing to invest. Following the crisis, only a few banks remain active in this specific sector.

As a result of the global financial crisis, the market for infrastructure finance slowed dramatically, as investors became more risk averse. To begin with, in the immediate aftermath of Lehman's collapse, bank lending "froze", which also affected any on-going negotiations for infrastructure projects striving towards a financial close.

The sovereign debt crisis in some Member States and general economic downturn across Europe resulted in a reduction of public sector investments in infrastructure and a dramatic reduction in the number of projects coming to market. At the same time, according to a European Commission respondent, other Member States increased infrastructure investment as a count-cyclical budgetary measure, sometimes via PPPs.

The respondents also unanimously agreed that, generally, there is more risk averseness following the financial crisis with significantly less "risk appetite" in the financial sector. Instead of requiring higher risk premiums, i.e. higher financing costs, financial sector investors have to a large extent withdrawn from the market.

The interviewed respondents, however, have noticeably diverging views on the effects of the crisis on their access to finance. It is worth noting that this difference of opinion appears to coincide to a certain extent with the overall performance of national economies throughout the financial crisis. Respondents from countries hit harder by the economic downturn reported difficulties in accessing long term finance (Spain) and exits of international banks from the national market for investment in infrastructure (Portugal). In contrast, the opinion of respondents from Germany on the availability of finance was split – some reported the German financial market as '*plentiful*' whereas others disagreed.

In addition to the general increased risk averseness amongst financiers, several respondents (both private and public sector) pointed out that banks were less willing to take on long term financing following the crisis, as a result of e.g. the increased macroeconomic risks and the restructuring in the bank market required by regulating authorities. The new regulatory frameworks governing banks (Basel III) and other financing institutions (Solvency II) require capital charges that are considered punitive in terms of infrastructure financing, as they diminish the incentives for long-term lending, especially in assets deemed to be risky. The difficulties in obtaining long-term financing were reported by many respondents from different stakeholder groups across different transport sectors. These were linked to the trend in extending short-term debt that has to be refinanced after 5-6 years. Thus re-financing risk became a critical consideration for market participants.

In addition, the availability of capital market solutions (i.e. bonds) collapsed – mainly due to withdrawal from the market of credit enhancing insurance products (provided by monoline insurers). This led to even more limited access to funding for investments in transport infrastructure.

According to Demirag (2010), recent PPP deals have relied on a pre-financial close syndication of banks each lending a proportion of the total (club deal), where previously it was more likely that a lead bank would have provided the senior debt, perhaps seeking

some syndication post financial close.[50] On the subject of syndication, an interviewee from a Spanish bank highlighted the difficulty in arranging such structures in less developed, relationship-based financial markets where international banks have little foothold. Due to the higher refinancing risk perceived when a large number of syndicate participants are involved, the interviewee reported that such broad syndication schemes were seen as rather unattractive.

A number of respondents, mainly providers, reported that not only did the financial crisis lead to a reduction in the number of banks active in the market, but also to significantly higher funding costs for infrastructure projects.

2.5.4 Move away from demand-based transport projects

Revenue based projects across Europe have become less common due to the reluctance of the private sector to take on traffic demand risk. A move away from demand-based transport projects in most EU Member States is reported by our respondents. Many see this as an effect of the economic and financial crisis. Thus, the sample of projects eligible for the LGTT is much smaller today than was anticipated in its design phase. The commercial bank representatives interviewed agree unanimously that currently traffic risk, especially in greenfield projects, is very difficult to accept.

There is less appetite from private capital and equity investors to take on anything else than availability schemes - where the traffic risks are fully borne by the public sector. Several respondents from different stakeholder groups agree that equity providers have become more risk averse as traffic performance has deteriorated due to the economic downturn.

In response, availability based payment mechanisms have received more attention and have become more important following the crisis. As one respondent (financial advisor) noted, while prior to the crisis there were hardly any availability based projects, currently they are the overwhelming majority. Traffic risk and availability based projects are not simple alternatives but have very different funding implications: availability constructs place the payment burden on the state. Banks prefer availability based schemes as there is no transfer of traffic risk to the private sector, which presents a safer lending prospect.

There are significant differences when it comes to traffic risk perceptions and risk sharing experience in the different Member States. According to respondents, France, Italy, to some extent Spain, the UK and Germany have experience with demand-based transport infrastructure which have been more or less successful depending on the circumstances.

Italy and France, however, are the only countries which are still doing PPP traffic deals. In Germany, the development of traffic-based A-models (brownfield shadow toll roads with real toll for heavy vehicles) has been discontinued and replaced with availability based schemes, and the F-models (greenfield real toll infrastructure such as bridges and tunnels) are put on hold. The reasons for this were reported to be the assessment of the Federal government that such projects are better financed on the state's balance sheet.

In Spain, the focus in transport infrastructure was reported to be currently on rail infrastructure, with no traffic-based road infrastructure in the pipeline in the moment. Similarly, the respondents assessed that the demand for road network development in

[50] Demirag, I., Khadaroo, I., Stapleton, P., & Stevenson, C. (2010). Public private partnerships financiers' perceptions of risks. Edinburgh: Institute of Chartered Accountants of Scotland.

Portugal has now mostly been reached, so there are little prospects of new projects in the future.

Interestingly enough, respondents from the private sector in Spain noted that demand risk can be sought after, when lenders are reluctant to have the public sector as a single counterparty, but evidence of such opinions hasn't been found yet in other MS.

There is a noticeable lack of recent demand based infrastructure projects in the Central and Eastern European (CEE) Member States, which was explained by respondents with the arguments valid for PPP development in these countries in general – low willingness to pay, lack of experience of PPP schemes, the low institutional capacity and insufficient legal framework for PPP development. These observations are also confirmed by Carpintero (2010), who adds that an additional obstacle for demand-based road PPP schemes are the low expected traffic volumes and the resulting pressure for tolls that were too high to be economically practical or politically sustainable.[51]

In addition, several of the public sector respondents (EU as well as national level) explained this downward trend with the use of grants from EU Structural Funds, being much easier and more accessible.

2.6 Cost of debt is not the predominant factor in the choice of financial solution

One of the evaluation questions posed by the EC is about whether reduction of costs of the senior debt has played a predominant role for projects providers in the choice of the financial solution for the TEN-T project. This question is difficult to answer since it is based on several concepts that can be interpreted in different ways. To begin with, "choice of financial solution", can be interpreted to refer to:

- The choice between PPP procurement and traditional procurement
- The choice between user-based or availability-based payment mechanism for the project
- The choice between project finance or corporate finance for the PPP project
- The choice of capital structure and sources of financing

All of these choices are relevant for transport infrastructure projects and even more so for the use of the LGTT instrument, which is restricted to a specific combination of these options.

At the same time, cost of debt is an indisputable factor for any decisions which has to do with finance, but the magnitude of its influence on the choices listed above is not so easy to determine prima facie. This was confirmed in the data collection process, as the responses by interviewees on this question varied significantly depending on which aspect of the decision making process they decided to focus on.

So far, no evidence has emerged on the role of cost of debt in the choice between PPPs and alternative procurement options for a particular deal. With respect to the decision on the financial structure of a project (capital structure, sources of financing), cost of debt was an

[51] Carpintero, S., (2010), Toll Roads in Central and Eastern Europe: Promises and Performance; Transport Reviews, Vol. 30, No. 3, 337–359, May 2010

influential factor, but it cannot be concluded that it was the predominant factor in the decision making process.

2.7 Is the LGTT relevant: does it address obstacles to reaching financial close on TEN-T projects?

The respondents provide opinions which suggest that while the financial crisis marginalised the LGTT in terms of number of projects on which it could be applied, it also helped its marketing to the private sector – without the worsened financial and economic conditions caused by the crisis, the incentives of the private sector to use the instrument would have been lower.

With respect to the current relevance of the instrument, the messages received from the private sector are mixed. While some respondents see value in the instrument and argue that it has contributed positively to reaching financial close on the deals for which it was used, others deem its scope to be too narrow and thus limiting the instrument's usability and relevance at present. The fact that the LGTT has never been used independently of EIB senior loans makes it difficult to assess its value: the relevance of the instrument would have been easier to evaluate if the instrument had been used on its own. Moreover, as will be discussed later on, some stakeholders claim that the LGTT has been presented as eligible only in combination with an EIB senior loan.

The scope of the instrument (narrow to begin with) has indeed contracted over time, given the reduction in PPP activity, the move away from demand based projects and the constraints on public spending. However, there is still a general need to support the financing of transport infrastructure projects in Europe.

3. The implementation of the LGTT

3.1 Summary of main findings

- The EIB has made adaptations to the instrument within the legal basis to make it usable
- The EIB is involved as a senior lender in all seven signed projects
- Communication and awareness campaigns take place but stakeholder awareness is relatively low
- Stakeholders currently involved in PPP projects have a general understanding of the LGTT, but lack knowledge about the details of the instrument
- Although it can be expected that as a financial instrument partially financed by the EU budget, all information regarding the set-up and price of the LGTT should be available to the public, this is not the case
- It is reasonable to believe that a pilot phase would have facilitated the roll-out of the instrument

3.2 The EIB has made adaptations to the instrument within the legal basis

As of today, seven projects have signed the LGTT. According to different types of interviewees (the EIB, banks, project providers and commissioning bodies), the EIB has been flexible in terms of adapting the instrument within its legal basis in order to try to make it work for the projects signed. Below, evidence of this is presented.

Due to the different nature of traffic risks faced by projects, different criteria are put in place. Furthermore, due to the various terms of financing applicable to each project, the mechanisms for drawing upon the LGTT are being adapted on a case-by-case basis.

3.2.1 There are three different delivery mechanisms for the LGTT

The most important aspect of the instrument that has been adapted to individual projects has been its **delivery mechanism**. In general terms, three structures can now be used on eligible projects:

- a "Contingent Liquidity Structure" or "revolving structure": a stand-by loan facility available during the first years of operation to cover scheduled senior debt service;
- a "Single Drawdown Structure": a loan facility available only on a specific date, at which it can be drawn in full in order to prepay part of the senior debt;
- a "Combined Structure", where both the Contingent Liquidity and the Single Drawdown structures are implemented.

3.2.2 The availability period differs

The instrument is also being individually tailored with respect to the **availability period**; this adaptation was necessary due to the different ramp-up periods (initial operating periods) anticipated for each individual project. The drawdown date has had to be adjusted individually in order to match the refinancing date. The availability period is limited to seven years from the date of completion (limit imposed in the EIB term sheet); however, it can be lower. As a result the availability periods range from:

- years from completion (IP4 Amarante – Vila Real PPP (TEN))
- months from LGTT traffic counting stop to LGTT drawdown date (Baixo Alentejo PPP (TEN) and Autobahn A-5 PPP (TEN)
- 4 years from completion (Autobahn A8 (II) PPP TEN)
- years from completion (Eix Transversal C- 25 PPP (TEN) and London Gateway)
- years from completion (LGV SEA)

3.2.3 The size of the LGTT differs

The size of the LGTT has also been adapted to each individual project. Currently, it ranges from 5.1% to 20% of the senior debt carried by the project and in absolute terms from EUR 20 to 200 million.

3.2.4 The LGTT trigger event has been adapted to suit different sectors

Another example of adaptation of the instrument relates to the LGTT trigger event, or the means by which traffic risk is calculated in order to assess whether the instrument should be drawn on or not. This has been of particular importance when adapting the instrument in sectors less accustomed to PPPs (such as Port and Rail).

In sum, the EIB has made several adaptations to the product to make it work for the seven signed projects. It should be noted that the EIB is involved also as a senior lender in all seven signed projects. There are strong indications that the EIB has been persistent in selling the LGTT in some of these cases. One stakeholder explains:

"If I may say so, it was a bit of a packaged sale: we got the feeling that it would be simpler or easier to get the EIB loan that was necessary to sort of wrap up financial close. LGTT came with an added, linked component and if we didn't take on LGTT that would make things more difficult to get EIB loan in the first place."

However, it should also be noted that the EIB is not the only senior lender involved in the concerned projects. In most cases, several sources of financing or tranches of debt are included in the capital structure.

3.3 Communication and awareness campaigns take place, but stakeholder awareness is relatively low

The EIB strategy is to communicate the complexity of the LGTT in a digestible way, especially towards the public authorities. The large majority of all LGTT communication is being performed by the team from the *New products and Special Transactions* Directorate, specifically, the *TENs, LGTT, Infrastructure* Division. The EIB also has a communication department which deals with the press and conferences. Also, the LGTT and Project Bond are mentioned on the website of the EIB.

The EIB has held a significant number of direct meetings and made presentations in order to explain the scope and structure of the LGTT. These meetings have taken place either at the premises of the EIB or at the premises of relevant stakeholders. Often, communication on the LGTT is done at an informal level, when discussing the overall aspects of the project directly with project providers, or Member States authorities. EIB staff from the geographic departments put the stakeholders in contact with the LGTT team for more concrete discussions.

