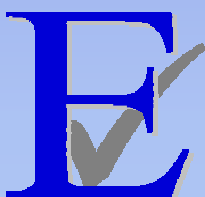


Evaluation Report

Operations Evaluation (EV)

Evaluation of Cross-border TEN projects

Synthesis Report



EVALUATION REPORT

Evaluation of Cross-border TEN Projects

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NOTICE

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Evaluation

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GLOSSARY

GLOSSARY OF TERMS AND ABBREVIATIONS

AGI	Action for Growth Instruments
ASAP	Amsterdam Special Action Programme
Borrower	The legal <i>persona</i> with whom the Bank signs a Loan Agreement.
CA	EIB's Board (<i>q.v.</i>) The EIB Board of Directors, which has sole power to take decisions in respect of loans, guarantees and borrowings.
CB TEN	Cross-border transport and energy TENs - transport TENs comprise land transport network projects, as well as other international transport node projects (i.e. ports and airports)
CD	EIB's Management Committee (<i>q.v.</i>)
COP	Corporate Operational Plan
EIA	Environmental Impact Assessment
EIB	European Investment Bank
ERR	Economic Rate of Return
EU	European Union
EV	EIB Operations Evaluation (Ex-Post)
FIRR	Financial Internal Rate of Return
FVA	Financial Value Added
GED	Gestion Électronique Documents (Electronic Documents and Records Management System)
JASPERS	Joint Assistance in Supporting Projects in European Regions: partnership between the Commission, the EIB and the European Bank for Reconstruction and Development, aiming to improve the preparation of major projects.
Management Committee	Internal EIB committee, comprising the Bank's President and Vice-Presidents
NUTS	NUTS (Nomenclature of Territorial Units for Statistical Purposes) subdivides the economic territory of the European Union into three subdivisions: 89 regions NUTS 1 level, 254 regions NUTS 2 level, 1214 regions NUTS 3 level.
Ops-A	EIB Directorate for Lending Operations – EU Member, Acceding, Accession and Candidate States
PCR	Project completion report
PIU	Project Implementation Unit
PJ	EIB Projects Directorate – Responsible for <i>ex-ante</i> project techno-economic analyses, the preparation of the Technical Description, and the physical monitoring of implementation and completion.
PPP	Public-Private Partnership
Project	A clearly defined investment, typically in physical assets, e.g. a specific section of road, a bridge, etc.
Promoter	Normally the <i>persona</i> responsible for identifying and developing a project. The promoter may also be responsible for operating and/or implementing the project.
RM	EIB Risk Management Directorate, responsible for credit appraisal and portfolio management
SPV	Special Purpose Vehicle – A company, with its own legal <i>persona</i> , set up for a limited set of specific purposes, e.g. to borrow for the construction of a project.
TA	Technical assistance
Technical Description	Project definition - the basis of the Loan Agreement; prepared by PJ.
TEN (T-E)	Trans European Network (Transport – Energy)
VA	Value Added

EXECUTIVE SUMMARY AND RECOMMENDATIONS

Introduction

This ex-post evaluation covers EIB financing of selected cross-border (CB) trans-European Network (TEN) projects during the period 1995-2004. The evaluation assessed the projects against the EIB's standard evaluation criteria¹, as well as the Bank's contribution and performance in these projects. As a specific feature, the project evaluation was extended to assess the impact of cross-border infrastructures on regional development. The specific "cross-border" dimension of this evaluation highlights the trans-national aspect of the projects that form the nexus within the wider TEN concept between the EU-25 and beyond.

The energy and transport sectors are often referred to and recognised as the arteries of modern industrial societies, strongly affecting Europe's long-term competitiveness. Energy and transport are mutually dependent, since transport requires energy and energy supply relies to a large extent on transport links. Their inter-relationship, the fact that they are one of the largest network industries and their overall importance for the economy makes it evident that "European citizens' welfare and way of life relies in many ways on the good functioning of these two key sectors"².

Since its foundation, the Bank's financing of transport and energy infrastructures throughout Europe has been one of its core activities. From the beginning of the TEN initiative in the 1990's, its financing was an important operational priority for the Bank and TENs are currently one of the five main COP lending priorities for the EIB. However, the Bank is not limited by TEN regulations. Total EIB signatures in favour of trans-European Network Projects amounted to EUR 86.8 bn between 1995 and 2005, which is a substantial share (23%) of total EIB signatures during this period. Transport-TENs (TEN-T) account for 74% of total TEN signatures (EUR 64.4 bn), followed by telecoms (e-TENs 18% or EUR 15.2 bn) and Energy-TENs (8% or EUR 7.2 bn). 94% of all TEN projects were located in the EU-25. EIB-financing for transport and energy TENs comprises roads (39%), railways (27%), air transport (14%), gas (7%), roads and railways (4%), water transport (4%), electricity projects (3%) and others (2%).

Following the review of the Bank's TEN portfolio and taking into consideration previous evaluations of CB TEN projects, eleven cross-border TEN projects were selected for an individual evaluation (8 in transport, 3 in energy). In this evaluation, a wider definition was taken as cross-border transport-TENs comprise land transport network projects, as well as ports and airports in view of their potential significance for regional development and their important transnational/cross-border dimension. In order to increase the relevance of this evaluation and its informational value, the analysis of previously evaluated cross-border TEN projects together with the review of the self-evaluation process by analysing recent TEN project completion reports has been conducted.

A total of 84 TEN projects were thus considered for this report.

Policy Context/Relevance

The Treaty of Rome provided the legal basis for the TEN concept, but only the Maastricht Treaty of 1993 defined and underlined the importance of TENs. Under the terms of Chapter XV of the Treaty, the **European Union** must aim to promote the development of trans-European networks as a key element for the creation of the Internal Market and the reinforcement of Economic and Social Cohesion. The TEN programmes are defined by Community Decisions that establish the TEN guidelines and by Regulations containing the framework for their financing. Since the introduction of the Community guidelines, specific emphasis has been given on cross-border sections, but it is increasingly recognised that these cross-border sections are often the key missing links in the networks. A recent report by the Court of Auditors confirmed that the execution of 14 TEN-T priority projects is behind schedule. In particular, cross-border connections are facing major difficulties since they receive less priority at the national level and require greater coordination efforts.

TEN financing was always an important operational priority for the **EIB**. The Bank was actively involved in the preparation of the European Action for Growth (AGI) initiative (2003), which has induced changes in its organisational structure and defined TENs as a main COP lending priority. The guidelines for the development of TENs are drawn at the EU level, while infrastructure planning

¹ Relevance, Effectiveness, Efficiency and Sustainability - see Appendix 1 for definitions.

² European Commission: The annual energy and transport review for 2004, December 2005, p.13.

and measures to implement individual projects are the responsibility of the **Member States** concerned. Within the Member States and depending on the size and importance of the projects, the responsibility for transport and energy projects is often delegated to a more local level. Whilst governments have launched many projects, which coincide with their national priorities, they have been more hesitant in respect of projects, particularly cross-border links, outside their national plans.

