

## FINANCE OF TRANSPORT INFRASTRUCTURE

*Available funding from traditional sources falls short of the investment needs of the EU transport sector. The necessary investments in TEN infrastructure are expected to reach €300 billion by 2013 and a significant financial gap in public resources is anticipated to appear. Under these conditions, one way is to mobilise private investment in infrastructure projects or investigate mechanisms for generating more resources from off-budget sources.*

The main traditional sources of funding for transport infrastructure include allocations from national and EU budgets, domestic and foreign loans, and official development assistance such as structural and cohesion funds. In recent years, governments find it very difficult to meet these funding needs and try to diversify the sources of finance. The public-private partnerships have played an important role in this process as well as capital markets' financial instruments.

The present section intends to provide an overview of recent trends in the financing of EU transport infrastructure and the innovative financial arrangements that have emerged. For instance, TEN-T programme in cooperation with the European Investment Bank's financial instruments, EBRD's financing and co-financing, and the EU Structural&Cohesion funds for transport infrastructure. All these existing public and private capital for funding infrastructure illustrate the variety of financial tools that can be applied for maintaining competitive transport system. From this perspective, the analysis might be of interest to:

- Policy makers, Investment funds, Infrastructure funds, Policy and financial analysts, Consultancies and Transportation professional organisations.

Table 2.1 summarises the EU funds and investment needs in the area. The World Bank estimates that investment of about 7% of GDP annually was required for transport infrastructure in developing countries. In developed countries, the investment was less, about 4% of GDP per year<sup>1</sup>. In general, there is a significant shortfall in infrastructure investment in many countries.

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<sup>1</sup> Fay M., T. Yepes, "Investing in infrastructure: what is needed from 2000 to 2010?", World Bank Policy Research Working Paper 3102, Washington DC, 2003

Table 2.1: Available public funds and investment needs

| EU programme   | year                       | budget (€)       | costs of completion (€)                 |
|--|----------------------------|------------------|---|
| TEN-T  | 2008                       | nearly 1 billion | -                                       |
| TEN-T  | 2007 - 2013<br>2007 - 2020 | -                | 300 billion<br>600 billion <sup>2</sup> |
| Structural funds ( <i>not only for transport needs</i> ) | 2007 – 2013                | 277 billion      | -                                       |
| Cohesion funds ( <i>not only for transport needs</i> )   | 2007 - 2013                | 70 billion       | -                                       |

Source: EU documents

Table 2.2: Available resources from financial institutions and private investors

| bank                    | year         | budget (€)                         | costs of completion (€) |
|-------------------------|--------------|------------------------------------|-------------------------|
| EIB (already provided)  | 2003-2007    | 45 billion of loans                | -                       |
| EIB                     | 2008-onwards | 1 billion loan guarantee scheme    | -                       |
| EBRD (already provided) | 1992-2004    | 3.5 billion                        | 11.2 billion            |
| Private investors       | 2008-onwards | expecting 130 billion <sup>3</sup> |                         |

Source: [www.eib.org](http://www.eib.org) and [www.ebrd.com](http://www.ebrd.com)

## I. TEN-T programme

The Trans-European Transport Network promotes the economic, social and territorial cohesion of the Union. It grants aid for transport infrastructure of European significance in the rate of 30%. The scheme funded 270 international ports, 210 inland ports, traffic management systems, navigation and user information system, 330 airports, roads and rail tracks since it started operating. Its financial viability is based in part on revenues, tolls or other user-charges. It facilitates greater participation of the private sector, especially for investments where there is a high level of revenue risk in the early operational period.