3.3.1 Not all relevant stakeholders are well informed about the LGTT and there is room for improvement

The project providers of signed LGTT projects indicate that overall the EIB gave them a clear understanding of how the LGTT works and what it is supposed to achieve (at a high level). This understanding was built successively through meetings and direct communication. However, some stakeholders noted an apparent lack of written documentation and information sources on the LGTT (e.g. on the web). According to these interviewees, the lack of written material negatively affects their internal communication and decision-making process. Also, the non-response rate, or refusal to take part, in this ex-post evaluation by stakeholders involved in the extended pipeline of projects suggests that there is an overall lack of knowledge of the LGTT beyond a small circle of stakeholders.[52]

This variation can be interpreted in two different ways:

1) On one hand, due to the TEN-T requirement and the EIB's involvement in TEN-T projects it could be argued that the EIB communicates the LGTT only where it knows it could be relevant.
2) On the other hand, the lack of communication to industry stakeholders who are not involved in TEN-T projects at the time being, or who are not engaged in projects that are considered as potentially eligible for the LGTT, limits the visibility of the instrument and the EC's support for transport infrastructure in Europe. This view has also been expressed by stakeholders, who consider the LGTT to be much less visible than for example the Project Bond Initiative.

The LGTT is intended to facilitate and accelerate private sector investment in the development of the TEN-T network. Designing and implementing the instrument should thus signal the political will to deliver more infrastructure projects and more specifically, to do so through traffic-revenue based PPP projects. Given the idea of the LGTT "signaling effect", one can argue that visibility of EC and EIB products is very important and that communication to industry stakeholders who at this point are not involved in projects eligible for the LGTT should improve. On the other hand, the LGTT targets a very small niche sub-sector (user based PPP schemes on the TEN-T), which is why one can argue that communication to the most relevant parties is good enough. Either way, although on a general level communication and awareness raising campaigns to stakeholders likely to do PPPs have been efficient, detailed information on how the LGTT works in terms of e.g. draw-down conditions and pricing has been lacking. A representative of a commercial bank involved in an LGTT signed project argues:

"Yes we got quite clear information. We have acted as financial advisors also, so we have talked directly to the EIB. As a financial advisor you get clear information. […] But again, we had a surprise with legal stuff, issues of bridging […] and conditions on draw-down, this we found out late in the process"

In summary, there is scope for improvement in communication and awareness raising campaigns, both on a general level (to stakeholders not involved in eligible projects for the time being) and on a more detailed level concerning e.g. pricing and draw-down

[52] Some stakeholders have been unwilling to take part in the evaluation based on an argument that they have no knowledge of the LGTT and/or estimate that they will never use it.

mechanisms (to "relevant" stakeholders). We see a risk that lack of knowledge of the LGTT, how it works and what it costs leads to stakeholder misinterpretation and questioning of the entire instrument. The lack of information on the price of the LGTT, which can be expected to be made available to the public since it is EU-funded, is an example of the information gaps that can be addressed in the short term. However, one should also have in mind that the LGTT is still a relatively new instrument. As with all new instruments, it is reasonable to expect a steep learning curve.

3.4 It is reasonable to believe that a pilot phase would have facilitated the roll-out of the instrument

It is reasonable to believe that a pilot phase would have helped in two respects:

- To accustom the market to the instrument
- For the EIB/EC to make the instrument more flexible from the beginning

In the words of an EIB interviewee:

"The Project Bond is being piloted, it's extremely helpful, you need to test it in the market, you have to implement it with the EC: the financial regulation needs to be in place, you need to negotiate the cooperation agreement, then the instrument gets placed in the market, the EIB takes a risk it is not used to. Normally the EIB is a senior financer."

However, it should also be remembered that the LGTT was set out as an instrument fit for an environment that changed dramatically upon its arrival: the advent of the financial crisis and the subsequent reduction in the number of projects being procured.

4. The effects of the LGTT

4.1 Summary of main findings

- The analysis indicates that it is difficult to establish clear attribution effects when it comes to clearly linking the LGTT to its intended outcomes and impacts
- While the data analysis confirms that the LGTT has helped to facilitate the financial close of some of the projects on which it was applied and has had a general credit enhancement effect, the evidence of its direct effect on debt pricing and increasing the attractiveness of demand-based transport projects is inconclusive
- The cost of debt was reported by a number of respondents to be a secondary driver in the financing decisions taken during the turbulent times at the peak of the financial crisis. Credit availability and willingness to lend were important factors, given the adverse market conditions, and several respondents assessed that the LGTT helped maintain them. Three of the respondents on LGTT signed projects specifically point out that the LGTT helped maintain originally intended debt to equity (D/E) ratios
- It is furthermore not possible to extrapolate the identified/confirmed outcomes to the larger intended impacts of the LGTT such as the acceleration of private sector investment in TEN-T financing or the development of more traffic revenue based PPP projects in TEN-T
- Given its current setup, the LGTT is best suited to accommodate road projects, while it is less suitable for rail, waterborne and aviation projects
- Geographical distribution of the projects being eligible for, or signing the LGTT has been uneven
- Given the small sample of projects signed with the LGTT and the substantial influence of contextual factors on the trends in the narrow range of projects eligible under the guarantee, it is reasonable to conclude that the LGTT has had a positive impact where it was applied, but not a sufficient effect to achieve its larger objectives

4.2 The LGTT has helped reach financial close in seven projects

Discussing the financial close of the projects to which it was applied, the LGTT on the outset can be assessed as having had a positive effect. Nevertheless, this effect is very difficult to quantify in a meaningful way, due to the small number of projects and the diverse circumstances in the individual cases.

4.2.1 No evidence of shortened path to financial close

Based on the seven projects that have signed the LGTT, the instrument appears to have helped the projects reach the financial close, but the respondents by large indicated that this was "not necessarily earlier or sooner". None of the respondents was able to provide an estimate of the time saved. This is also due to the intrinsic difficulty of making a judgement call such as "faster" or "sooner", as such qualifications presume the ability to compare against a benchmark. Data on the duration of negotiations to reach a financial close is not available and if available would be difficult to compare for a number of reasons:

- Procurement procedures differ – in some countries the negotiations on the financing with lenders start already in the first phases of the procurement process (if there are different stages to begin with).
- In some cases the length of the financial close is determined by the procurement process where sponsors need to reach a close by a certain time limit.
- Interruptions caused by the onset of the global financial crisis and related tightening of credit markets.

The general conclusion is that the LGTT has not enabled the projects providers to reach the financial close of the TEN-T projects earlier than without such an instrument.

4.2.2 Would the financial close have been compromised without the LGTT?

One indicator of whether the LGTT has fulfilled its objective is the role it played during financial close. Establishing proof that the capacity to reach financial close can be attributed to the LGTT instrument, however, is not a straightforward task. Attribution can only be established through a strict counterfactual analysis, where it is possible to isolate the effect of the different variables that determine the outcome of negotiations for a financial close. Given the complexity of the setting, this is not a viable evaluation approach here. What is, however, feasible is to assess the contribution effect of the LGTT towards the signed project's capacity to reach financial close.

The overall feedback received from different types of stakeholders involved in the projects signed with the instrument is that the LGTT has facilitated the financial close of the projects and has played an important but not necessarily leading role in it. Stakeholders in several of the projects have confirmed this effect.

Stronger impact of the LGTT on capacity to reach financial close can be seen in the following two projects (projects anonymized to preserve confidentiality):

- In project A, an instrument like the LGTT or equivalent was a requirement from the State for the project to be constructed. As there was no equivalent to the LGTT at the time, it had to be included in the offers.
- In project B, the commercial lenders to the project demanded an instrument mitigating traffic revenue risk. Nevertheless, since the construction of the project had already started at the time of negotiation, the project would also have gone through without the LGTT.

In the remaining projects, the stakeholders also recognized the positive effect of the LGTT on their capacity to reach financial close, but were also firm to assess that financial close without it would still have been possible. In project C, the sponsor stated that the LGTT was valuable (for the financing of the project), but the financing of the project could have been done without it as well. In project D and E, the LGTT was also said to have helped with financial close, but not in a measurable way and the projects would have reached financial close without it as well. Similarly, in project F, one of the stakeholders was of the opinion that as long as the EIB was a senior lender, the deal would have been finalised even without the LGTT. Finally, in the project G, according to the provider and as confirmed by their lender:

"If the LGTT hadn't been available, the private banks would require [the provider] to put in more equity to address the higher traffic risk their forecasts indicated. In this case we were talking of EUR [X million] of additional equity, which would have been very difficult to secure from the SPV shareholders."

This also leads to a discussion of the question whether there are alternative, "traditional" ways of achieving the effect on financial close. Several of the respondents have stressed that if there is a demand for a financial mechanism mitigating revenue-related risks, the alternative to the LGTT is contingent equity from the shareholders of the project. Further discussion on the effects of the LGTT on capital structure is presented in the following section.

4.3 Impact of the LGTT on "senior debt"

The effect of the LGTT on the senior debt of projects, which used it, is one of the most important indicators of the performance of the instrument. The underlying logic of the LGTT is to mitigate early period traffic risk. The LGTT should reduce the risk perceived by lenders and as a result lead to a correspondingly lower pricing of the senior debt of the project. The analysis of the collected data is not conclusive with respect to the existence of this credit-enhancing effect and indicates that while it was overall deemed to be positive, it is not possible to quantify it.

The reason for this is that much like in the case of assessing whether a project reached financial close "faster" due to the LGTT, the question here implies that there is a baseline scenario without LGTT, which can then be compared to results achieved after the LGTT is included in the financing of a project. In fact, the evaluation established only one case where this is indeed the case. Here the EIB suggested the LGTT to the providers after contract award. As such, the pricing and details of the senior loans to the project had already been arranged, when the LGTT was introduced and this allowed for a re-negotiation and subsequent measurement of the reduction of risk margins. For the rest of the projects, the LGTT was introduced during the procurement process when negotiations with lenders were still taking place. As such, the LGTT was included in the lenders' assessment of the risk of the project and there is no counterfactual "no LGTT" scenario which would indicate the exact effect of the instrument on the suggested variables (credit rating, risk margins, etc.). As one respondent put it:

"*It's hard to say "thanks to the LGTT it became X% cheaper"…It was a specific tool in a package*."

This effect is described in more detail in the following subsections. Since all projects signed with the LGTT also had EIB senior loans together with commercial debt, the analysis treats the effects of the LGTT on the two separately.

4.3.1 Impact of the LGTT on EIB senior loans

In view of the limitations described above, the LGTT has had a positive influence on terms and conditions of the EIB senior loan in four out of the seven projects. A credit enhancement effect and lowered margins have been confirmed by both EIB respondents as well as project providers. The improvement of the conditions of EIB senior lending was deemed sufficient to cover the costs of the LGTT in these projects, according to the providers. Based on this, in a way it can be said that the LGTT has been used to protect EIB senior lending with support of the EU budget.

In the remaining three projects, the interviewed sponsors could not confirm such a positive effect on the EIB loans, mostly because they could not compare the terms offered to a situation without the LGTT.

4.3.2 Impact of the LGTT on commercial bank loans

Regarding the effects of the LGTT on commercial bank lending, the analysis shows that there is some evidence of a credit enhancement effect in all cases, but not to an extent of having a measurable reduction of pricing, with the exception of one project.

Many respondents (sponsors, lenders, financial advisors) recognised the logic behind the expectation of reduced pricing as a result of the use of the LGTT instrument. As one respondent (financial advisor) puts it: "*Theoretically, if we were to run our credit metrics without the LGTT, the project costs would have been higher.*"

As mentioned above, there is only one project for which the credit margins of the commercial loan were reduced (by 50 basis points) in a way that can be linked directly to the LGTT. In two of the other projects, the LGTT was included in the first offers and thus a change cannot be established. In the remaining four projects, the respondents did not report a change in the terms or pricing of their commercial bank lending, but rather reported that the LGTT helped counter increases in these variables, which would have happened due to worsened market conditions or uncertainty about the traffic forecasts of the projects.

As one respondent puts it:

"The LGTT helped us preserve the original terms and conditions of the negotiated debt which were otherwise under pressure to become more stringent due to the adverse market conditions at the time of financial close."

Another respondent states that as a result of Lehman Brothers collapse in 2008 and the ensuing credit freeze, any uncertainty about the creditworthiness of a project at the time could have led to lenders withdrawing from a project altogether. The respondent highlighted that the LGTT gave lenders and borrowers comfort and helped during the negotiations on the terms of the debt by making certain aspects of it "friendlier" to the borrowers.

The cost of debt was reported by a number of respondents to be a secondary driver in the financing decisions taken during the turbulent times at the peak of the financial crisis. Credit availability and willingness to lend were important factors given the adverse market conditions, and several respondents assessed that the LGTT helped maintain them. Three of the respondents on LGTT signed projects specifically point out that the LGTT helped maintain originally intended debt to equity (D/E) ratios.

4.4 Signalling effect of LGTT on providers and commercial banks

The long-term effects of the LGTT are intended to be the facilitation and acceleration of private sector investment in TEN-T development. The LGTT is meant to signal the political will to deliver more infrastructure projects and more specifically, to do so through traffic-revenue based PPP projects.