The projects evaluated were all in line with the general EU TEN objectives. Furthermore, the transport projects also contributed at least partially to other EU transport policy objectives (e.g. improving the competitiveness of business and increased transport safety). The energy projects were in line with the EU energy objectives to reinforce supply security and to strengthen the Internal Market. There is a strong coherence between the operations financed by the Bank and EU policies translated into the Bank’s strategy, and all projects were in line with EIB guidelines and national policy objectives. The projects’ cross-border dimension was important. It reached from the establishment of direct links between Member States over specific cross-border sections that form the missing/important link of a network to projects representing important international connections/communication points. All eleven projects were rated Satisfactory or better against the “Relevance” criterion, which is a sound overall performance. Similar results were observed in past evaluations for cross-border TEN projects.

Project performance

All projects, except two, were rated Satisfactory or better against “Effectiveness”. While the actual implementation performance of the promoters varied, and sometimes the scope of the project was extended, all projects except one reached completion as defined by the technical description. The projects out-turn costs were found acceptable in all but three cases, but many operations faced implementation delays. Although environmental procedures were handled in coherence with EU/national and Bank’s guidelines, this could be improved in some projects. The Bank should continue to ensure that wider infrastructure development plans, for ports and airports for instance, have an Environmental Impact Assessment (EIA), allowing all sub-projects to be examined in combination with one another. Offshore sections of cross-border energy projects should also be included in the EIA procedure.

For cross-border projects coordination and management is often particularly complex due to different sets of regulations and laws, but also due to cultural and/or language barriers. For large-scale transport infrastructure projects in conjunction with the physical cross-border infrastructure, mental connections have to be built, since country specific differences might hamper the exploitation of the full benefits of the physical connection.

All but one project had a positive rating for the “Efficiency” criterion, which is a very good result. Four projects were rated Good, due to high traffic and demand increases impacting favourably on the projects ERR, and six projects were rated Satisfactory. Only one project was rated Poor, since important project objectives were not met and it lacked economic justification.

All projects were rated Satisfactory or better for the “Sustainability” criterion, reflecting the promoter’s strong managerial capacity and support, the project’s standing and, in addition, to that the backing from national/cross-border authorities.

Criterion	Project Rating (11 projects)			
	Good	Satisfactory	Unsatisfactory	Poor
Relevance	9	2	0	0
Effectiveness	4	5	2	0
Efficiency	4	6	0	1
Sustainability	2	9	0	0
Overall Rating	2	8	0	1

Overall project performance has been assessed against these criteria. 2 operations were rated Good and 8 operations were rated Satisfactory. One project was rated Poor and the evaluation confirms the ex-ante observations by the Bank’s services at the time of project approval.

Analysing the previously evaluated cross-border TEN operations, the results are much weaker than the current evaluation. Although Relevance was rated highly (96%) in this sample, Effectiveness

(81%) and Sustainability (62%) were rated significantly worse. In particular, the performance for the Efficiency criterion (46% of satisfactory/good rating) was weaker. This can be explained on the one hand by a relatively high number of not rated projects, and on the other hand by the relatively weak performance of some sectors in former evaluations (railways, roads, airports).

EIB value added and project-cycle management

The Bank, as the leading EU long-term infrastructure lender, provided significant financial value added (FVA) to the project evaluated. Its main strength resided in its role of providing the required, often very large, financial resources in line with the needs of the promoter and at competitive rates and terms. In addition, there was an important non-financial contribution for certain projects. The EIB has experience and particular knowledge in cross-border projects and an early EIB presence in the structuring of projects can allow a timely agreement on the corporate, project and financial structure; it can be a catalyst for other financial institutions. Appropriate conditions for technical assistance (TA) support have improved project realisation in certain cases. Overall, three projects were rated High for the EIB contribution criterion, since the provision of financial and non-financial value added was important. In the other cases, the projects benefited mainly from significantly better financial terms than the alternative funding available.

As a major player for infrastructure financing throughout Europe, the Bank has developed good long-term relationships with many of the main counterparts in the sector. Project appraisal was usually well structured and systematic. The Bank's knowledge of infrastructure related project issues, built on its experience both within the EU and outside, has enabled the Bank's experts to identify most of the major issues of the projects evaluated. Consequently, the Bank's overall performance on project-cycle management has been Satisfactory or better. Two projects were rated Good due to the EIB's good management, responsiveness and flexibility. Nevertheless, physical monitoring still has some weaknesses and some of the Project Completion Reports (PCRs) came to overly positive self-evaluation conclusions, which could not be confirmed ex-post.

Regional impact

Successful regional development and economic growth are impacted by a range of factors and policy instruments, whereby infrastructure projects are only one component, in the overall set of options.

The evaluation showed that while levels of regional impacts deviate from sector to sector, the hypothesis that the larger the project, the higher the regional impacts could not be validated. The most important regional impacts are related to accessibility: the possibility to attract new and often project-related industries and socio-economic activities. While employment effects are often an important policy objective and a concern for regional politicians promoting a project, the long-term employment effects are often limited. However, the port and airport projects had important employment as well as wider economic implications. Considering the broader impacts in areas more distant from the project sites, the most significant effects are efficiency gains achieved by some energy projects. Only one of the projects evaluated contributed significantly to establish cross-border cooperation (cultural and commercial). Hence, the genuine cross-border impact of the projects was less prominent than other regional effects. In an attempt to understand the reasons behind the differences in regional impacts across the projects, the level of 'enabling factors' (institutional and policy framework) or "policy multipliers" offers a plausible explanation. Deliberate policy actions initiated by regional stakeholders appear to have contributed greatly to the positive regional impacts.

The majority of projects (6) were rated Significant for the regional impact criterion, while 3 projects received a Medium rating for the regional impact analysis; only two projects were rated Low. The impact results are in line with the ERR conclusions and their inclusion would not have changed EIB's financing decision for the evaluated projects. Large cross-border infrastructure projects are not a sufficient condition for long-term growth, since the regions concerned have to exploit their respective competitive advantages.

Conclusions

Transport and energy TEN infrastructure financing is well established within the Bank and processes and procedures are mostly well targeted. Over time, the EIB has developed specific knowledge and particular value added for many cross-border "mega"-projects. This knowledge is increasingly requested for project preparation. Although the Bank has significantly strengthened its TEN

cooperation, in particular with the Commission over the recent past, further increased policy dialogue as well as a proactive prioritisation for cross-border sections, seems appropriate. This seems particularly relevant for the JASPERS initiative and a proposal in this respect could be forwarded for consideration to the EU Commission.

There appear to be two main categories of cross-border TEN projects. On the one hand, projects impacting mainly at national level and often promoted by private sector operators (typically energy projects) and, on the other hand, projects with a more direct, regional/local impact (typically transport projects), where the catalytic effect of the EIB can be higher.

The environmental handling of mega-projects should be done at an early stage of the project cycle to reduce both public opposition and potential cost increases during implementation. An environmental expert panel can reduce objections and support appropriate mitigation measures. Environmental procedures for cross-border projects should be based on common reporting to reduce delays in the EIA process. For large cross-border projects, formal and strict governmental agreements have to be in place to allow the timely connection of the infrastructure with the hinterland.

While most of the projects were successful, there are a number of measures which are recommended to further increase the Bank's value added, improve project efficiency and sustainability and maximise its contribution.