By 2020 the total costs of completion of TEN-T projects<sup>4</sup> amount to €600 billion. €220 billion were for priority projects, of which €80 billion went for the most technically and financially mature proposals by 2006. The new financial instruments

<sup>2</sup> EC Delegation, “The Trans-European Transport Network: new guidelines and financial rules”, Conference, Warsaw 2003

<sup>3</sup> OECD, “Infrastructure to 2030: Mapping policy for electricity, water and transport”, Volume II, 2007 Paris

<sup>4</sup> For the purposes of this study, we exclude TEN-E projects which may be classified as transport projects but are funded as energy infrastructure (for ex. pipeline infrastructure)

of the EIB add €1 billion of capital contribution to the existing budget for TENs<sup>5</sup>. The budget for 2008 is €810, 852, 600 for TEN-Transport and approximately €35 million for loan guarantees.

However, the evaluation of these projects says that the main problem of TENs is the mismatch between TEN-T objectives and the financial means available from the EU. The insufficient funds make the completion of these projects very difficult<sup>6</sup>.

To improve the financial viability of TEN-T projects, the European Commission and the EIB launched new instruments to finance European transport network that cover the risk. Several guarantee schemes and venture capital are also able to leverage a substantial quantity of resources without too much risk for the public sector in result of the sharing it among different parties. Debt financing (loans, bonds, securitisation) has become an important source of finances for transport projects.

The new loan guarantee instrument (LGTT) aims to facilitate investment in TEN-T projects by improving the ability of borrower to service debt during the initial period when there are no traffic revenues. Under the LGTT the EIB will accept exposure to higher financial risks than under its normal lending. The risk capital is jointly provided by EIB and the European Commission in favour of commercial banks which will provide the stand-by liquidity facility in addition to the usual project finances. This liquidity facility can be drawn by the project company in case of unexpected reduction of income during the “ramp-up”<sup>7</sup> period of operation. If at the end of the availability period there are still amounts outstanding under the liquidity facility (interest, etc.), the LGTT guarantee can be called upon by the providers of this facility, the EIB would pay out them and then become subordinated creditor to the project. Once EIB is creditor to the project, the debt will be repaid on a cash sweep basis or on a fixed reimbursement payments<sup>8</sup>.

The LGTT scheme is in addition to the other two financial instruments tailored for TEN-T projects. The Risk Capital Facility offers risk capital to investment funds that provide equity for TENs, while availability payment schemes can benefit from a construction cost based grant during the operational, post-construction phase of the project.

In 2007, the EIB lent €41.4 billion to the 27 members of the EU, of which 20% were allocated to transport projects. It raised €55 billion on the capital markets for its financing activities via 236 bond issues denominated in 23 different currencies. The table below demonstrates the amount of individual loans allocated to the 27 members for transport purposes only.

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<sup>5</sup> Information on: [http://ec.europa.eu/ten/index\\_en.html](http://ec.europa.eu/ten/index_en.html) and <http://www.eib.org>

<sup>6</sup> EC Delegation, “The Trans-European Transport Network: new guidelines and financial rules”, Conference, Warsaw 2003

<sup>7</sup> “ramp-up” – cover the period from the completion of the project until the 5th anniversary

<sup>8</sup> MEMO/08/12, Brussels 11th, January 2008

Table 3: Individual loans provided within the EU from 2003 to 2007 (€ million)

| <b>country</b> | <b>transport projects of common interest</b> |
|----------------|--|
| Belgium        | 255  |
| Bulgaria       | 1 160  |
| Czech Republic | 1 310  |
| Denmark        | 576  |
| Germany        | 1 882  |
| Estonia        | -  |
| Ireland        | 999  |
| Greece         | 2 152  |
| Spain          | 13 750                                       |
| France         | 3 500  |
| Italy          | 5 085  |
| Cyprus         | -  |
| Latvia         | -  |
| Lithuania      | 64   |
| Luxembourg     | 382  |
| Hungary        | 1 277  |
| Malta          | -  |
| Netherlands    | 360  |
| Austria        | 1 318  |
| Poland         | 3 025  |
| Portugal       | 1 766  |
| Romania        | 1 200  |
| Slovenia       | 694  |
| Slovakia       | 175  |
| Finland        | 608  |
| Sweden         | 726  |
| United Kingdom | 2 222  |
| EFTA           | 551  |
| <b>Total</b>   | <b>45 037</b>                                |

Source: EIB, Annual report 2007

The European Investment Bank is a significant source of financial capital for transport projects within the EU and partner countries. In comparison with Asia, the Asian Development Bank and Japan Bank for International Cooperation have developed different loan schemes for transport infrastructure whereas the China Development Bank is a large source of bond financing.