Estimating these effects is a challenge for a number of reasons. Similarly to the discussion on outcomes (or short-term effects), assessing the strength of the causal link between the availability of the LGTT and the materialisation of measurable long-term impacts is hindered by the specifics of the sector and the large influence of contextual factors. As described in

the Relevance section, while only a narrow group of transport projects are eligible for the LGTT to begin with, the collected responses suggest that since the introduction of the LGTT in 2008, it has become even narrower – a development attributed to larger macroeconomic factors such as the financial and economic crises and their lasting consequences.

The analysis of the collected information has yielded little evidence of any "signalling effect" taking place.

4.4.1 Signalling effect for the development of more LGTT eligible projects

None of the respondents were able to link the development of traffic revenue-based projects and their procurement via a PPP scheme to the existence of the LGTT. There are a number of factors which are taken into account in the political decisions to use PPPs rather than traditional procurement and the choice of using availability based schemes on one end of the spectrum, and traffic-dependent revenue schemes, on the other.

The LGTT cannot be said to have steered public procurement authorities to develop more projects that would be eligible for financing under it. For the projects which are signed with the LGTT, the instrument was introduced during the procurement phase or after award of the contract and as such there was no influence on the design of the projects in the pre-bid phase that can be attributed to the LGTT.

4.4.2 Signalling effect for private sector participation in transport infrastructure financing

When it comes to the intended effect of facilitating private sector participation in the development of transport infrastructure in general, and TEN-T projects in particular, the evidence collected is somewhat more optimistic. Many public and private stakeholders interviewed see a positive effect of the LGTT in terms of reassuring lenders in the quality of projects with traffic-risk. According to one of the sponsors in a LGTT-signed project:

"The transaction closed in the middle of the financial crisis where one bank after another dropped out [of the deal] and the remaining lenders were trying to increase prices. The LGTT helped a few banks to get approval for the deal from in their credit committees, which shouldn't be underestimated as a result."

However, the analysis indicates that so far the LGTT has not managed to attract additional sponsors and lenders to invest in transport infrastructure. While it was recognised that the LGTT provides a buffer for traffic risk, this was not deemed to be a sufficient incentive for the private sector to go for such projects, unless there is interest in them to begin with. As confirmed by another respondent (financial advisor):

"The LGTT is not sufficient in itself to move banks which categorically refuse to finance [traffic-revenue based] deals to actually do so, but for the "grey" cases where they are uncertain due to less experience, it can help convince them [to participate]."

4.4.3 Signalling effect of the LGTT vs signalling effect of EIB senior loans

The signalling effect of the LGTT is also difficult to isolate from the signalling effect of EIB involvement as a senior lender. As already mentioned, all of the projects signed with the

LGTT also have EIB senior loans. The reputational effect of having the EIB as a senior lender was pointed out by several respondents, in particular, stakeholders in Spain and Portugal. The IP4 deal was a first instance of the EIB lending to a traffic-revenue based project in Portugal without requesting a guarantee by commercial banks and this was seen as a "stamp of approval" and confidence in the quality of the project amongst national and international lenders. In these cases, the subordinate lender role taken via the LGTT was still recognised, but it was not assessed as having attracted additional lenders.

4.5 Main reasons for using the LGTT

In this section we present the main reasons for using the LGTT in the projects that have signed it. Based on the analysis of the collected information from stakeholders (Commissioning bodies, providers/sponsor and banks), case studies for three of the LGTT-signed projects have been prepared.

The three case studies presented here show that the main reason for using the LGTT is the mitigation of traffic risk in PPP projects on the TEN-T where the private sector is to take on traffic risk. In this respect, the instrument as such is well targeted towards commercial banks, not really towards equity. In the case of EIX Transversal C-25, the LGTT was a response to diverging traffic forecasts appreciated by the commercial bank. The alternative to the LGTT would have been more equity from shareholders, a not so plausible solution. In the case of LGV Sud in France, a rail project, the product was the only one in the market that could meet the requirements of the State. In order to make the LGTT work for this project, it was adapted to suit the needs of stakeholders: flexibility in the way the instrument can be drawn on (stand-by facility) and the possibility for the EIB to fund the credit line directly to the borrower, in case the provider should not find a commercial bank for this purpose.

The subsequent analysis will provide case studies for the remaining four projects which used the LGTT.

LGV Sud, France

The project is an extension of the existing LGV Atlantique, running from Tours to Bordeaux. Despite the brownfield nature of the project, the State required a guarantee that could mitigate traffic risk. The procurement process started before the arrival of the financial crisis, which is why in the first round of tenders, no bidder had included the LGTT in their offers. However, with the arrival of the crisis in the autumn of 2008, the French government launched its "plan de relance", comprising two components with regard to transport and infrastructure projects. One of these components was the state offering guarantees for borrowing tranches. One important condition for eligibility in the state guarantee term-sheet was financial robustness. As a consequence, bidders for the LGV project were required to include the use of an instrument like the LGTT or equivalent. However, there were no equivalents to the LGTT at the time, which is why it was included in the offers by all bidders.

In short, the main reason for using the LGTT is that it was the only product available in the market that could live up to the French State's requirements for security and provide sufficient comfort to the commercial banks in order to make the risk profile of the transaction acceptable. However, the use of the LGTT was also made possible due to efforts from all parties to adapt the instrument as much as possible given the needs of the project at hand. For example, in this project structure of the instrument is combined, meaning that the provider can make not only a single draw-down but also contingent draw-downs during several years. Also, the EIB accepted to fund the LGTT credit line directly to the borrower, in case the borrower should not find a commercial bank willing to fund it.

A8 Autobahn Augsburg-Ulm ITP

In Germany the so called A-models with traffic risks (projects A1, A5 Autobahn Baden Baden and A8 Autobahn Augsburg-Ulm IPT) are shadow tolls with real tolls for trucks. Under a shadow toll payment mechanism, private sector reimbursement is linked to asset use (so demand risk is transferred from the public sector) but the payments are made by the state, not by users. The A-model projects are extensions, i.e. brownfield projects with knowledge of demand. However, in the words of a representative of the German public limited company managing toll collection and assisting the regional governments in the development of PPPs: *"There are market issues if you raise the toll and trucks do not use the road anymore. This risk we have to distribute to the private sector, whereas in the standard shadow toll there is no price risk. Thus there is more risk in A-models as compared to a standard shadow toll."*

The existence of traffic risk is a main reason for using the LGTT in this project: the additional 60 million EUR of the LGTT helped complete the funding provided by the EIB senior loan and commercial bank senior loans. According to one of the preferred bidders, the reason for using the LGTT in their offer is that it was deemed to mitigate traffic risk during the project's most critical post-construction early operational phase. According to the respondent, the pricing of the LGTT was also competitive with commercial bank lending:

"It made sense to use the LGTT for a mezzanine loan and it allowed us to increase the share of the EIB structured finance facility, which at the time was cheaper than the commercial loans." According to another stakeholder in the deal, the LGTT enhanced the credit quality and made the bid more robust, which was an important factor. And as stated by the provider: "*The LGTT proved to be valuable (for the financing of the project). We could have done the financing of the project without it but it had a favourable impact on the conditions of the banks*."(Project Finance Magazine, February 2012).

EIX TRANSVERSAL C-25 PFP
This project is a widening of an existing free road and therefore has brownfield characteristics. In the understanding of the provider, the public authorities did not consider it a good idea to charge tolls. Hence, a shadow toll structure was deemed the most appropriate, where the state provides a payment to the provider on behalf of the end users. According to the provider, existing payment mechanisms for other roads in the area was also an important factor behind this choice:
"The policy is to have always a free road available. The alternative road is already tolled, hence the C-25 had to be free. In addition, traffic wise, there was a high percentage of heavy trucks on the road [prior to the extension] and the authorities didn't want to push them off it by tolling it."

The commercial bank and the provider/sponsor faced the problem of substantially different traffic forecasts. The bank's advisors' forecast was significantly lower compared to the forecasts of the provider/sponsor. As a response, the loan officers from the EIB, with whom the provider was working with on the senior loan arrangements, suggested the use the LGTT. In this case, the reason for using the LGTT is well in line with the very purpose of the instrument: to provide a buffer for traffic risk in the ramp-up phase of a project where there is uncertainty about demand (traffic risk). Without the LGTT, the bank would either have abandoned the project or demanded more equity from the shareholders, a solution that would have been difficult according to the project stakeholders.

4.5.1 Main reasons for not using the LGTT?[53]

As discussed previously in this report, the LGTT is targeted at a small sector: revenue risk PPP schemes on the TEN-T network. Consequently, there are a number of reasons for not using the LGTT, such as the use of availability schemes, the lack of capacity to do project finance, the lack of political will towards PPPs in some, Member States, the use of direct Cohesion Fund grants in some Member States, etc. These and other so-called "failure factors" for not using the LGTT will be further discussed in section 4.6.

Instead, here we will study why the LGTT was not used in two projects where the LGTT was actually suitable. These are the A63 Autoroute TEN PPP between Salles et Saint-Geours-de-Maremne in France and the Gdansk Airport in Poland.

[53] Evaluation question 4.8

A63 Autoroute TEN PPP between Salles et Saint-Geours-de-Maremne

The A63 is part of a wider corridor - on the south part of the road the Vinci group is the concessionaire linking the section to the Spanish boarder. The northern part of the road is managed by the state, and HSBC/Infrared is the concessionaire of the part running between Salles et Saint-Geours-de-Maremne. This part of the road is an open toll: users can partly use the road for free (if they exit before the toll). The idea is that local users driving only some limited kilometres should not have to pay for the entire section. Therefore, in short the A63 is a long-distance connection between the Iberian Peninsula and the rest of Europe designed not to penalise local traffic.

Total project costs amount to over a billion EUR (1137 million EUR), financed by commercial bank debt, EIB senior debt and sponsor equity. According to stakeholders, the main reason for not using the LGTT is the brownfield nature of the project. Due to the good traffic story, there were no problems finding financing and therefore the LGTT was not needed.

Secondly, leverage is high in the project, which is why the cost of senior debt has a bigger impact on the choice of capital structure than equity. From one interviewee's point of view, the LGTT would not have generated a reduced price on senior debt, instead it is "an additional cost on top of the existing ones". On the pricing of the instrument, this was not so far from the mezzanine price on the market, according to a representative of the provider. Because of commercial bank liquidity constraints, the potential risk decrease generated by the LGTT is not translated into a price reduction for the senior debt. One respondent puts it this way:

"For me the LGTT is an instrument to be used when you really cannot find funding."

Gdansk Airport
The project aims at modernising the regional airport in Gdansk, servicing the Tricity (Gdansk, Gydnia and Sopot) and the coastal region of Pomerania. The programme notably includes the construction of the new passenger terminal and investments on the airside and access infrastructure. Thus, the project is of a brownfield nature and this is a key reason for not using the LGTT: traffic decline was not considered likely by the project provider.

There seem to be four interacting factors explaining the non-use of LGTT:

1) The pricing of the LGTT in relation to traffic risk
From the promoter's point of view, there was a high probability that the LGTT credit line would not have to be used (given the brownfield nature of the project). The pricing of the LGTT was too high in relation to the low risk of traffic decline.

2) Timing constraints
The duration of the EIB's project screening (technical, financial and legal assessment) takes "a long time" from identification until project approval, negotiations and signature. With the EURO 2012 Championship moving closer and given the Airport's cash flow of planned investments, the provider could not wait any longer for fulfilling the EIB procedures. A bond was used for this project, a product faster to implement than the LGTT.

3) Liquidity on the local commercial bank market
According to another respondent, the Polish banks have good liquidity and are essentially fighting for deals:
"Not only the Gdansk Airport, but all other airports were financed by banks".

4) Absorption of EU funds
In a country such as Poland, the combination of commercial banks (still) willing to fund transport and infrastructure projects and the relative abundance of EU funds further reduces the need of a product like the LGTT.

4.6 "Failure" factors for not using/difficulty in using the LGTT

As discussed previously in this report, the LGTT is targeted at a small sector: revenue risk PPP schemes on the TEN-T maps. Consequently, there are a number of reasons for not using the LGTT. According to interviewees from the European Commission, the INEA and the EIB the main reasons for not using the LGTT are:

- Procurement authorities' reverted course:
  - from envisioning traffic schemes, they have changed to availability payments
  - from considering PPPs, they have either stopped all procurement or are selectively taking some projects forward using public finance

These factors have diminished the pipeline of projects, making the market for LGTT very small. Consequently, one can argue that for projects within the scope of the instrument, the LGTT was mostly used, with some exceptions (such as the A63 in France). It could be also noted that the perceived complexity of the instrument, discussed in the Implementation section, is a possible limitation to its use. This has been discussed by a number of stakeholders, notably commissioning bodies, but also by the EIB.

This section touches upon specific "failure factors" for not using the LGTT: the design addressing only traffic risk, obstacles in specific sectors and country specific obstacles.

Within the current limits of the LGTT, there are no major technical, financial, legal requirements that could have been adapted in order to achieve a higher degree of implementation of the LGTT facilities in eligible projects that did not use the LGTT.