TABLE OF RECOMMENDATIONS

	EV Observations & Recommendations	Response of the Operational Departments
1.	<p>Observation: Cross-border TEN projects can offer substantial opportunities for the Bank to provide value added. EV recognises that these cross-border projects receive certain prioritisation from the Bank and new financial instruments are considered for these projects. A higher priority for cross-border TEN projects is also attributed by the EU in various documents.</p> <p>Recommendations:</p> <p>a) The rating given to “Value Added pillar 1” should be positively influenced (‘High’), if it is a Cross-border TEN project.</p> <p>b) A common, cross-departmental inventory of good practices for TENs (similar to the one for PPPs) to improve the sharing, management and dissemination of knowledge should be considered.</p> <p>c) Increased TEN (Energy+Transport) coordination within PJ should be contemplated (§ 2.2 + 5).</p>	<p>Agree. Cross-border road and rail links face particular coordination and implementation problems. Actions by the TEN Centre of expertise will help to maximise the contribution of the Bank to these projects.</p>
2.	<p>Observation: In the context of increasing cross-border TEN financing <u>EU-wide</u>, JASPERS could be given a pro-active role for cross-border project selection and preparation (§ 2.2). In the longer term, JASPERS could have a more prominent role in supporting cross-border projects even in a wider regional context (i.e. certain EU “15” Member States as well as neighbouring countries).</p> <p>Recommendation: The proposal should be forwarded for consideration to the EU Commission.</p>	<p>The purpose of JASPERS is to assist Member States in their preparation of projects for an application to the Structural Funds. Therefore, these comments will be sent to the JASPERS Steering Committee.</p>

<p>3.</p>	<p>Observation: Environmental procedures are in coherence with the EU/national and the Bank's guidelines. To be fully effective, the Bank should continue to ensure that project boundaries are not set too narrowly by the relevant authorities to allow for appropriate environmental impact assessment. This is particularly relevant for those sectors (e.g. ports, airports), which are in continuous development and are changing all the time. An entire development plan should have an EIA to allow all sub-projects (including the main hinterland connections) to be examined together. For cross-border energy projects, the EIA process should include those sections in international waters (§ 3.1).</p> <p>Recommendation: The EIB procedures should be rigidly applied.</p>	<p>Agree. As with projects in all sectors, the bank's environmental due diligence needs to pay attention that projects have been sufficiently broadly defined for environmental purposes.</p>
<p>4.</p>	<p>Recommendation: Internal data management/transparency should be improved through better file management in the archives/GED (§ 5).</p>	<p>Agree.</p>
<p>5.</p>	<p>Observation: Internal procedures have strengthened to cover the exceptions that we have noted in this evaluation. Namely that the recommendations and conditions at appraisal have to be included in the finance contract and that they should be enforceable and followed up accordingly. The Bank must remain vigilant on these new procedures (§ 5).</p>	<p>Agree.</p>
<p>6.</p>	<p>Observation: Weaknesses in the physical monitoring during the implementation of the projects, and in the self-evaluation process, have been signalled in many thematic evaluations in the past. Although monitoring is currently in the process of being enhanced, quality control/assurance in the self-evaluation process needed to be strengthened.</p> <p>Project completion reports should be drafted with care; further supervisory control has been introduced during the period of this evaluation.</p> <p>The financial value added (third pillar) part is not recorded in the PCRs (§ 3.4 and 5).</p>	<p>As noted in previous evaluations, monitoring practices are being improved. Additional staff members have been recruited and new systems and new monitoring processes have been developed.</p> <p>As part of the above process, new procedures to improve the quality control of project completion reports are being implemented.</p> <p>In the light of recent developments on financial value added (FVA) - including clarification of methodology and RM review at appraisal stage - Ops will review with EV the need to assess once again FVA in PCR including resources required to perform such a task.</p>

1. INTRODUCTION

This ex-post evaluation covers EIB financing of selected cross-border (CB) Trans-European Network (TEN) projects during the period 1995-2004. The focus of the evaluation is on the relevance and performance of the projects (Effectiveness, Efficiency and Sustainability - see Appendix 1 for definitions), as the Bank's standard evaluation criteria, as well as EIB's contribution and performance in these projects. In addition, the project analysis was extended to assess the extent of the impact of cross-border infrastructures on regional development. The specific "cross-border" dimension of this evaluation highlights the trans-national aspect of the projects that form the nexus within the wider TEN concept between the EU-25 and beyond.

The evaluation has two primary functions. Firstly, to increase transparency to the EIB's governing bodies and, secondly, as a learning exercise to provide assistance to the Bank's operational departments, thereby increasing the Bank's value added in future operations. It does by no means evaluate the performance and impact of the Commission's TEN-E and TEN-T programme, which is carried out by the Commission's evaluation units³.

Approach and methodology (see also Appendix 1)

The comparison of ex-post results with the expectations and objectives at appraisal is the main basis for the evaluation of the operations. In accordance with the Bank's evaluation procedures, individual projects were rated in four categories: "Good", "Satisfactory", "Unsatisfactory" and "Poor"⁴. While internal EV staff carried out most of the evaluation, the EIB evaluation team was supported by external consultants from COWI (Denmark) for the evaluation of the selected energy projects and the regional impact assessment for six projects. The relevant operational departments (OPS-A, PJ and RM) were fully involved in the various stages of the evaluation.

The following steps are key elements for this evaluation:

A comprehensive portfolio review - analysing EIB financing trends, sector and country distributions for Transport and Energy TENs over the last ten years (see below) – this evaluation does not include e-TEN (telecoms) given their different nature and a planned evaluation in this sector. This portfolio review includes CB-TEN projects (representing about 15 – 20 % of the total);

An analysis of previous cross-border TEN evaluations - in recent years, energy and transport infrastructure projects have been evaluated on several occasions⁵. In order to increase the relevance of the selected sample and the informational value of this cross-border TEN evaluation, an analysis of the results of previously evaluated (26) cross-border transport and energy TEN projects was performed. The results are presented with the conclusions for the specific ratings of the evaluated cross-border TEN projects (see chapters 2 and 3);

A project completion report review - based on an analysis of 41 Transport and Energy-TEN Project Completion Reports (PCRs) issued by PJ in 2004 and 2005 (see chapter 3.4).

Further selection of CB-TEN projects for this evaluation was then achieved in order to take due account of previous evaluations and to ensure adequate coverage of CB-TEN operations⁶.

A detailed desk review of all projects from the initial project list was carried out, which formed the basis for the selection of the final project sample. Eleven projects⁷ were chosen to represent a good

³ See for instance: Mid term evaluation of the TEN-Energy projects (2004); Evamonten-T: Ex-post Evaluation of TEN-T Actions (under preparation) - see http://ec.europa.eu/dgs/energy_transport/evaluation/activites/rte_en.htm.

⁴ "High", "Significant", "Medium" and "Low" for EIB contribution and regional impact rating.

⁵ EV: Air Infrastructure projects - 2005, Railway projects in the EU – 2005, PPP projects – 2005, Impact of EIB Financing on Regional Development in Greece – 2003, Urban Development in the EU – 2003, Transport projects in Central and Eastern Europe – 2003.