## II. European Bank for Reconstruction and Development (EBRD)'s transport projects

EBRD finances infrastructure projects in economies of Central and Eastern Europe, south-eastern Europe and the Commonwealth of Independent States. The EBRD is the largest lender for urban transport projects, where the municipal governments are mainly the sponsor of these projects financed by the Bank. Globally, the private investments in infrastructure development grew dramatically in the 90s.

By the end of 2004 the EBRD has undertaken 108 projects with an average financing of €33 million each year. Port projects represented 3% of all those projects and shipping & water transport – 7%. Port investments were €97.2 million, while investments in shipping and shipbuilding were €2591 million until 2004. 54 of the projects included an element of cofinancing – EBRD contributed €1.7 billion while cofinanciers contributed a further €3.7 billion (EIB, EU, IMF, etc)<sup>9</sup>.

However, projects differ widely in the extent of private sector participation as well as in the form of such private involvement, which ranges from participation with no private risk-taking to full privatisation, in which the private investor assumes all commercial risks. For some projects there are sovereign guarantees for the loan that the municipality takes, which involves the presence of additional public actors. The evaluation of project performance indicates that private participation without commercial risk tends to increase the completion probability of a project. Also sovereign guarantees reduce delays but decrease financial discipline<sup>10</sup>. Summing up, the EBRD experience illustrates that the presence of private parties is beneficial because they transfer know-how. Therefore, the focus should be on the public-private partnerships.

The EBRD commitments to transport sector was €617.9 million in 2007, which is 17% more than in 2006. The bank provided its first loans for a project to modernise infrastructure at the Port of Durres (Albania) in co-financing with the EIB and the EU; and the Port of Illichivsk in Ukraine. It also invested in the Port of Ploče's bulk terminal in Croatia and in Russia's Rosmorport to help them operate on a more commercial basis. In the shipping sector, financing was provided to upgrade the fleet of Ukraine. As governments' capacity to finance large transport projects decreases, the EBRD encourages greater involvement of private parties in Bulgaria, Romania, central Europe, Russia and Western Balkans. The EBRD provides a wide range of financial products for use in public-private transactions – loans, equity, guarantees and treasury products (for ex., interest rate swaps).

Data from the Private Participation in Infrastructure (PPI) database of the World Bank shows that, in Asia the private sector made investments in 362 transport projects until 2005 at the value of more than €40 billion, as roads and ports drew most of the investments<sup>11</sup>.

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<sup>9</sup> EBRD, Transport Operations Policy 2005-2008, [www.ebrd.com](http://www.ebrd.com)

<sup>10</sup> Dobrescu G., Friebel G., Grosjean P., K. Robeck "The determinants of performance in building infrastructure in transition economies", EBRD paper No106, March 2008

<sup>11</sup> <http://ppi.worldbank.org>

### III. EU Structural and Cohesion Funds

The other source of governmental support within the EU are the structural and cohesion funds. They provide development assistance and focus on:

- cross-border cooperation
- transnational cooperation
- interregional cooperation

The Structural Funds were created to help those regions within the EU whose development is lagging behind.

The Structural Funds aim to:

- develop infrastructure, such as transport and energy;
- aid regions affected by industrial decline;
- support the development of rural areas;
- extend telecommunication services;
- provide training for workers;
- combat long-term unemployment;
- disseminate the tools and know-how of the information society;
- promote research and development;

The EU Structural Funds consist of four individual programmes as the one that supports the maritime development and public transport projects is European Regional Development Fund. In the UK, the funding mainly goes to projects relating to ports development and maritime business networks. In Ireland, ERDF supports road development, public transport and quality bus corridors. The aid covers up to 40-50% of the expenses on a project. The new budget is €277 billion until 2013.