4.6.1 The design of LGTT addressing only traffic risk is an obstacle to its use

The following analysis is based on a list of 49 projects identified as relevant for the LGTT in the Terms of Reference for this project.[54] For the 42 projects that have not made use of the LGTT, there is significant variance in their status of each project differs - some of the projects were cancelled due to environmental reasons and postponed due to country specific factors. For projects where the financial close has not been achieved due to such reasons, it is not possible to assess whether the design of the LGTT is an obstacle. Therefore, the following categories of projects are excluded from the analysis under this evaluation question:

- Projects in the EIB pipeline: here the financial close is currently being negotiated and we therefore do not know if the projects will make use of the LGTT or not (for example a number of projects in Italy)
- Postponed projects: here the future of the project is uncertain and we do not know if the project will be constructed or make use of the LGTT or not (for example the CDG Express in France)
- Cancelled projects: projects that have been cancelled due to environmental or other reasons (for example the A355 in France)
- Early stage projects: these projects are not approved or tendered yet, why it is too soon to say whether they will make use of the LGTT or not (for example the A831 and A45 in France)
- Projects closed before the LGTT was operational (for example the EIX Llobregat Motorway PPP in Spain)
- Not eligible projects: projects that are not TEN-T are beyond the scope of the LGTT. In addition, a decision on public procurement (not project finance) was taken at an early state, making these projects not eligible for the LGTT, according to EIB.

This leaves us with 17 projects that were either negatively assessed by the EIB, not suitable for LGTT or suitable for LGTT but LGTT not used. This selection of project categories makes a study on the possible obstacle of the design of LGTT addressing only traffic risk more fruitful. It should be noted, however, that here we are studying the financial close of the projects from an LGTT point of view, i.e. whether the design of the LGTT addressing only traffic risk has been an obstacle to signing the projects with the LGTT. Moreover, an interacting set of factors can explain the non-use of the LGTT in these cases. Therefore, here we make an effort to study whether the design addressing only traffic risk *to any extent* has been an obstacle for its use. The analysis is thus a simplification of a complex reality. Last but not least, in a few cases different interviewees presented conflicting evidence on the matter.

[54] Annex 1, Terms of Reference

In the table below, a summary of the analysis is presented.

Table 6: The design of the LGTT addressing only traffic risk as an obstacle to its use in 17 projects

Project	Sector	Did the design of the LGTT addressing only traffic risk (to any extent) make an obstacle to signing the LGTT?	Comments
1	Road	UNCLEAR	According to one interviewee, the EIB did not agree on the provider's traffic forecast and therefore chose not to fund the project. According to another interviewee, the reason LGTT was not used is that it was not available at the time of financial close.
2	Air	YES	According to the provider, there is a very low risk of traffic decline. Given its price, it does not make financial sense to use the LGTT.
3	Road	YES	The project has brownfield characteristics and a good traffic story. Moreover, the structuring and price of the LGTT did not appeal to the provider/sponsor.
4	Maritime	YES	According to the provider, the LGTT could only cover volume drops, but the project needed it to cover a potential revenue drop. This was a critical condition for the LGTT to be useful.
5	Road	YES	Only a part of the project is based on user payments: traffic related revenues are too low to comply with LGTT
6	Rail	UNCLEAR	Evidence suggests that traffic risk is not a problem, which is why the design of the LGTT can be perceived as obstacle to its use. On the other hand, this is not a PPP, making the LGTT not suitable. It is unclear to what extent there were discussions on the LGTT and whether the decision not to do a PPP was taken before or after any such discussions.
7	Rail	UNCLEAR	Same as previous.
8	Road	UNCLEAR	The government had plans to structure the projects under a PPP scheme, but they were abandoned. Ramboll has not been able to get clear information on why. "Traditional" public procurement was the final choice. According to an EIB interviewee, historical preferences probably explain this. Further evidence suggests there were timing constraints and that the pricing of the LGTT was considered a problem.
9	Air	YES	The provider is a state-owned privatized entity, by default doing corporate finance. According to one interviewee business is big with stable revenue, why it does not make sense to include the LGTT.
10	Air	UNCLEAR	Probably the reasons are the same as for the previous project: corporate finance is the standard choice.

Project	Sector	Did the design of the LGTT addressing only traffic risk (to any extent) make an obstacle to signing the LGTT?	Comments
11	Maritime	YES	An interviewee argues that the LGTT is not suitable for addressing traffic risks in ports: *"The reason we didn't think it is a good idea to use the LGTT is that we had taken on volume risk, which we could also influence. This is in general a problem for port projects, as you can control who uses your facility, unlike road projects where you can't restrict access to the facility."*
12	Maritime	UNCLEAR	Evidence is lacking, but probably the reasons for not using the LGTT are the same as in the previous project.
13	Air	UNCLEAR	According to evidence the LGTT has not been discussed. Project finance has probably not been an alternative for this airport.
14	Road	YES	The project has brownfield characteristics and a good traffic story.
15	Road	YES	The project has greenfield characteristics and traffic risk. But, the project is under restructuring and construction risks seem to be the major problem at this point. The original estimated project costs have significantly increased. The LGTT, however, cannot cover construction risks.
16	Road	UNCLEAR	So far there is no evidence on this project.
17	Maritime	UNCLEAR	The project is not a prime target for the LGTT. According to an interviewee the provider (a corporate entity) took a decision to take on ring-fencing of the company asset revenues, with project finance style controls, but in a corporate finance environment. There were brief discussions with the EIB, but it was quickly agreed that the LGTT was not an appropriate tool.

Subject to methodological difficulties in defining the most accurate population of projects for this analysis, the results presented above should be interpreted carefully. Nevertheless the analysis suggests that the design of the LGTT addressing only traffic risk has to some extent been an obstacle to its use in nearly half of the projects (8 out of 17). The other half has been characterized as "unclear" (9 out of 17). Here it is difficult to assess to what extent the LGTT has ever been considered. Despite this difficulty, the "unclear" projects still illustrate some challenges to the use of LGTT in specific sectors, namely rail and ports. This will be further discussed in the subsequent section.

4.6.2 What have been the main obstacles (legal, financial, technical) to using the LGTT in specific sectors (such as rail, ports and inland-waterways)?

None of the respondents has identified specific legal obstacles to the use of LGTT in different transport mode projects.

With respect to financial obstacles, projects which are done through corporate finance rather than project finance are not eligible for the LGTT. According to respondents, most port and airport projects are done via corporate finance, which could be considered an obstacle for the use of the LGTT in these sectors.

With respect to technical aspects related to the use of the LGTT, most of the respondents are of the opinion that the design of the LGTT makes it particularly suitable for road transport due to the more straightforward treatment of traffic risk in road projects. Among the seven LGTT signed projects, five are roads, one is a railway and one is a port. The relative abundance of road projects in the LGTT portfolio is also due to the fact that road projects dominate the pipeline: among the 49 projects in the extended pipeline, 33 are road projects, compared to seven ports, five airports and four railways.

Stakeholders for both the rail and the port projects signed with the LGTT highlighted that is was necessary to adapt the instrument due to the different nature of traffic revenue risk. For example, in the railway sector, track access is the main method of re-payment for projects, i.e. train operators are the revenue stream, not the end-user (passengers or freight forwarders). Traffic risk is manifested as demand, but exerts pressure indirectly upon the lenders. Moreover, in the words of an interviewee, "railways are heavily subsidised and are historically rooted in national policies."

Within the current limits of the LGTT, there are no major technical, financial, legal requirements that could have been adapted in order to achieve a higher degree of implementation of the LGTT facilities in eligible projects that did not use the LGTT.
Some interviewed stakeholders have brought up the cost of using the LGTT and state that the instrument today is considered relatively expensive, especially considering it only covers one type of risk.

The stakeholders interviewed have expressed their thoughts on their need for the LGTT or similar instruments. Stakeholders of all categories (public procurement authorities, government representatives and project providers) see a need for long-term financing of transport infrastructure. Regarding the duration of the availability of the LGTT, representatives of public agencies suggest that guarantees on short-term debt repayments are less relevant. Many also express the need for a more general instrument covering more risks than only traffic risk, such as construction risk and traffic risk beyond the first 5 to 7 years. Others see a need for an instrument targeted towards institutional investors and a need for instruments responding to investment needs in EU Cohesion Member States.

4.6.3 What are the main systemic obstacles to using LGTT in all Member States?

None of the respondents identify a clear-cut obstacle for the use of LGTT in a specific Member State. Rather, the obstacles identified were broader, and referred to the overall approach to the development of transport infrastructure adopted in the different Member States. The list of projects identified as relevant for the LGTT shows that there is a far from equal representation of Member States.

Table 7: LGTT relevant projects by country

Country	Number of projects on list
Germany	6
France	10
Spain	3
Portugal	4
United Kingdom	4
Italy	13
Poland	3
Greece	3
Netherlands	1
Romania	1
Austria	1
Total number of projects	**49**

In terms of numbers of projects identified as relevant for the LGTT, Italy and France stand out. Among the seven LGTT signed projects two are in Germany, two in Portugal, one in Spain, one in the United Kingdom, but only one in France and none in Italy. In Italy, stakeholders are interested in the LGTT but the financial crisis has been severe so the main concerns of PPP projects are the liquidity and the cost of capital for banks. Therefore, EIB senior lending has been prioritized over the LGTT. Also, in Italy there are examples of projects whose project costs have exceeded forecast, causing relatively complex re-financing negotiations in which the introduction of a novel product like the LGTT may prove difficult. Moreover, the LGTT does not cover construction risk (i.e. project costs). In France, a lack of greenfield projects has made the LGTT less attractive. Also, a number of projects have been cancelled, reducing the pipeline of PPP projects. These circumstances are valid for most other countries as well.

The limited representation of Central and Eastern European MS as well as MS from Northern Europe, shows that the lack of LGTT eligible projects in these MS is the main reason for the limited relevance and usability of the LGTT there. While some MS were reported to lack the institutional capacity (legal basis, procurement procedures, experiences or resources) to do project finance and manage PPPs, in other MS it was lack of political will, competition from Cohesion Policy funds or simply a lack of money, to do PPPs that was deemed to be the main challenge.

5. Efficiency of the LGTT

5.1 Summary of main findings

- There is insufficient evidence to indicate that the LGTT has had an important impact on the realisation of TEN-T priority projects
- Given the narrow scope of the LGTT and the observed challenges in its implementation, it is reasonable to believe that the instrument will have only a limited effect on stimulating private sector participation in development of the TEN-T core and comprehensive network in the new financial framework 2014-2020
- To stimulate the pipeline of projects, a thorough assessment of TEN-T potential projects, including mapping and analysing the main risks and obstacles which hinder the development of the projects, should be made.

5.2 Importance of the LGTT to realisation of TEN-T priority projects[55]

The TEN-T Priority Projects are 30 EU transport projects chosen as a focus of the TEN-T development efforts due to their European added value and their contribution to the sustainable development of transport. Their completion - planned for 2020 – is expected to improve the economic efficiency of the European transport system and provide direct benefits for European citizens.

The breakdown by transport mode of these projects shows that 18 are railway projects, 3 are mixed rail-road projects, 2 are inland waterway transport projects and one refers to Motorways of the Sea. This pattern reflects the priority given to the development of more environmentally friendly transport modes, contributing to the fight against climate change.

Of the list of projects selected for the evaluation,[56] 5 were identified as belonging to the priority axes.

Table 8: Number of projects considered by EIB and contributing to TEN-T priority projects

	Project considered by EIB eligible for LGTT	Country	Mode	TEN-T Priority project	Signed with LGTT
1	LGV SUD (Europe Atlantique)	France	Rail	Priority Project 3[57]	Yes
2	IP4 Amarante - Vila Real PPP	Portugal	Road	Priority Project 8[58]	Yes
3	Autoroute Ferroviarie Alpine (Alpine rolling highway)	France	Rail	Priority Project 6[59]	No
4	A1 Strykow-Pyrzowice MOTORWAY -2NDPHASE	Poland	Road	Priority project 25[60]	No
5	E-K-P-P-T MOTORWAY (Corinth-Tsakona) PPP (TEN)	Greece	Road	Priority project 7[61]	No

[55] Evaluation question 8.1-8.2
[56] Annex 1 of the Terms of Reference for the tender
[57] Priority project 3 (Atlantic branch) http://tentea.ec.europa.eu/en/ten-t_projects/30_priority_projects/priority_project_3/
[58] Priority project 8 (http://tentea.ec.europa.eu/en/ten-t_projects/30_priority_projects/priority_project_8/priority_project_8.htm)
[59] Priority project 6 (http://ec.europa.eu/transport/themes/infrastructure/ten-t-implementation/priority-projects/doc/pp_report_low_final.pdf, p. 70)
[60] Priority project 25 (http://www.eib.org/projects/pipeline/2008/20080068.htm)
[61] http://www.ppptransport.eu/wiki/index.php/Case_Studies:_Olympia_Odos_Motorway
http://tentea.ec.europa.eu/en/ten-t_projects/30_priority_projects/priority_project_7/priority_project_7.htm

Based on our analysis, we find no indications that the LGTT has had an important impact on the realisation of TEN-T priority projects. The reasons for this are largely related to the narrow scope of the instrument. LGTT is designed to fit the project finance world, which in combination with the eligibility requirement of sufficient level of traffic risks makes its design suitable for only a proportion of the TEN-T projects.