⁶ For transport-TENs the following selection criteria are applied: a) Water transport infrastructures, such as ports, have not been evaluated so far, but were included in view of their important trans-national/cross-border dimension, and the recent Motorway of the Sea concept (see Appendix 3), b) exclusion of railway projects and EU-15 airport infrastructure (see EV reports 2005). In view of their potential significance for economic and social cohesion, EV has opted to include airport projects (as international/regional connection points) in the New Member States in the portfolio sample for the evaluation.

selection in terms of country coverage, loan volume, sector, size and type of operation, while duly considering the previously evaluated project sample.

The selected project sample (including past evaluations and the present one) is representative for the cross-border financing of the Bank, covering some 20% of cross-border road projects, around 10% of energy and port projects and 24% of airport evaluations. The following table summarises the main features of the selected projects, covering 13 EU Member States.

Project	Sector	Size*	Operation	Counterpart
1	TR - Port	Medium	Greenfield	Private
2	TR - Port	Small	Modern. /Expansion	Public
3	TR - Port	Small	Modern. /Expansion	Public
4	TR - Airport	Small	Modern. /Expansion	Public
5	TR - Road & Rail	Large	Greenfield	Private
6	TR - Road	Medium	Greenfield	Private
7	TR - Road	Small	Modernisation	Public
8	TR - Road	Small	Modernisation	Private
9	EN - Gas	Large	Greenfield	Private
10	EN - Gas	Medium	Greenfield	Private
11	EN - Electricity	Medium	Greenfield	Private

* Loan size – small < 100 million, large > 250 million.

In-depth evaluation & synthesis: During the last step, detailed project analysis and field visits for all projects have been conducted. Individual evaluations involved meetings with the organisations for project implementation, operation and policy. Site visits included meetings with Ministries, Chambers of Commerce, representatives from local and regional authorities and academia. Individual evaluation reports have been prepared and discussed with the operational staff associated with the project, and the main elements were provided to project promoters for their comments. The information contained in these reports is of a confidential nature and availability is restricted to EIB staff. They will not be released to outside parties and the EIB will not approach promoters for their permission for a wider circulation. This evaluation report is a synthesis of the findings of the individual evaluations and the complementary analysis and considers a total of 84⁸ TEN projects for its conclusions.

Presentation of the EIB TEN portfolio 1995 - 2005

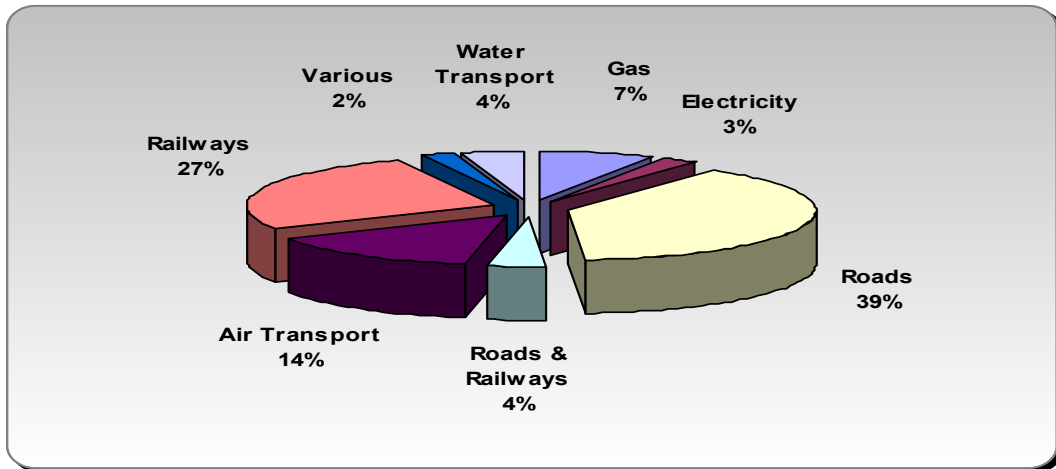
Since its foundations, the Bank's financing of transport and energy infrastructure throughout Europe has been one of its core activities. From the beginning of the TEN initiative in the 1990's, its financing was an important operational priority for the Bank and TENs are currently one of the five main COP lending priorities for the EIB.

Total EIB signatures in favour of trans-European Network projects amounted to EUR 86.8 bn between 1.1.1995 and 31.12.2005, which is a substantial share (23%) of total EIB signatures during this period, reflecting the Bank's important contribution towards the financing of TENs. Transport-TENs account for 74% of total TEN signatures (EUR 64.4 bn) followed by e-TENs (18% or EUR 15.2 bn – not included in this evaluation, as stated above) and Energy-TENs (8% or EUR 7.2 bn). During the period, a total of 390 Transport and Energy TEN projects were signed for a total amount of EUR 71.6 bn with Transport accounting for 90%. 94% of the TEN operations were projects in EU-25 (84% EU-15, 10% New Member States), and 6% were TEN operations with neighbouring countries.

⁷ Project number 5 comprised two EIB projects with separate due diligence and approval procedures. Since these projects form part of one larger mega-project, the evaluation has considered both sub-projects jointly as one in the individual project evaluation.

⁸ 11 in-depth and desk review, 6 additional desk reviews, 26 evaluated cross-border TEN projects and 41 PCR reviews of TEN projects.

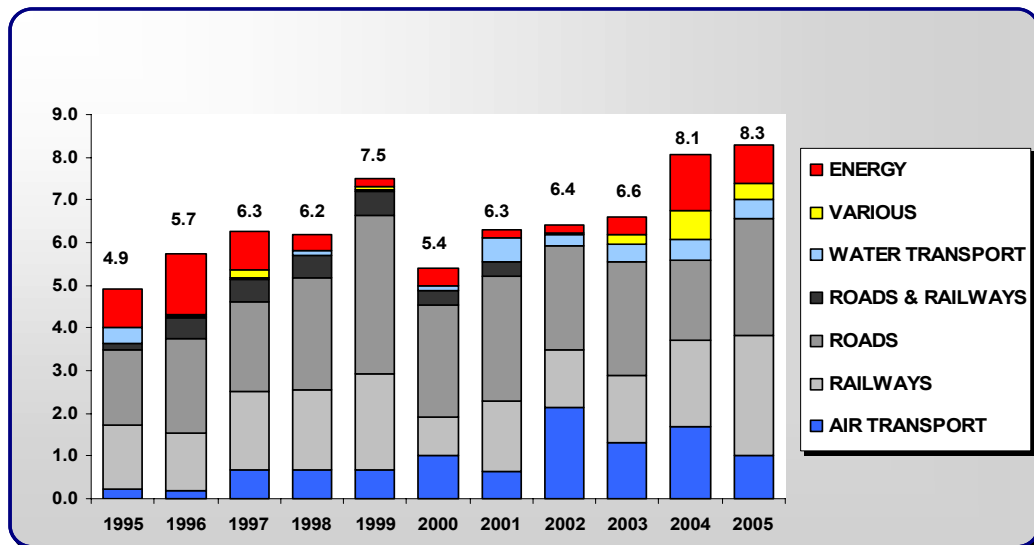
Overall EIB Transport and Energy TEN Signatures (1.1.1995-31.12.2005)
(Total EUR 71.6 bn)



N. B. Roads and railways are related to major combined infrastructures (e.g. bridges or tunnels).

Signatures have shown distinct annual variations during the time period analysed. Annual signatures increased from EUR 4.9 bn to EUR 7.5 bn between 1995 and 1999, dropped to EUR 5.4 bn in 2000 and then increased again, reaching EUR 8.3 bn in 2005. The following graph presents the overall signature trend of transport and energy TEN projects between 1995 and 2005.