The Cohesion Fund was established in 1993 to complement the Structural Funds. It was intended to help the EU's poorer countries prepare for economic and monetary union. At that time, the four Member States whose GNP per capita was less than 90% of the EU average - Greece, Ireland, Portugal, and Spain - originally qualified for the fund. Today, the Cohesion Fund covers projects in all new Member States: Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Romania, Slovakia, and Slovenia.

The Cohesion Fund assists individual projects in the fields of environment and transport infrastructure e.g., roads, ports, airports, water supply, and waste water treatment projects. For instance, Ireland was qualified for these funds from 1993-2003. The main projects included the upgrading of main rail corridors including the cross-border route to Belfast, an extension of the DART service in the Dublin area, and the re-development of Heuston Station in Dublin.

Irish seaports projects from the 90s included the Cork Passenger Ferry, dredging at Waterford Port, and Roll On/Roll Off Berths at Dublin Port.

The new period runs from 2007 to 2013 with €70 billion budget. Most EU funding is not paid directly by the European Commission but via the national and regional authorities of the Member States<sup>12</sup>.

Similar development funding goes to neighbour countries of the EU via EuropeAid, the office of EU external aid programmes that ensures the development assistance goes worldwide. The office manages the aid instruments financed by the Community budget and the European Development Funds. EuropeAid is engaged in supporting infrastructure policies, investment and services in developing countries<sup>13</sup>.

All these funds are often used in cooperation with financing from EIB or EBRD. In the face of continuing government budget constraints, it is expected that private participation in the transport sector will be sustainable. The public-private partnerships as well as debt financing have offered new innovations in infrastructure financing. And while the actual amount of future investment needs may still be debated, there is a great need to increase the availability of funding from all possible sources. Greater reliance on off-budget sources requires an use of financial tools for borrowing from the market and also equity participation by the private sector. This instrument is unlikely to be used in the new market circumstances, but it will be utilised at a lower growth rate in the future. The EU fiscal stimulus packages will contribute to the rise of infrastructure investments.

Stanford's Collaboratory for Research on Global Projects estimated that more than 72 new infrastructure funds had been introduced since 2006 and that more than €120 billion (\$160 billion) had been raised for infrastructure investments globally for the last two years<sup>14</sup>. The huge pools of private sector capital managed by pension funds and insurance companies, are of considerable potential interest to such investments. Alone in the OECD area, pension funds amount to €135 trillion (\$18 trillion). They might provide a large amount of private investment in the transport sector as a long-term and low-risk initiative.

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<sup>12</sup> Grants of the European Union – Introduction to EU funding

<sup>13</sup> [http://ec.europa.eu/europeaid/index\\_en.htm](http://ec.europa.eu/europeaid/index_en.htm)

<sup>14</sup> [http://crgp.stanford.edu/news/global\\_projects\\_the\\_rise\\_of\\_infrastructure\\_funds.html](http://crgp.stanford.edu/news/global_projects_the_rise_of_infrastructure_funds.html)

## CONCLUSIONS

Current funding levels fall short of the future investment expectations, and without larger government budget allocations, the existing public provision alone will not be sufficient to meet the demand. To effectively engage the private sector and have a stable infrastructure development in the EU, the policymakers have developed an appropriate legal and regulatory framework, a suitable risk-sharing mechanism, transparent processes and a provision of incentives. Furthermore, they now have to establish a more sophisticated framework in order to diversify the traditional sources of financing. This includes:

- Better use of off-budget sources (user fees and charges);
- Promote low-risk financial innovations (loan guarantee schemes, risk facility funds, and others);
- Secure long-term private investment in infrastructure;

To deal with all these new issues of recent time, the policymakers will have to consider a wide array of measures on a policy and regulatory level. Therefore the management of infrastructure projects is crucial at this juncture.