Given the narrow sector targeted by the LGTT, one should have reasonable expectations on what the instrument can achieve. For the LGV SUD project the involved stakeholders were of the opinion that the LGTT was crucial for financial close and the project would have been much more expensive on the EU budget if grants were used instead of the LGTT. For the IP4 project, the LGTT had a smaller, although still positive credit enhancement effect.

Nevertheless, such results cannot be extrapolated at this stage to confirm significance of the LGTT for the development of the TEN-T priority projects in general.

In the new financial framework for 2014-2020 and the current policy context, the European Commission is putting emphasis on supporting the completion of TEN-T projects through the use of financial instruments financed by the EU budget, to support road and also port, airport and railway projects. TEN-T grants will be reserved mainly for environmentally friendly transport modes such as railways and projects targeted at solving bottlenecks. A likely effect will be that project providers seeking financial support from the EU budget for TEN-T road projects will need to apply for a new financial instrument under the Connecting Europe Facility, such as the CEF Debt instrument. Given the narrow scope of the current LGTT and the observed challenges in its implementation, it is reasonable to believe that the instrument, if left unchanged, would have only a limited effect on stimulating private sector participation in the development of the TEN-T core and comprehensive network.

5.3 The role of non-refundable grants vs. LGTT

The stakeholders interviewed do not see the lack of non-refundable grants as a specific obstacle for the use of the LGTT on the projects discussed. The bigger picture, though, is that overall, there are less transport infrastructure projects being developed through schemes that make them eligible for the LGTT, which many respondents linked to the economic downturn and the pressure on public budgets across the EU. On the question of what the main parameters that are taken into consideration in the choice of financing structure for TEN-T projects are, a representative of a Ministry says:

"I guess at the stage it's the public finance constraints: affordability comes first. Public finance is becoming scarcer by the year. The national schemes for transport have been cut down very significantly. So the first aspect is affordability. Basically, this has a consequence: we would first look at if the project can be financed and structured as a concession, with user fees, being able to finance most of the cost. Unfortunately, this is becoming more and more difficult. […] So it's becoming more difficult to arrange these as concessions without public money […]"

Grants could be used to strengthen the public sectors' technical and financial capacity to continue to develop transport infrastructure. A better understanding of the mechanisms hindering the pipeline of project to grow is needed. To stimulate the pipeline of projects, a thorough assessment of TEN-T potential projects and mapping of the main risks and obstacles which hinder their development should be made. Once the demand for such

projects is restored, the LGTT, as a more sophisticated instrument with a narrow applicability, will present a stronger case for the development of traffic-revenue based infrastructure.

6. Administrative efficiency

6.1 Summary of main findings

- The administrative mark-up varies significantly
- There is not a formalized process of project screening specifically for the LGTT: it takes place within the framework of the standard EIB deal sourcing, but focuses to a larger extent on projects' traffic forecasts
- The duration of the screening process depends on project characteristics. Also, the screening is intimately tied to national public procurement processes (which are influenced by many factors beyond EIB control)
- Providers have diverging views on EIB information sharing during the appraisal procedure
- Non-availability of the LGTT would be communicated to eligible projects, but not necessarily to projects beyond the scope of the instrument
- There is scope for improvement in the communication between the EC and the EIB

6.2 Administrative mark-up

The Administrative Mark-up included in the fee for the LGTT instrument is described in the EIB/EC agreement on the LGTT concluded in January 2008. According to the Agreement, the Administrative Mark-up is "a margin expressed in basis points which, according to the Credit Risk Policy Guidelines of the EIB (CRPG), covers EIB's operating costs."[62]

The Agreement further specifies that the final beneficiary shall bear the cost of the Administrative mark-up, the risk margin and the EIB lending rate (Art.5(4)). The administrative mark-up is payable to the EIB and shall be calculated in line with standard EIB practice for its credit operations as amended from time to time (Art.5(5)). According to respondents from the EIB, the administrative margin includes a "modulation" to remunerate the bank for the residual risk of the financed operations. This was confirmed by a project sponsor who has participated in several deals in which the LGTT was discussed with the EIB. According to the respondent, the pricing of the LGTT changes in accordance with the EIB's overall pricing strategy and the LGTT was offered at a much lower price during the peak of the financial crisis compared to the "recovery" period.

The administrative margin and other LGTT fees are presented in a separate file to the EC, due to confidentiality issues. The administrative margin is the same in all but one case, but due to the "modulation" describe above, its nominal value varied significantly. The actual amount indicated as Admin mark-up in the upfront LGTT payment varies from EUR 20k to EUR 2.2m of the overall price of the LGTT and as share of the price from 0.7% to 16.4%.

6.3 Pricing

As illustrated in the separate file on administrative margins, the price of the LGTT varies, but it is determined by a number of factors in addition to the size of the guarantee provided. All stakeholders involved in the data collection were asked to reflect on the pricing of the instrument, but the analysis shows that given the small sample of projects on which pricing

[62] p.4 of the Agreement

was discussed it is difficult to provide a straightforward answer to the question of whether the LGTT provided value for money and whether it was considered prohibitively expensive.

An objective, economic analysis on whether the LGTT induced savings on the cost of senior debt is not possible due to the non-existence of a counterfactual control group. As mentioned in Section 4.2, for most of the LGTT-signed projects the cost of senior debt was negotiated at financial close, when LGTT was already part of the structure. As such it is not possible to make an exact comparison of costs and savings in scenarios with and without the LGTT. The project sponsors confirmed that the savings on EIB senior debt compensated for the upfront price of the instrument only in the case of the C-25 project, since in this project senior lending conditions were renegotiated as a result of the introduction of the LGTT in the financing structure.

In the remaining 6 LGTT signed operations, value for money was assessed qualitatively by the interviewed stakeholders. The analysis of the collected responses indicates a positive assessment of the value of the instrument in view of its credit enhancing effect (see Section 4.2). In other projects which were signed without the LGTT, or for bidders who preferred not to use the LGTT, the instrument was assessed as a cost that does not bring additional value to the offer. However, other factors also explain the non-use of the LGTT, such as timing constraints and absorption of EU funds. These diverging opinions are difficult to reconcile, and should also be treated with caution, in the absence of quantitative indicators.

6.3.1 Has the pricing of the LGTT been detrimental to the use of the LGTT?

As shown in the separate file on administrative margins, the price of the LGTT is different in each of the completed transactions and has been as little as 3% of the amount guaranteed via the instrument or as high as 11%. However, based on the collected information, it is possible to conclude that the exact price is only determined once actual negotiations are entered. Nevertheless, some indications for the price appear to have been provided to stakeholders involved in LGTT eligible projects, as some of them pointed to the price of the instrument as one of the factors that informed their decision.

6.4 There is not a formalized process of project screening specifically for the LGTT

As far as the LGTT is concerned, there is no formalised process of "project screening" at the EIB. It is important to bear in mind that the core business of EIB is senior lending. Activities related to the LGTT are therefore closely linked to EIB ordinary activities (e.g. communication and awareness campaigns, project identification and screening). Below we try to give a short summary of the different steps of the process, from project identification to screening (technical, financial and legal assessment),

In the project identification stage, since the LGTT targets a very small sector, the EIB maintains that all potential projects will come under the radar at some point or another:

- The INEA might inform the EIB about a certain feasibility study being launched for an important infrastructure project.
- Procuring authorities might contact the EIB in other cases before beginning any process of public procurement.

In the next stage, contacts are established between the EIB and stakeholders. In most cases, either the procuring authorities or project providers come into contact the EIB in

order to assess the position of the EIB as a senior lender. In a number of cases, the EIB first meets with the procurement authorities during the planning of the project and mapping the risks. Here it is up to the procuring authority to decide which risks it is willing to take on and which it is willing to transfer. The EIB also conducts an internal assessment of whether the contemplated project is conducted under project finance and whether it is based on traffic risks. At this stage, an eligibility sheet is prepared for DG MOVE's approval and this is when the Commission gets involved. The Commission response is sufficiently timely and this step does not raise any problems: an EC position is usually obtained within 2 weeks.

The EIB may start by assessing the economic and technical aspects (to see if the expected economic rate of return is satisfactory). Only when this aspect is complete the projects move into looking at the financing side and the risks involved. At this stage, the procuring authority may indicate whether it welcomes any instruments that account for traffic risks. As discussions progress, the EIB conducts talks with financial advisors, other lenders and the bidders in order to discuss the more technical parts of the structure of the LGTT. Here, procuring authorities are not directly involved. In the first projects which signed the LGTT, the EIB intervened at bid stage, all bidders being contacted and involved as the tendering processes had already started when the LGTT became operational. A number of procuring processes also require underwritten bids, which means that the EIB has to work via independent teams with all bidders.

Actual technical and financial assessment cannot be done until the sponsors already have a financial structure in mind, however, before that point sponsors would be in regular contact with the EIB to test a number of options. A formal appraisal for LGTT (cost structure, risk assessment, documentation) is only conducted after the EIB board has approved work to commence on the matter. The EIB is not seeking board approval without knowing that they have a real project. The board is just giving permission for them to do a full due diligence for the project. The EIB might not necessarily be involved as a senior lender, but it still needs board approval for the project. Board approval does not require the EIB to be senior lender but in all seven signed LGTT projects, EIB is a senior lender.

6.4.1 Duration depends on project characteristics

While the assessment of EIB senior lending options is standardized, there is no formalised screening process for identifying projects relevant for the LGTT and the duration of project assessment can differ. The interviewed EIB respondents indicated that depending on the project, the progress of a project from its first identification by the EIB through its assessment as relevant for the LGTT to the conclusion of an actual agreement for use of the instrument can take anything between 1 and 10 years. This duration is intimately tied to national public procurement processes, which are influenced by many factors beyond EIB's control. Therefore it is very difficult to isolate the EIB screening process for the LGTT from other processes taking place, in which a multitude of actors are involved. Also, the duration depends on the complexity of the project. The most consuming steps have to do with the adaptation of the LGTT to project specific needs. This was particularly time consuming for adapting the instrument for the rail and port sector. According to the interviewed EIB officers, the appraisal of projects with regard to the LGTT often runs in parallel to assessment of senior lending options, but it is overall much shorter. Furthermore, the LGTT appraisal process is focused on the traffic forecasts of the projects, which are not necessarily analysed to the same extent in the appraisal performed in the context of the traditional senior lending activities.

Formal appraisal of the LGTT, i.e. work actually conducted after EIB board approval until financial close, is often much shorter, ranging from one to six months.

6.4.2 Providers have diverging views on the information provided by the EIB during the appraisal procedure

The sponsors of LGTT signed projects have diverging views on the information provided by the EIB during the appraisal procedure: some feel it has been swift and clear enough, while others are frustrated that it took a long time or that there was a lack of transparency on how EIB calculations were made. The three quotes below, from different providers, illustrate this spread:

"Step-by-step we adapted the product [provider, commercial bank and EIB, author note*]. The technical part was made by a small EIB team, so communication was really easy."*

"The EIB took our forecast and tried to analyse it from an EIB perspective and from an LGTT perspective, they look at the different traffic scenarios. But this was very time consuming and much more so than we would have liked, but it was necessary for the EIB so we understand that […]"

"The communication was really good – it was mostly informal (e-mails and phone calls). But we didn't see the calculations which determined the size and we never really understood how they came about."

Whereas the first quote indicates a high degree of satisfaction with the communication channels between the EIB and project providers, the third quote indicates that the provider did not have ability to strategically influence the negotiations on the project. To sum up, in general the communication channels between the EIB and project providers have been efficient, but there is a need to make information on financial details more transparent.

6.5 Non-availability of the LGTT would be communicated to eligible projects

The list of 49 projects that has been the basis of this evaluation is not an official LGTT list in the sense that the EIB has made an appraisal for all of them. Rather, it is an internal list that allows for identification and screening of projects across Europe. The projects' status differ considerably: some reached financial close before the LGTT was operational, some were abandoned for e.g. environmental reasons, some are postponed, some are not on the TEN-T network, some are not project finance (e.g. corporate finance) etc. This means that the EIB has not been in contact with stakeholders in all projects, specifically concerning the LGTT. In some cases, it is too early for the EIB to get involved, in others the EIB was never involved, or involved to a very limited extent. As an example, ports and airports are rarely structured as concessions. Regarding a project in one of these sectors, an EIB loan officer says:

"The provider, a privately owned company, took a decision to take on ring-fencing of company asset revenues, with project finance style controls, but in a corporate finance environment […] I had a brief discussion with them, they understood quickly that LGTT was not appropriate for the [name of project]"

In this case, there was a very brief discussion on the LGTT and the decision not to use LGTT was (quickly) made by the provider.

To our knowledge, there are no projects that have actively applied for LGTT but have been denied it. However, as discussed above, there is no formalized process in place for project screening specifically for the LGTT, nor a formalized application procedure. Therefore, it is difficult to be entirely sure that there are no projects that have applied for LGTT but were given a negative assessment. However, we do know that the EIB has made negative assessments of projects from their ordinary senior lending point of view. In these cases, it would not make much sense to propose the use of the LGTT. Supporting this argument is the fact that all seven LGTT signed operations also make use of EIB senior debt in their financing structure. This means that the question of EIB communication to stakeholders in case of non-availability of the LGTT is closely related to its communication of availability of senior lending, in the same way that project identification and screening concern both these activities.