Annual EIB Transport/Energy TEN signatures (EUR bn)
(1.1.1995-31.12.2005)



Analysing the overall evolution of Transport and Energy TEN approvals, signatures and disbursements, the following trends become apparent: on average, up to 31.12.2005, 79% of the projects approved were signed, and 69% of the projects approved were disbursed, which is slightly below the overall EIB figures (79%/77%).

There are slight differences with respect to these shares in the different sectors. For Transport TENs, 78% of all approved projects have been signed, while for Energy TENs this ratio is 83%. The conversion rate from signed loan to disbursed loan is 88% for Transport TEN projects and 81% for Energy TEN projects, which is below the comparable figure (97%) for overall EIB lending in the EU-25 for the period 1995 to 2005.

Transport and energy sector trends⁹

The energy and transport sectors are often referred to and recognised as the arteries of modern industrial societies. They are also at the very heart of important issues affecting Europe's long-term competitiveness (e.g. increasing fuel prices and energy import dependency; environmental risks etc.). Energy and transport are mutually dependent, since transport requires energy and energy supply relies to a large extent on transport links. Their inter-relationship, the fact that they are the largest network industries together with telecom, and their overall importance for the economy makes it evident that "*European citizens' welfare and way of life relies in many ways on the good functioning of these two key sectors*"¹⁰.

Energy and transport sectors have distinct characteristics differentiating them from most other industrial sectors. They are a) classic network industries (consisting of fixed network infrastructure, operations control systems and a set of services for firms and consumers) often regulated through state intervention, b) very capital intensive with relatively low flexibility and long lead times for changes, c) visually intrusive and can occupy large areas of land.

Freight **transport** growth is closely correlated to overall GDP trends and trade flows have become an increasingly important driver of freight transport. Between 1995 and 2004 goods transport growth within the EU 25 (2.8% p.a.) was broadly in line with economic growth (2.3% p.a.). Passenger transport is mainly driven by population and demographic trends, as well as economic drivers, such as disposable income and to some extent fuel prices. Freight transport growth was primarily driven by increased maritime and road transport. Overall, goods transport grew by 28% and passenger transport by 18% during the period 1995-2004. The EU 25 accumulated average growth in passenger transport, generally measured in terms of passenger-kilometres, reached some 15% during 1995 to 2003, most of it by individual road transport (78%). Despite the negative effects of the events of 11 September 2001, the air transport market was the most dynamic passenger transport market in the last decade and Intra-EU air travel grew by more than 50% in the same period¹¹.

The EU 25 is the world's largest **energy**-consuming region, after the US. The primary energy demand grew at an average rate of 0.8% p.a. between 1990 and 2003, with the volumes accelerating in recent years. Oil met more than 38% of primary energy demand, followed by natural gas (24%), coal (18%) and nuclear energy (less than 15%). The EU-25 is a net importer of primary energy with an import dependency ratio of about 50%. Although energy prices had been falling during the 1990s, this trend has dramatically reversed in recent years, driven principally by rising oil prices. A forecast for transport and energy demand developments (trends to 2030) has been recently presented by the Commission¹². The EU transport and energy policy context is evolving constantly and many market segments have been opened to increase competition¹³.

2. POLICIES & STRATEGIES – RELEVANCE

RELEVANCE is the extent to which the project objectives are consistent with EU policies, the decisions of the EIB Governors, as well as the country policies.

All projects evaluated were in line with the general **EU TEN objectives**, which are defined in the Maastricht Treaty, namely "to contribute to the establishment and development of trans European networks in the areas transport, ... and energy infrastructures". By improving transport systems, the projects also achieved, at least partially another objective of EU transport policy: improving the competitiveness of business. The objective of increased transport safety was fulfilled by two projects. All energy projects evaluated were in line with the objectives to reinforce supply security and to

⁹ See for instance 'European Commission: Keep Europe moving – Sustainable mobility for our continent – Mid-term review of the European Commission's 2001 Transport White Paper, 22.06.2006 – COM (2006) 314 final' and 'The annual energy and transport review for 2004, December 2005'.

¹⁰ European Commission: The annual energy and transport review for 2004, December 2005, p.13.

¹¹ Keep Europe moving – Sustainable mobility for our continent – Mid-term review of the European Commission's 2001 Transport White Paper, 22.06.2006 – COM (2006) 314 final, p.7.

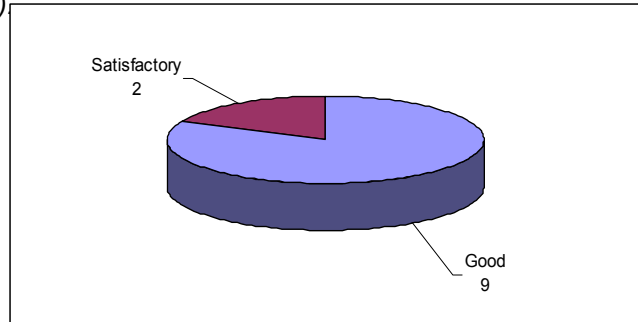
¹² See http://ec.europa.eu/dgs/energy_transport/figures/trends_2030_update_2005/energy_transport_trends_2030_update_2005_en.pdf.

¹³ A summary of recent Community transport and energy policy initiatives is presented in European Commission: The annual energy and transport review for 2004, December 2005. p.15 ff.

strengthen the Internal Market. Transport, energy and cohesion policy are interrelated, since regional competitiveness is improved by fostering the free movement of passengers, goods and services. All projects thereby also contributed to regional development (see chapter 6). All projects were and/or would be now eligible for **EIB** funding under the TEN eligibility and are consistent with the general EIB policies and guidelines. Several projects also justify multiple EIB eligibility criteria (regional development: transport projects 2, 3, 4, 6, 8, energy projects 10 and 11). All of the individual projects evaluated complied with **national** policy objectives.

The projects evaluated have significant **cross-border aspects** reaching from the establishment of direct links between Member States (projects 5, 9-11) over specific cross-border sections of networks forming an important link of a network (projects 6-8), to projects representing important international connections/ communication points (projects 1-4).

The evaluation results are depicted in the graph, which is a very positive outcome, demonstrating the strong coherence between the operations financed by the Bank and EU policies translated in the Bank's strategy. The recent signature of the Memorandum of Understanding between the EU Commission (DG TREN) and the EIB provides a clearer mandate for a prioritisation of cross-border TEN sections.



Cross-border connections often face particular difficulties since they have lower priority at the national level and require more coordination. Consequently, the rating given to “VA pillar 1” should be positively influenced (‘high’), if it is a cross-border project. JASPERS could take a more pro-active role for project selection and preparation. A proposal in this respect could be forwarded for consideration to the EU Commission.

2.1 EU POLICIES AND OBJECTIVES

The **trans-European networks** concept emerged in the late 1980s and the Maastricht Treaty of 1993 defined and underlined the importance of TENs. In Article 154, the Treaty states “... the Community shall contribute to the establishment and development of trans-European networks in areas of transport, telecommunication and energy infrastructures. Within the framework of a system of open and competitive markets, action by the Community shall aim at promoting interconnection and interoperability of national networks as well as access to such networks”. TENs are one of the EU’s policy components for network industries and have been in constant development since the early 1990’s. Both TEN-Transport (TEN-T) and TEN – Energy (TEN-E) are defined by Community Decisions that establish the TEN guidelines and by Regulations containing the framework for their financing¹⁴.