According to the EIB, for projects for which eligibility factsheets are prepared reasons for non-availability would be very well communicated. Before proceeding with due-diligence and seeking board approval, there must be a written request from the sponsors saying they want to use the LGTT. Similarly, the EIB would communicate the result of the work conducted and the reasons for non-availability of the instrument, in writing.

For the projects where eligibility factsheets are not prepared, there are many reasons as to why projects are not pursued, e.g. not project finance or not traffic risk. In these cases, reasons for non-availability would not be communicated. But, as discussed above, in these cases it is unlikely that project providers will actively apply for and pursue the use of LGTT. Rather, the indications are that the EIB is persistent to sell the instruments in the cases where it is clearly suitable. For projects that are not eligible for the LGTT the EIB states that it continues to support project providers by discussing the possibility of using other financing solutions such as the project bond.

6.6 There is room for improvement in the communication between EC and EIB

Through the interviews different views from different stakeholders within the EU bodies are emerging. These differences concern substance, formats, timing and frequency among other topics. However there is a common will expressed by the interviewees to improve the communication and they understand the benefits in adapting the communication to fit the needs of the different stakeholders and to secure a common understanding in terms of inter-EU communication. Hence there is a great potential for improvement in this area.

There seem to be different needs in different parts of the EC.

In relation to TEN-T projects on the EIB radar, the EC is in most cases only brought into the loop at the moment when a request for eligibility is submitted. The EC has an interest in being well informed on potential projects on the TEN-T network. Early stage information on the evolution of the pipeline and information about the existence of potential TEN-T projects that are being considered by the EIB would make it easier for the EC to have an overview of TEN-T project pipeline. This could be catered for through more informal communication, before the actual formal steps are taken. This applies both for processes where EIB loans and the LGTT instrument are considered.

The application for screening by the EIB is not very transparent from the EC point of view, which is to some respects understandable due to the nature of the work performed by the EIB in private sector financing (where confidentiality is the norm and where evolution of the pipeline is the result of a fluid process and not a formalized procedure). However, information on the pipeline and potential projects on its way would be valuable to the EC. It has been questioned if not the forms and substance of information in theses stages could be presented in a format that would not harm the ongoing negotiations.

With respect to the formal communication between the bodies, there are various views. As far as EIB reporting is concerned, areas for improvement from the EC perspective are timeliness, completeness, the level of detail, substance and form of delivery which is perhaps not always written in a format that is optimal for policy makers and fulfils the requirements of sound financial management. Reporting of adaptions of the LGTT instrument and the underlying rationale could also be improved. It should be underlined that none of the interviewees have put in doubt the fact that the EIB has fulfilled its obligations from a formal point of view.

The picture emerging from the interviews shows a discrepancy on what kind of information is needed, in what form and when. This can lead to misunderstandings and makes it difficult for the parties to fill their roles. The EC and EIB should ensure that the information is provided in smooth and consistent way.

It has been acknowledged that it would have been valuable to have steering committee meetings more often than the one meeting/year as foreseen in the cooperation agreement.

All interviewees point out the importance of swift and informal communication between various desk officers. Although it has been mentioned that the necessary relationships were not always built on operational level due to changing personnel, however, on top level, the staff remained stable through the implementation period and this has helped communication between the EC and the EIB to a very high extent.

In cases of risks or difficulties in relation to the use of the LGTT instrument, the EIB considers that the communication with the Commission/INEA has generally been good. It has been possible to discuss problems swiftly through fluid and efficient communication channels. These channels have been used to improve the reporting and cooperation over time. Also the LGTT steering committee has been highlighted as an important platform for solving problems of various kinds.

7. Conclusions

The overarching conclusion of this evaluation is that the LGTT has had a positive impact where it has been applied, but not a sufficient effect to achieve its broader objectives such as significantly contributing to the completion of the TEN-T network and increased participation of private sector investors in transport infrastructure.

The reader may want to consider the fact that the LGTT has never been used independently of EIB senior loans, which makes it difficult to isolate and assess the value of the LGTT as a stand-alone facility. We will present our conclusions in more detail below.

7.1 Relevance of the LGTT – a narrow instrument facing a decreased deal flow

The LGTT relies on an assumption of a market failure that is due to the private sector's unwillingness to take on traffic risk in the ramp-up phase. By mitigating this risk, the LGTT should contribute to fostering private sector participation in TEN-T development and to facilitating the development of user based PPP schemes. Stakeholders have a general understanding of the LGTT but make different interpretations of what specific needs it is intended to address. Most of the private sector respondents interviewed were not able to identify particular "market failures" in the strict sense of the term at the time of the development of the LGTT, and some of them pointed out that the rationale or need for the instrument only became apparent in the context of the financial crisis.

Still, there are obstacles to financing transport infrastructure projects. A credit enhancement tool like the LGTT is expected to reduce the risk for private sector actors such as commercial banks and therefore make them more willing to provide long-term lending to demand-based projects. Although factors underpinning the LGTT, such as the cost of debt, are important in the choice of capital structure the key issue today is that governments are not promoting transport projects generally due constrained public finance. The 'deal flow' of potential projects has slowed considerably; almost to a stop in a number of countries. The LGTT targets a very small sector: user based PPP schemes on the TEN-T. Thus, it had a very narrow application from the beginning – even more so during the financial crisis.

The overall objectives of the LGTT are generally known and accepted, but there is not a common understanding of what specific needs the LGTT is supposed to address. This uncertainty has followed the instrument from the start. The evaluators have not found any comprehensive needs assessment underpinning the rationale and design of the instrument. Also, given the turbulent times on the financial markets since the launch of the instrument, the needs for this kind of instrument have undoubtedly changed. Markets evolve over time: needs assessments should be an on-going process.

The private sector stakeholders have different views on the relevance of the LGTT today. Some see value in the instrument, while others deem the scope of the LGTT to be too narrow.

7.2 Implementation of the LGTT – low awareness, narrow scope

Since the launch of the LGTT, the EIB has made adaptations to the instrument within the legal basis to attempt to make it more applicable and it has been particularly time

consuming to adapt the instrument to the port and rail sectors. The narrow scope has thus been a challenge from the beginning.

It would appear that a pilot phase for the LGTT could have facilitated the roll-out of the instrument. On the other hand, the financial crisis coincided with the launch of the instrument, altering the context for potential transport projects significantly. As mentioned earlier, market relevance should be tested on an on-going basis.

Stakeholder awareness – beyond the direct recipients – is relatively low. Stakeholders currently involved in PPP projects have a general understanding of the LGTT, but lack knowledge about the details of the instrument. As a result, the LGTT is perceived by many to be a complicated instrument with unclear value. The adaptations made by the EIB have further compounded the challenges associated with understanding how the instrument functions.

There is a general lack of transparency about the EIB's selection and evaluation procedures, and its cost calculations (what it charges for the facility and its costs of administration). It would be expected that all aspects of information associated with publicly-funded instruments like the LGTT such as the conditions on draw-downs, costs and calculation of administrative mark-ups, should be made available to the public, without hindering the commercial interests of the project company or the procuring authority.

The EIB is involved as a senior lender in all seven signed LGTT projects. There are strong indications that the EIB has been persistent in promoting the LGTT as a condition to access senior loans in some of the cases. However, it should be noted that the EIB is not the only senior lender involved in these cases. In most cases, several sources of financing or tranches of debt are included in the capital structure.

7.3 The effects of the LGTT – help in reaching financial close, but little impact on broader needs

It is difficult to establish clear attribution effects when it comes to linking the LGTT to its intended outcomes and impacts. While the data analysis suggests that the LGTT has helped to facilitate the financial close of some of the projects on which it was applied and has had a general credit enhancement effect, the evidence of its direct effect on debt pricing and increasing the attractiveness of demand-based transport projects is inconclusive.

The cost of debt was reported by a number of respondents to be a secondary driver in the financing decisions taken during the turbulent times at the peak of the financial crisis. Credit availability and willingness to lend were important factors given the adverse market conditions, and several respondents reported that the LGTT helped maintain them. Three of the respondents on LGTT signed projects specifically pointed out that the LGTT helped support originally-intended debt to equity (D/E) ratios.

It is not possible to extrapolate the identified/confirmed outcomes to the larger intended impacts of the LGTT such as the acceleration of private sector investment in TEN-T financing or the development of more revenue-based PPP projects in TEN-T. Besides the narrow scope of the instrument, important "failure factors" for not using the LGTT include constrained public finance reducing the pipeline of projects, a lack of greenfield projects and a lack of institutional capacity, political will or resources to do PPPs in some Member States. Also,

given its current set-up, the LGTT is best suited to accommodate road projects, while it is less suitable for rail, waterborne and aviation projects.

Given the small sample of projects signed with the LGTT and the substantial influence of contextual factors on the trends in the narrow range of projects eligible under the guarantee, it is reasonable to conclude that the LGTT has had a positive impact where it was applied, but not a sufficient effect to achieve its broader objectives.

7.4 Efficiency of the LGTT – a pipeline of projects is a prerequisite for the use of the instrument

There are no indications that the LGTT has had an important impact on the realisation of TEN-T priority projects. Among the seven projects signed, only two are TEN-T priority projects.

Given the narrow scope of the LGTT, along with the observed challenges in its implementation, it is reasonable to believe that the instrument will have only a limited effect on stimulating private sector participation in development of the TEN-T core and comprehensive network in the new financial framework 2014-2020.

The LGTT is one of the EU instruments promoting transport infrastructure. To some market participants it is unclear how the LGTT 'fits' with other developments such as the 2020 Project Bond Initiative. The significance of the LGTT in the portfolio of funding sources needs to be considered.

As mentioned above, the main issue today is a lack of projects. The LGTT cannot incubate new projects. A coherent set of instruments promoting completion of the TEN-T network would need a stronger focus on incubating instruments. Grants could be used to strengthen the public sectors' technical and financial capacity to promote transport infrastructure projects in the current climate. To stimulate the pipeline of projects, a thorough assessment of TEN-T potential projects, including a mapping and analysis of the main risks which hinder their development, should be made.

7.5 Administrative efficiency – no formalized process specifically for the LGTT, part of the EIB broader lending activities

Value for money has been assessed qualitatively. Given the small sample of projects on which pricing was discussed, it is difficult to provide a straightforward answer to the question of whether the LGTT provided value for money and whether it was considered prohibitively expensive. The administrative mark-up applied by the EIB appears to vary significantly – although contradictory information and a lack of transparency make any formal assessment difficult.

There is not a formalized process of project screening specifically for the LGTT: the identification and preliminary assessment of projects takes place within the framework of the standard EIB deal sourcing, but focuses to a larger extent on projects' traffic forecasts. The duration of the screening process depends on the project characteristics. Also, the screening is intimately tied to the national public procurement processes (which are influenced by many factors beyond the EIB's control).

With respect to the appraisal procedure, project providers have diverging views on the EIB's approach to sharing information, but the analysis indicates it can be improved. Furthermore, there is scope for improvement in the communication between the EC and the EIB.

8. Discussion and recommendations

In this final chapter, we point to lessons learnt from the conclusions of our evaluation and give our recommendations in view of the new financial framework 2014-2020. The discussion and recommendations are structured along two dimensions: first we discuss the future of the LGTT in perspective of the larger context surrounding it (relevance). Secondly, we provide our view on future implementation of the product (implementation), assuming that it will continue to be applicable.

The evaluators would like to point out that aspects of availability schemes have not been evaluated in this assignment.

8.1 Discussion and recommendations with regard to the relevance of the LGTT

The scope of the LGTT is very narrow, targeting only a very small fraction of projects: user charge based PPP schemes on the TEN-T. Also, it was set out as an instrument fit for an environment that changed dramatically upon its arrival: the advent of the financial crisis and the subsequent reduction in the number of projects being procured. Consequently, the LGTT so far has been signed only by a small number of projects and it is reasonable to believe that the instrument will have only a limited effect on stimulating private sector participation in the development of the TEN-T core and comprehensive network in the new financial framework 2014-2020.

A main overall finding of this evaluation is that currently the most important obstacle to realizing transport infrastructure is not traffic risk during the ramp-up phase. Instead, the fundamental problem is the lack of projects: due to the effects of the financial and debt crisis on public finances and spending, governments in many cases cannot afford to promote new projects. A prerequisite for the use of any instrument is a pipeline of projects. The LGTT does not have the power to make projects by virtue of its existence. Moreover, the evaluators have not identified any comprehensive needs assessment or ex-ante evaluation underpinning the objectives, design and/or application of the LGTT. As a result, the evaluators would like to give the following recommendations:

- ➔ *Before adapting the LGTT further or designing new financial instruments in this area, the obstacles to realizing transport infrastructure projects as a result of affordability problems should be further investigated and better understood. The initial focus should be on stimulating the pipeline of projects. A thorough assessment of TEN-T potential projects, including the mapping and analysis of the main risks and obstacles hindering the projects' development should be made. This process should also be carried out in view of achieving better geographical coverage of the instrument.*

- ➔ *As part of working on stimulating the pipeline of projects, the EC should investigate if there is demand for more capacity building with respect to knowledge and competence to implement PPP schemes in Member States where these are underutilised.*

➔ *Before adapting the LGTT further (e.g. extending its scope to cover different risks), it should be further investigated to what extent contractors, governments and public procurement authorities promoting PPPs require mitigation for other types of risk.*

As presented in chapter 4.6.2, the stakeholders interviewed have expressed their thoughts on the need for LGTT or similar instruments in the future. Stakeholders of all categories (public procurement authorities, government representatives and project providers) see a need for long-term financing of transport infrastructure. Many also express the need for a more general instrument covering more risks than only traffic risk, such as construction risk and traffic risk beyond the first 5 to 7 years. Others see a need for an instrument targeted towards institutional investors and a need for instruments responding to investment needs in EU Cohesion Member States.

Re-financing risk is a key problem for infrastructure financing in general. Usually, transport infrastructure needs long-dated debt (e.g. 15 – 20 years), which is prohibitive in terms of capital charges for many banks to provide now and for the years to come. The LGTT in its current form does not address this risk, nor does it respond to investment needs in Cohesion Member States. As argued earlier, grants could be used to make projects affordable and thereby increase the number of projects suitable for the LGTT or other financial instruments. This should go both for less developed EU Member States, where the main issue is the affordability for users and more Cohesion Member States where due to the financial and debt crisis new infrastructure projects are not affordable for the public budget., The evaluators would also like to stress that institutional investors such as pension funds are and should be very risk averse, i.e. conservative, in their investments. In relation to incentivising or directly targeting such institutional investors, the public sector should consider the importance of their experience of and expertise in investments in the transport infrastructure sector.

The design of the LGTT is based on an assumption of a "market failure" where the private sector does not want to take on traffic risk during the ramp-up phase of projects. However, risk averseness in itself is not a market failure, but rather a perfectly rational response to difficulties in forecasting traffic demand. Research on international projects shows that traffic risk is not limited to the ramp-up phase but persists well after, suggesting that any 'market failure', as such, could actually be due to overly optimistic traffic forecasts (rather than underperforming projects). In this context, there is a risk that the LGTT instrument serves to incentivise or 'forgive' aggressive traffic forecasts – developed to win concessions – that could prove to be financially unviable in the longer term. We would like to give the following recommendations:

➔ *It should be further investigated to what extent the issues of difficulties in forecasting traffic demand and aggressive traffic forecasts are valid for European projects.*

➔ *If the real issue is over-aggressive bidding for transportation projects, then an EC paper on best-practice procurement advice (including bid evaluation and concession award criteria) could be useful to avoid promoting over-optimistic traffic forecasts in the future.*

Assuming that the LGTT will continue to be applicable in the new financial framework 2014-2020, below we discuss implications on the future implementation of the instrument.

8.2 Discussion and recommendations with regard to the implementation of the LGTT

The EIB has held a number of meetings and made presentations in order to explain the scope and structure of the LGTT. The project providers of signed LGTT projects indicate that, overall, the EIB gave them an understanding of how the LGTT works and what it is supposed to achieve. However, a number of stakeholders noted an apparent lack of written documentation and information sources on the LGTT and our conclusion is that there is an overall lack of knowledge of the LGTT beyond a small circle of stakeholders. Moreover, within this small circle of stakeholders, comprising government representatives and contractors experienced in the PPP domain, detailed information on how the LGTT works has been lacking and project providers have diverging views on EIB information-sharing during the appraisal procedure.

As a result, the evaluators would like to give the following recommendation:

➔ *As a product financed partially by the EU budget and implemented by a European institution, all aspects of information about the LGTT should be transparent, understandable and made available to the public, without hindering the commercial interests of the project company and the procuring authority. This could include, where applicable, the conditions on draw-down, pricing and calculation of the administrative mark-up.*

There are strong indications that the EIB has been persistent in promoting the instrument. The fact that the EIB is involved as a senior lender in all signed projects is a complicating factor, although it should also be noted that the EIB is not the only senior lender in these projects. Although there has been no evidence of potential users of the guarantee deciding against it due to the perceived "bundling", it should be made clear that the LGTT is available regardless of whether the recipient is an EIB senior borrower or not. As a result, the evaluators would like to give the following recommendation:

➔ *If promoting the LGTT, the EIB should make clear the availability of the guarantee as a stand-alone market instrument, not tied to the EIB's senior lending activities. This could make the LGTT interesting to a wider circle of project stakeholders.*

Finally, the LGTT instrument sits most comfortably in a project finance environment, yet a number of European transportation financings, e.g. in the rail, maritime and air sectors, are undertaken on a corporate financing basis. With the exception of the London Gateway Port, the 12 projects in the maritime and air sectors studied in this evaluation have all used corporate finance type structures. As a result, the evaluator would like to give the following recommendation:

➔ *Consideration should be given to how the LGTT might fit better with corporate finance type structures. The demand for a product like the LGTT among stakeholders in the relevant sectors should be further investigated.*

Appendix 1
Evaluation matrix

The evaluation matrix is present below. Overall, this first set of questions looks at the extent to which the LGTT instrument has contributed to the implementation/delivery of the TEN-T projects. These questions can be grouped in three categories:

- **Relevance**, i.e. the extent to which the design of the LGTT instrument has addressed the needs of the project providers (or procuring authorities)
- **Effectiveness (response),** i.e. the extent to which the target groups have been responsive and the LGTT instrument used
- **Effectiveness (effects),** i.e. the extent to which the LGTT instrument has generated its intended outcomes and impacts

NB: Some questions on implementation overlap

Table 9: Evaluation questions: effectiveness and relevance

Question	Question short	Evaluation criterion
Has the LGTT enabled the project providers to reach the financial close of the TEN-T projects earlier, than without such LGTT instrument? Can this acceleration of the implementation of the TEN-T project be quantified in the terms of months and costs saved? Would the project reach anyhow a financial close with other "traditional" senior lending, or would the financial close have been compromised in its absence?	Impact on "financial close"	Effectiveness (effects)
Has the LGTT enabled the projects providers (borrowers) to enhance the credit ranking of the senior debt and to reduce risk margins? Can these elements be quantified in terms of costs saved for the project?	Impact on "senior debt"	Effectiveness (effects)
Did the reduction of costs of the senior debt play a predominant role for the projects providers in the choice of the financial solution for the TEN-T project?	Determinants of financial structure choice (incl. cost of senior debt)	Relevance (design)
How effectively was the LGTT instrument designed to address key risks and key market failures preventing the projects to reach the financial close? What are the views of the projects providers, of the EIB and of the other interested parties? How was the instrument adapted by the EIB during the course of its implementation to allow the eligible projects to reach the financial close?	Key risks and market failures preventing financial close, and capacity of the LGTT to address them	Relevance (design) Implementation
Could the Commission have achieved similar results (in terms of the number of the TEN-T projects and the cost to the EU budget) by using different "traditional" instruments such as grants, instead of the Union Contribution to the LGTT instrument?	Potential outputs with instruments other than the LGTT	Effectiveness (response) Efficiency
For how many of 50 projects, which did not make use of the LGTT, does the design of LGTT addressing only traffic risk, make an obstacle to the financial close of these projects?	"Failure" factors for not using/difficulty in using the LGTT	Effectiveness (response)

Question	Question short	Evaluation criterion
What has been the impact of the LGTT (risk sharing involvement of the Commission and the EIB) on the financing of infrastructure in Europe? Did the LGTT cause the signalling effect to attract more project providers and the private banks to do infrastructure financing?	Impact of the LGTT on the financing of infrastructure in Europe Signalling effect on providers and commercial banks	Effectiveness (effects)
What has been the impact of the LGTT on the realisation of the TEN-T priority projects (please refer to the current TEN-T guidelines)? Could these projects have been achieved without LGTT instrument?	Contribution to TEN-T priority projects	Effectiveness (effects)
What are the main systemic obstacles (legal, financial, technical) of doing rail, ports and inland-waterways projects with LGTT?	"Failure" factors for not using/difficulty to use the LGTT	Effectiveness (response)
What are the main systemic obstacles to using LGTT in all Member States?	"Failure" factors for not using/difficulty to use the LGTT	Effectiveness (response)
Was the absence of a pilot phase to refine the design of the instrument (and for example address other risks than traffic risks) a problem in the roll-out of the LGTT instrument?	"Failure" factors for not using/difficulty to use the LGTT	Effectiveness (response) Implementation
Could the LGTT have been used more effectively and deliver more TEN-T projects, if non-refundable grants from the national or EU budgets had been used?	"Failure" factors for not using/difficulty to use the LGTT	Effectiveness (response)

This second set of questions address the extent to which the components of the LGTT instrument were delivered as planned and in a cost-effective way, in order to ensure response of the target groups to the initiative. We divide these questions into two categories:

- **Administrative efficiency**, i.e. the input/output relationship (input costs/output costs) and the overall efficiency of the delivery of the LGTT
- **Implementation**, i.e. the quality of the way the LGTT has been delivered

Table 10: Evaluation questions: efficiency and implementation

Question	Question short	Evaluation criterion
(1) What are the average costs of the administrative mark-up for 6 LGTT Operations signed charged to the projects providers by the EIB? Are these costs proportional to the costs of the LGTT facilities provided, or irrespective of the amount of the LGTT facility (flat rate)?	Administrative mark-up	Administrative efficiency
(2) Does the pricing applied by the EIB on the LGTT facilities play a role in the reasons why a project provider may withdraw from the usage of the LGTT? What are the views of the projects providers on the pricing of the facilities?	Pricing and use of the LGTT	Administrative efficiency

Question	Question short	Evaluation criterion
(3) What is the average duration of the projects' screening (technical, financial, legal assessment) for the 6 signed operations? What is the appraisal of the administrative efficiency of the EIB by the projects providers? Are the communications channels between the EIB and the projects providers efficient? Is the information on the stages of the appraisal procedure communicated swiftly and clearly to the projects providers?	Projects' screening	Administrative efficiency Implementation
(4) For the 50 projects for which the LGTT facilities have been contemplated but not signed, were the reasons of non-availability of the LGTT facility communicated clearly to the projects providers? Were any alternative financing solutions suggested by the EIB?	Communication in case of non-availability of the LGTT "Failure" factors for not using/difficulty to use the LGTT	Implementation
(5) Have the communication and awareness raising campaigns on the LGTT instrument worked efficiently? How active was the EIB to promote the LGTT instrument? What are the views of the private sector participants to the awareness raising events on the usefulness of information provided to them and on the clarity of the applications' procedures? What means of communications with the public and the private sector could be proposed in the future in order to more efficiently raise the awareness of the public and the private sector on the financial instruments/ LGTT instrument in particular? Where have the projects providers/ other parties heard about the LGTT? (Is it directly from the EIB's events? From the EC? From the private sector fora?)	Communication and awareness raising actions	Implementation
(6) How in practice has the LGTT instrument been adapted by the EIB to specific projects' requirements? Please provide few examples. Have these adaptations enabled the projects providers to make use the LGTT facilities? For the 6 projects contemplated but not used, what technical, financial, legal requirements would have been necessary in order to achieve the implementation of the LGTT facilities?	Flexibility of LGTT to projects requirements	Implementation
(7) How efficiently were any risks identified/ delays with regard to the implementation of the instrument and/ or its reporting communicated between the EIB and the EC? How efficient and clear was the communication between the EC's services with the EIB?	Communication between the EIB and the EC	Implementation

Appendix 2

Sources

Legislation:

Treaty on European Union, OJ C 191, Article G.

Regulation (EU) No 670/2012 of the European Parliament and the of the Council of 11 July 2012 amending Decision No 1389/2006/EC establishing a Competitiveness and Innovation Framework Programme (2007-2013) and Regulation (EC) No 680/2007 laying down general rules for the granting of Community financial aid in the field of the trans-European transport and energy networks. OJ L 204/1

Regulation of the European Parliament and the Council (EC) 680/2007 on the general rules for granting Community financial aid in the field of the trans-European transport and energy networks. The Regulation (EU) 670/2012 of the European Parliament and of the Council modified the TEN Regulation in relation to (a) the change of the risk sharing pattern from pari passu to the Portfolio First Loss Piece (PFLP) and (b) establishment of the Europe 2020 Project Bonds Initiative.

Decision No 1692/96/EC of the European Parliament and of the Council of 23 July 1996 on Community guidelines for the development of the trans-European transport network, substantially amended several times and latest through a recast by Decision No 661/2010/EU of the European Parliament and of the Council of 7 July 2010 on Union guidelines for the development of the trans-European transport network.

Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II); OJ L 335/1

Commission delegated regulation 1268/2012 of 26.10.2012 on the Rules on the implementation of the Financial Regulation (Regulation (EU) 966/2012), OJ L 298/1

Policy documents and reports:

CEPS (2012), 'The use of innovative financial instruments for financing EU policies and objectives: Implications for EU and national budgets.

European Commission (2010), Europe 2020 - A strategy for smart, sustainable and inclusive growth; COM(2010) 2020 final

European Commission (2010), TEN-T Policy Review – Commission consultation document and background papers

European Commission (2011), Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system. COM (2011)144 final.