The Commission’s White Papers (1992, 2001¹⁵) defined the general framework of **transport policy** in the EU: “The objective of an EU sustainable transport policy is that our transport systems meet society’s economic, social and environmental needs. Effective transport systems are essential to Europe’s prosperity, having significant impacts on economic growth, social development and the environment¹⁶”. Stemming from this, several main objectives for EU transport policies can be derived, namely improving the competitiveness of business, increasing environmental protection and safety levels, stimulating technological innovation and expanding the TEN concept to cover the enlarged Union. However, there is also a clear interrelation between transport policy and regional/cohesion policy. The free movement of passenger, goods, services and capital is key to exploiting comparative cost advantages for industry and services within the EU, which ultimately fosters regional competitiveness, one of the main goals of EU’s cohesion policy.

¹⁴ Council Regulation (EC) 2236/95 and its main amendments (1655/99; 788/2004; 807/2004) set the general rules for financial aid in the field of TENs.

¹⁵ COM (2001) 370 of 12/09/2001 – European transport policy for 2010: time to decide.

¹⁶ Keep Europe moving – sustainable mobility for our continent – Mid-term review of the European Commission’s 2001 Transport White Paper, COM(2006) 314 final, June 2006, p.3.

The TEN-T guidelines were first adopted in 1996 (amended in 2001 and 2004) and were aimed at integrating the national networks and transport modes into one European system. This should promote a better linkage of the peripheral regions of the Union to the centre and improve both safety and efficiency. A High-Level-Group "On the trans-European transport network", composed of experts from the 25 Member States, Romania and Bulgaria as well as the European Investment Bank (EIB) was set up to revise the TEN guidelines. One of the aspects was the introduction of the concept of motorways of the sea (see box).

Furthermore, the financial framework has been adapted, helping to target infrastructure bottlenecks at cross-border sections. The new plan concentrates investment on a core network of major trans-European axes that primarily serve long-distance and international traffic. More than 10 years after the launch of the TEN programme in Essen¹⁷, progress of works is to a large extent unsatisfactory, since many projects are facing important delays.

In its Transport White Paper of September 2001, the Commission proposed the development of "**Motorways of the Sea**" as a "real competitive alternative to land transport." These "motorways of the sea" should be part of the Trans-European network (TEN-T) and the concept aims at introducing new intermodal maritime-based logistics chains in Europe with three main objectives: a) freight flow concentration on sea-based logistical routes; b) increasing cohesion; c) reducing road congestion through modal shift.

Four corridors have been designated for the setting up of projects of European interest: Motorway of the Baltic Sea; Western Europe; South-East Europe; South-West Europe. These corridors provide one essential part of the projects: the "floating infrastructures" of the European seas. However, it is up to industry, Member States and the Community to implement financially and operationally sound projects to use these maritime resources better for new intermodal maritime-based transport systems (see also Appendix 3).

There is no single Treaty provision defining a common energy policy, but there is a set of EU energy policy¹⁸ objectives: a) reinforcing supply security, b) strengthening the Internal Energy Market in an enlarged EU, c) supporting the modernisation of energy systems in partner countries, d) increasing the share of renewable energies and e) facilitating the realisation of major new energy infrastructure projects. The proper functioning of the internal energy market as well as climate change targets are centrepieces of this policy. The objectives of EU actions for the development of **TEN-E** programme is to contribute to: a) effective operation of the internal energy market, b) strengthening economic and social cohesions and c) reinforcing energy supply security. The TEN-E programme identifies missing links and congestion points together with priority routes. The fundamental policy measures are laid down in the TEN-E guidelines (1996 - 2003). Priority was given to the gas and electricity sector. In view of the enlargement of the EU and the adoption of the new directives on market opening, revised TEN-E guidelines (July 2006) were adopted, which are expected to attract investment for cross-border projects of high European Interest.

The development of TENs is supported by Community grants, through the TEN-budget line, the cohesion and regional funds and with financing from the EIB. It is important to note that one of the stated objectives of the TEN guidelines is that projects have to demonstrate "at least potential economic viability".

The specific "**cross-border**" dimension of this evaluation highlights the trans-national aspect of those projects that form the nexus within the wider TEN concept between the EU-25 and beyond. Although there is no "cross-border TEN policy" as such, since the establishment of the Community guidelines, specific emphasis has been given to cross-border sections. However, the Commission as well as other European Institutions have increasingly recognised that cross-border sections are often the key missing links in the networks.

A recent report by the Court of Auditors also confirmed that the execution of 14 TEN-T priority projects is behind schedule. In particular, **cross-border sections are facing major difficulties** since they receive less priority at national level and require greater coordination efforts; TEN-T financial aid

¹⁷ http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/ec/00300-1.EN4.htm.

¹⁸ See EU Commission Green paper - A European Strategy for Sustainable, Competitive and Secure Energy Brussels, 8.3.2006 COM(2006) 105 final; EIB Energy Review 2006, Energy Action Plan and updates.

is allocated in an overly fragmented way and is not sufficiently **focused on cross-border projects (or project sections)**¹⁹.

The latest revision of the Community guidelines (2004) therefore clearly stated: “the priorities shall be:

establishment and development of the key links and interconnections needed to eliminate bottlenecks, fill in missing sections and complete main routes, especially their **cross-border sections**, cross natural barriers, and improve interoperability on major routes²⁰”.

EU funds will be concentrated on projects that offer the greatest added value for Europe and where active collaboration with national and other financing organisations is guaranteed.

Also in the TEN-E programme, the Commission suggests that, for certain cross-border projects on priority axes, a single level of coordination should be established. In the electricity market, a regulation on cross-border exchanges in electricity was adopted in 2003.

2.2 EIB POLICIES AND MANDATES

Since its foundation, the Bank has been actively involved in the financing of transport and energy infrastructure throughout Europe as one of its core activities. The underlying basis and rationale for EIB involvement in the sectors is the contribution to the Common Transport Policy and Community objectives in the energy sector. These cover the development of the TENs on the one hand and the fulfilment of other policy objectives on the other. Consequently, the Bank is not limited by TENs regulations. The Bank has translated the main provisions of the EU Treaty into its eligibility guidelines for transport and energy projects. Since the beginning of the TEN initiative its financing was an important EIB priority. More recently (2003), the EIB was actively involved in the preparation of the European Action for Growth (AGI) Initiative. The importance attached by the Bank to AGI has led the Bank to implement changes in its organisational structure (see chapter 4.2) and to give even higher priority to the development of TENs in the Corporate Operational Plan (COP). **TENs are currently one of the five main COP lending priorities for the EIB.**

Although the Bank has actively supported the financing of a significant number of cross-border projects whenever possible, also by means of innovative mechanisms (Edinburgh facility, TIF – see chapter 4) in the past, no specific EIB operational mandate or objective towards cross-border prioritisation was given. The national prioritisation towards advancing “easier”, national sections of TEN projects (see chapter 2.3) was to a certain extent also reflected in EIB’s TEN portfolio (see appendix 3). It is recognised that cross-border projects receive certain prioritisation by the Bank. The recent signature of the Memorandum of Understanding between the EU-Commission (DG TREN) and the EIB was an important step towards a new framework for policy and project cooperation between the two institutions. In the Memorandum, a clearer mandate towards an appropriate priority for cross border projects in general has been given. A dedicated specific task force within the organisational structures of the Bank to implement in particular cross-border TEN-T sections might be appropriate. Due to the specific nature of the TEN-E cross-border sections, which are largely driven by commercial interests, the need for specific emphasis might be lower.