EIB (2004), The EIB's role in Public-Private Partnerships (PPPs)

EIB (2008), European Commission and European Investment Bank Launch new Instrument to Finance European Transport Network , Press release; Retrieved from: http://www.eib.org/about/press/2008/2008-005-european-commission-and-european-investment-bank-launch-new-instrument-to-finance-european-transport-network.htm

EIB (2010), Financing infrastructure – A review of the 2010 EIB Conference in Economics and Finance

EIB (2011), 'Supporting the EU budget: the EIB contribution', power-point presentation

EIB (2012), PPP and financing in Europe: Recent trends and EIB involvement

EIB (2012), Connecting Europe Facility – Forms of financing, priorities and synergies between the sectors; PowerPoint presentation retrieved from : http://www.europarl.europa.eu/document/activities/cont/201204/20120424ATT43833/20120424ATT43833EN.pdf

EPEC (2013), Review of the European PPP Market 2012. March 2013

EPEC (2013) Market update: Review of the European PPP Market, First half of 2013

Financial Stability Board (2013), Financial regulatory factors affecting the availability of long-term investment finance.

Jennet, N. (2011) in TEN-T Days 2011: Connecting Europe: Putting Europe's economy on the move – Conference Report

House of Commons, 2008, Private Finance Initiative – its rationale and accounting treatment; Available on: http://www.parliament.uk/documents/upload/0807pfi.pdf

Literature:

Bailey, S., Asenova, D., & Beck, M., (2009). UK public private partnerships and the credit crunch: a case of risk contagion? Journal of Risk and Governance, 1(3), 1–11.

Bain, R., (2011), Public-Private Partnerships: Lessons from Europe, Transportation Builder, January – February 2011, 19-21, February 2011, The American Road & Transportation Builders' Association (ARTBA), Washington DC.

Bain, R., (2009), Error and Optimism Bias in Toll Road Forecasts, Transportation, Vol. 36, No. 5, September 2009, Springer, Netherlands.

Bain, R., (2009), Review of Lessons from Completed PPP Projects Financed by the EIB, European Investment Bank, May 2009, Luxembourg.

Bain, R., (2009), Toll Road Traffic & Revenue Forecasts: An Interpreter's Guide, ISBN 978-0-9561527, April 2009.

Bain, R., (2009), Big Numbers Win Prizes: Twenty-One Ways to Inflate Toll Road Traffic & Revenue Forecasts, Project Finance International, Issue 406, 8th April 2009, Thomson Reuters, London.

Bain, R., Meaney, A., Dixon, P., & Davis, C., (2012), Disincentivising Overbidding for Toll Road Concessions, Oxera (for the Australian Department of Infrastructure and Transport), September 2012, Sydney.

Carpintero, S., (2010), Toll Roads in Central and Eastern Europe: Promises and Performance; Transport Reviews, Vol. 30, No. 3, 337–359, May 2010

Demirag, I., Khadaroo, I., Stapleton, P., and Stevenson, C., (2011), Risks and the financing of PPP: Perspectives from the financiers, The British Accounting Review 43 (2011) 294–310. doi:10.1016/j.bar.2011.08.006

Demirag, I., Khadaroo, I., Stapleton, P., & Stevenson, C. (2010). Public private partnerships financiers' perceptions of risks. Edinburgh: Institute of Chartered Accountants of Scotland.

Hallowel, M., 2013, Private Finance 2? An evaluation of the UK government's new approach to public-private partnerships. Conference Paper, Available on: http://www.sauder.ubc.ca/Faculty/Research_Centres/Phelps_Centre_for_the_Study_of_Government_and_Business/Events/UBC_P3_Conference/~/media/Files/Faculty%20Research/Phelps%20Centre/2013%20P3%20Conference/Papers/s15%20%20Hellowell%20Private%20Finance%202.ashx

Kappeler, A. (2012), PPPs and their Financing in Europe: Recent Trends and EIB Involvement, European Investment Bank, ECON note.

Meaney, A., & Bain, R., (2012), Good Procurement: Rewarding Deliverability Rather than Excessive Risk, Local Transport Today, LTT 608, 26 October – 8 November 2012, London.

Robinson, N., and Bain, R., (2011), The Implications of EIB and EBRD Co-financing for the EU Budget, Directorate General for Internal Policies, Policy Department D: Budgetary Affairs, European Parliament, March 2011, Brussels.

Soliño, A.; Santos, P. (2010). Transaction Costs in Transport Public–Private Partnerships: Comparing Procurement Procedures. Transport Reviews, v. 30, n. 3, pp 389-406.

Van Essen, H., Brinke, L., Bain, R., Smith, N., & Skinner, I., (2012), Financing Instruments for the EU's Transport Infrastructure, Directorate General for Internal Policies, Policy Department B: Structural and Cohesion Policies, European Parliament, December 2012, Brussels.

Appendix 3
Glossary of terms

The initial discussions in the team and the informal talks with stakeholders revealed that there are some inconsistencies in the way terms in the field of project finance are used. To ensure the consistency of discussions and outputs, a glossary of working definitions is needed. The following definitions are mostly based on a 2004 EIB report on PPPs.[63] However, they have also been supplemented where needed with the project team's clarifications. As such the glossary should not be viewed as an attempt to construct exclusive definitions, but rather as guidance for discussions with the study stakeholders. Terms in the present report are used in accordance to this glossary.

Availability-based project	A project for which the company providing the infrastructure receives fixed periodic payments from the Commissioning Body as long as the transport infrastructure is available for use.
BAFO	Best And Final Offer, a second stage bid in a public procurement competition.
Concession	A contract between the Commissioning body and the Provider (Concessionaire) to provide a specified service or facility (e.g. a road) over a specified period, with payments being made by end-users.
Demand-based project	A project for which the company providing the infrastructure receives payments based on direct or indirect user charges (real toll or shadow toll).
Financial Close	The point at which commercial and financing contracts have been signed and conditions precedent to the first debt drawdown have been fulfilled.
O&M	Operation and Maintenance.
PFI	Private Finance Initiative, a term primarily used in the UK for PPP projects.
PPP	Public-Private Partnership, according to EIB definition: "A PPP should: have been initiated by the public sector - involve a clearly defined project – involve the sharing of risks with the private sector – be based on a contractual relationship which is limited in time – have a clear separation between the public sector and the Borrower."
Project	A clearly-defined investment in physical asset, e.g. a specific section of road, a bridge, etc.
Project Finance	A loan made primarily against the cash flows generated by the project, rather than relying on a corporate balance sheet, the security value of the physical assets, or other forms of security.

[63] EIB, 2004, Evaluation of PPP projects financed by the EIB, Synthesis Report. Retrieved from: http://www.eib.org/attachments/ev/ev_ppp_en.pdf

Commissioning Body	Normally the body responsible for identifying, developing, implementing and operating a project. Specifically on PPPs, the Commissioning body is also called procuring authority and typically is the public-sector awarding authority responsible for identifying and developing the project, managing the PPP process, and signing the PPP contract.
Provider	The entity responsible for the implementation and operation of a PPP project, under the PPP contract with the Commissioning body. The Provider, also referred to as the private partner, is usually an SPV owned by shareholders – members of the consortium that was awarded the project. Providers are also referred to as "project sponsors".
SPV	Special Purpose Vehicle – A company, with its own legal persona, set up for limited set of specific purposes, e.g. to borrow for the construction of a project, to place contracts for construction and maintenance, and to receive remuneration.

Appendix 4

List of interviewees

Category	Last Name	First Name	Organization	Country	Project name
European Commission staff	Ouaki	Stephane	DG MOVE	-	-
	Gryc	Katarzyna	DG MOVE		
	Bertrand	Matthieu	DG MOVE		
	Santoni	Marjut	DG ECFIN	-	-
	Romer	Eva	DG ECFIN	-	-
INEA (former TEN-T Executive Agency) staff	Panagopoulou	Anna	INEA	-	-
	Forrester	Shelley	INEA	-	-
	Pernetta	Robert	INEA	-	-
EIB Staff	Jennett	Nick	EIB	-	-
	Murphy	Cormac	EIB	-	-
	Thiele	Olivier	EIB	-	-
	Cenci	Karine	EIB	-	-
	Zambrano	Adrian	EIB	-	-
	Horvath-Gillemot	Levente	EIB	-	-
	Valentine	Neil	EIB	-	-
	Badot	Gilles	EIB	-	-
	Brunkhorst	Martin	EIB	-	-
	Gaellstad	Eric	EIB	-	-
	Pinto	Manuel	EIB	-	-
	Fuchs	Theda	EIB	-	-
	Woitok	Matthias	EIB	-	-
	Deska	Wojciech	EIB	-	-
National public procurement authorities for PPPs in	Ulber	Frank	VIFG – Verkehrs-infrastruktur-finanzierungs-gesellschaft	DE	Albaufstieg, A1 Autobahn, A8 Autobahn, A5 Autobahn

Category	Last Name	First Name	Organization	Country	Project name
transport	Hersemul	Michel	French ministry of Transport	FR	CDG Express, A355, A63, A831, A45, Autoroute Ferroviaire Alpine
	Lasserre	Sabine	French ministry of Transport	FR	CDG Express, A355, A63, A831, A45, Autoroute Ferroviaire Alpine
	Guiavarc'h	Gweltaz	Réseau Ferré de France	FR	LGV SUD
	Bergère	Francois	French Ministry of Finance	FR	LGV SUD, A831, A45, A63
	Nucci	Settimio	ANAS	IT	Porto di Ancona Collegamento Stradale
	Tramonti	Ida	Ministry of Infrastructure and Transport	IT	-
	Rognoni	Antonio Giulio	Concessioni Autostradali Lombarde SpA	IT	Milano Tangenziale, Pedemontana Lombarda, Autostrada BreBeMi
	Slawomir	Siewko	GDDKiA	PL	A1 Strykow-Pyrzowice Motorway (2nd phase); A2 Strykow KonotopaTEN
Project provider	Skipiol	Artur	Bilfinger	DE	A1 Autobahn, A8 Autobahn, A5 Autobahn
	Raguse	Karen	Eurogate	DE	Jade Weserport
	Schütt	Michael	FRAPORT	DE	Frankfurt Airport A380 Extension
	Genkel	Jens	Meridiam	DE	A5 Autobahn
	Diaz	Ursula	Cedinsa	ES	C-25 Eix Transversal; Eix Llobregat
	Hermange	Pierre-Antoine	Lisea	FR	LGV SUD
	Julien	Touati	Meridiam	FR	LGV SUD; A5 Autobahn
	Simon	Maxime	Vinci	FR	LGV SUD

Category	Last Name	First Name	Organization	Country	Project name
	Kofman	Stéphane	HSBC/Infrared	FR	A63
	Giacoppo	Ivan	Autostrade per l'Italia	IT	Autostrade Potenziamento A14; Autostrade Firenze Bologna; Atlantia Firenze Bologna IV, Milano Tangenziale
	Algisi	Alberto	BreBeMi	IT	Autostrada Brebemi PPP
	Rognioni	Angelo	Concessioni Autostradali Lombarde SpA	IT	Milano Tangenziale PPP; Pedemontana Lombarda; Autostrada Brebemi PPP
	Fearnley	Peter	Rothschild	NL	Rotterdam World Gateway
	Tomczynska	Iwona	Gdansk Airport	PL	Gdansk Airport
	Garrido	Pablo	Grodovario	PT	Baixo Alentejo Motorway
	Silva	Francisco Manuel de Jesus	Somague	PT	IP4 Vila Real Amarante
	Qureshi	Sarmad	DP World	UK / NL	London Gateway, Rotterdam World Gateway
Public or private investment or commercial bank	Castro	Nicolas	NIBC	DE	A5 Autobahn
	Babanikas	Thanos	UniCredit Bank AG	DE/UK	A8 Augusburg Ulm; London Gateway
	Borregon	Gonzalo	La Caixa	ES	C-25 Eix Transversal
	Lopez Formosa	Elsa	Santander Global Banking & Markets	ES	A63, LGV SUD, A5 Autobahn
	Gest	Patrick-Henri	Crédit Agricole	FR	LGV SUD
	Moore	Laurence	Crédit Agricole	FR	A63 Autoroute
	Bracaletti	Alessandro	Cassa depositi e prestiti S.p.A.	IT	A4 Autovie Venete Widening;Milano Tangenziale PPP; Pedemontana Lombarda; Autostrada

Category	Last Name	First Name	Organization	Country	Project name
					Brebemi PPP, Aeroporto fi Catania, Strada dei Parchi; Porto di Ancona Collegamento Stradale
	d'Adamo	Massimo	Mediobanca	IT	A4 Autovie Venete Widening
	Mustac	Sandra	UBI Banca	IT	Milano Tangenziale PPP; Pedemontana Lombarda; Autostrada Brebemi PPP
	Pescarini	Gabriele	Banca Dexia Group	IT	Strada dei Parchi
	Almeida	Tiago Samoes	Banco BPI	PT	Baixo Alentejo Motorway
	Gonçalves	Tomás	Banco BPI	PT	IP4 Braganca Transmontana
	Caldeira	Jose	Caixa	PT	IP4 Vila Real Amarante