A prioritisation towards cross-border sections appears to be particularly relevant for the JASPERS initiative, providing inputs for project design and preparation for the New Member States. JASPERS is client, therefore Member State, oriented which, from a cross-border project point of view, is not ideal since these areas do not usually receive highest priority in the establishment of the national plans. A higher priority for CB-TEN projects is also attributed by the EU in various documents. In the context of increasing cross-border TEN financing EU-wide, JASPERS could be given a pro-active role for cross-border project selection and preparation. In the longer term, JASPERS could have a more prominent role in supporting cross-border projects even in a wider regional context (i.e. certain EU “15” Member States as well as neighbouring countries). The proposal should be forwarded for consideration to the EU Commission.

¹⁹ See Court of Auditors – Special report on the Trans-European Network for Transport (TEN-T), 15.12.2005.

²⁰ Decision No 884/2004/EC of 29.4.2004, p.10.

2.3 NATIONAL/COUNTRY OBJECTIVES

As specified in the EC Treaty, the guidelines for the development of TEN are drawn at the EU level, while infrastructure planning and measures to implement individual projects are the responsibility of the Member States concerned. Within the Member States, and depending on the size and importance of the projects, the responsibility for transport and energy projects are often delegated to a more local level.

Whilst governments have launched many projects, which coincide with their national priorities, they have been more hesitant in respect of projects, particularly cross-border links. In fact, the most significant delays were concentrated on the cross-border sections of the projects; this in turn discourages Member States to invest in access links. Moreover, infrastructure project management has become increasingly complex, which affects cross-border projects in particular. The political decision-makers are sometimes inclined to sacrifice cross-border projects in favour of national projects, which are often seen as being more politically attractive. Although most countries recognise the increasing share of international transport in total transport volumes, the total benefit of improving cross-border sections is sometimes underestimated from a national perspective. The Multi-annual Indicative Programme 2000-2006 is an indicator of this tendency, since it gives only a relatively small share to intra-EU cross-border projects.

Extended scope: Relevance analysis of previously evaluated cross-border TEN projects

a) CB-TEN previous evaluation results: Since the inception of EV, energy and infrastructure projects have been evaluated at several occasions. In order to increase the relevance of this evaluation and its informational value, an analysis of the results of previously evaluated transport and energy projects with a TEN eligibility was performed. These were evaluated in the framework of six earlier evaluations. The rating of the operations included in this analysis is depicted in the following table, which confirms the overall positive rating for Relevance, since 96% of all energy and transport TEN projects were considered fully relevant (Good or Satisfactory).

RATING 'RELEVANCE' OF PAST EIB EVALUATED CB TEN PROJECTS					
	Good	Satisfactory	Unsatisfactory	Poor	Not rated
<i>Railways</i>	4	2	0	0	0
<i>Airports</i>	6	5	1	0	0
<i>Roads</i>	0	7	0	0	0
<i>Electricity</i>	0	1	0	0	0
TOTAL	10	15	1	0	0

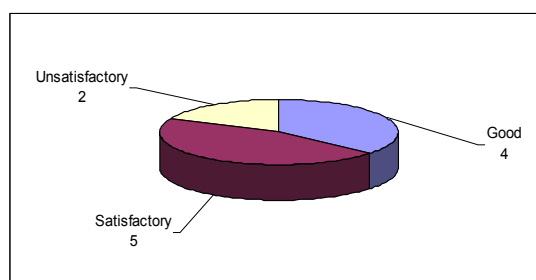
b) Project Completion Report (PCR) results: When analysing completed PCRs for TEN projects over the last two years (see chapter 3.4), relevance (VA pillar 1) is rated "high/medium" in 87 % of all cases, "moderate" rating was given in 5% of all PCRs. 7% of the PCRs did not receive any rating for VA Pillar 1 and none was judged "not acceptable".

3. PROJECT PERFORMANCE

Project performance, relating to EIB's second pillar of value added, is assessed using three core evaluation criteria, namely Effectiveness, Efficiency and Sustainability, which are all rated individually.

3.1 EFFECTIVENESS

Project Effectiveness rates the extent to which project objectives have been achieved, based on the following parameters: a) implementation: the evaluation looked at completion information: coherence with the technical description, timing, costs and procurement, b) operation: management and organisation of project operations, environmental performance, cooperation and coordination with counterparts.



The rating for the effectiveness criterion was good and only two projects were rated unsatisfactory. For project 8, the objective of improved security of the infrastructure was achieved, but one of the two project components was not executed. Project 11 established an energy link between two countries (one key project objective), but with a significant implementation delay. Furthermore its effective utilisation is constrained by regulatory limitations and bottlenecks. The strategic objectives, rated highly at appraisal, have to a large extent not been achieved.

Environmental procedures were handled competently in most cases, but they could be improved in some areas (e.g. EIA procedures for wider development plans, and offshore sections of cross-border energy projects). Two transport and two energy projects clearly made a significant difference in project effectiveness. Project 1 was carried out on time and below budget and is performing significantly above ex ante expectations. Project 5 faced significant challenges initially, which were competently handled, even considering the high requirements in terms of environmental protection. The project has a significant importance in a regional context and its contribution to enhancing economic and social cohesion is increasing. The initial project concept for project 9 was innovative and was developed by a competent promoter, on time and below budget. Its initial objectives have been more than achieved, since additional investments to increase capacity are underway. Project 10 has also significantly surpassed ex-ante objectives. It provides one of the most important gas importation flows in Southern Europe and is a major step for energy supply diversification.

3.1.a Implementation performance

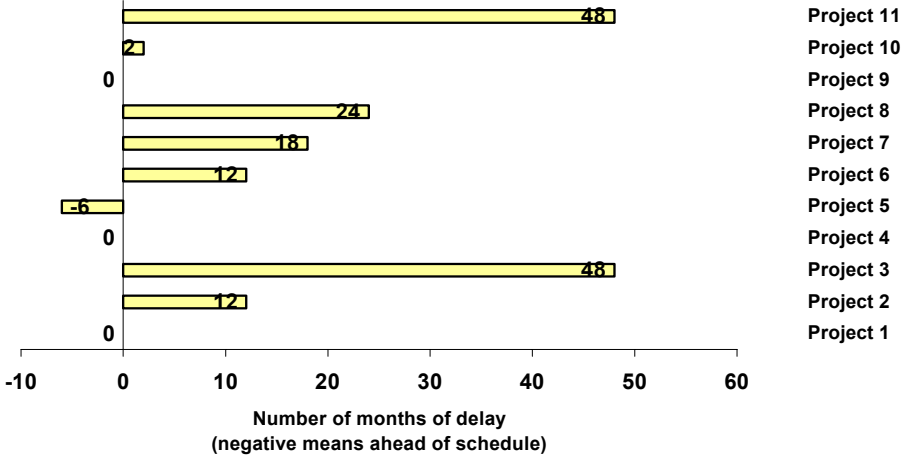
Project promoters covered a wide range of entities ranging from publicly owned companies to fully private companies. The project types could be classified into two main groups, namely the modernisation and expansion of existing operations and greenfield projects.

In general, the competence of the promoters to implement the projects has been high. For five cross-border operations (three transport, two energy), special purpose vehicles (SPVs) or European Economic Interest Group's for project implementation and coordination have been set up. Responsibility for project implementation has been left with the national partners on either side. Implementation for projects 2, 3 and 4 was supported by either technical assistance or a Project Implementation Unit (PIU).

Physical implementation and time schedule: While the actual implementation performance of the promoters varied and sometimes the scope of the project was extended, all projects except one (project 8) reached completion as defined by the technical description. Project scope was extended during implementation for some projects (2, 5, 7, 8, 9). Project 5 experienced a significant number of changes with respect to the original design since it had to be continuously adjusted to minimise environmental effects. Higher safety regulations, which came into force during the implementation, changed the scope for projects 7+ 8, but one component was not implemented (access road - 8).

Most of the projects were completed later than initially foreseen (see figure below) with delays amounting up to 4 years for two projects. The main reasons for the delays were: a) changes in project scope and design; b) complex and lengthy procurement procedures, c) technical difficulties, d) environmental opposition, e) local authorisation procedures.

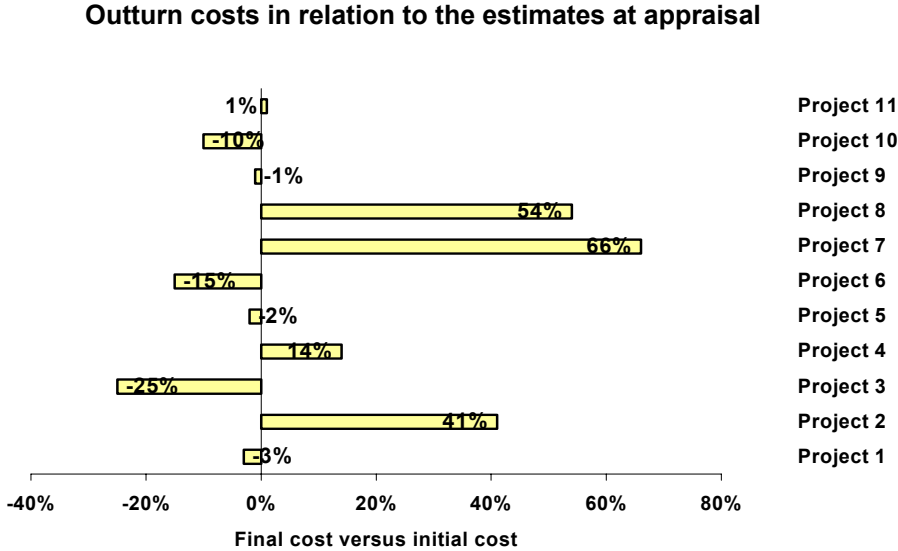
Work duration in relation to the estimates at appraisal



Project 5 was completed ahead of schedule in spite of initial delays, which were made up through financial incentives offered to all contractors, if the project as a whole was completed on time. This encouraged contractors to speed up work and a dispute review panel was introduced, which limited the necessity for arbitration. Furthermore, strict governmental agreements were in place to allow the timely connection of the infrastructure with the hinterland.

Procurement: For all projects, procurement was done in accordance with EU and EIB guidelines. Some port projects experienced delays due to longer tendering procedures. For one project, there was little response from manufacturers, since the technology was available from only a very limited number of firms. Contracts were awarded to the contractor, who was involved in the feasibility study of the project.

Project cost and financing plan: For most projects (8 out of 11), out-turn costs were acceptable (see figure below). Three projects had a significant cost overrun (more than 40%), mainly due to changes in their scope.



In line with EIB’s guidelines, EIB financing remained for all but one project, in line with the statutory regulations, in particular considering also complementary investments financed by the promoters from own funds. In all cases, co-financing with the Commission, other International Financial Institutions (IFIs) or commercial banks complemented EIB financing. Only project 6 exceeded with 58% the usual EIB financing share, due to lower project cost. In addition, the total amount of “European Funds” (Cohesion Funds plus EIB loan) exceeded the normal limit of 90% of the total project cost. For project 5, the finance department of the special purpose vehicle (SPV) was better placed to hedge against currency fluctuations than the contractors, which helped to reduce cost and risks for both parties (promoter and contractor). Project 9 was eligible for financing under the Edinburgh facility, allowing the EIB loan to cover up to 75% of total project cost (see also chapter 4.1).

3.1.b Operational Performance

Management and employment: The management of all, but one, projects still remains under the responsibility of the initial project promoter. While for one of the port projects, the operation is organised as a single profit centre (1), one of the two other port projects (2) experienced a change of concessionaire, which was not reported to the Bank. All of the operations visited during the evaluation were technically sound, functional and in good condition and the management considered appropriate.

Due to the specific character of infrastructure projects, their direct long-term employment effects are in most cases relatively limited and mostly concentrated during project implementation. Nevertheless, the projects have contributed to create and/or stabilise employment for some 2200 people (projects 1-4 accounted for 75% of these employment effects).

Environmental impact: The significant environmental impact of large infrastructure projects necessitates a specific review of the environmental compliance and performance of the projects. Environmental procedures were in coherence with the EU/national and the Bank's guidelines at appraisal. A formal Environmental Impact Assessment (EIA) procedure was required for all greenfield projects (six), while for three projects (2, 3, 4) environmental studies were prepared. Projects 7 and 8, consisting of the rehabilitation of the transport infrastructure, did not require an EIA, as safety improvements were the main objective.

Ports are in continuous development and a restriction of project boundaries for the EIA procedure might limit the relevance of the EIA process. An entire port development (plan) should have an EIA, allowing all sub-projects to be examined in combination with one another. New regulation for Strategic Environmental Assessment (SEA) should reduce this problem. In the same context, for airport expansions, it would be appropriate to execute an EIA integral with an Airport Master Plan to ensure that appropriate mitigation measures are put in place to support the airport's current and future physical and operational developments.

The environmental effects for the large transport project (5) were a matter of great interest and discussion throughout project preparation and implementation. The inter-governmental agreement stated that protection of the environment in the region had to be at the core of the project and underlined the need for continuous optimisation of the project's design in order to minimise the effect on the environment. This was ambitious and sets a benchmark for projects of this nature. However, the cost of reaching the solution - in terms of time and money - has been substantial and important design modifications had to be done. Administratively, the complexity was due to the fact that the project had to obtain double approval in different languages, where legal and political differences often resulted in differences in the formulation of environmental criteria. The promoter has already drawn the lessons from this experience and wishes to apply a different approach for other projects, which includes, among others, carrying out larger consultations before the project is launched.

The environmental handling of mega-projects needs to be done at a very early stage of the project cycle to reduce both public opposition and potential cost increases during implementation. An international expert panel on environment can reduce public opposition and support appropriate mitigation measures. A further lesson is that environmental procedures for cross-border projects should be based on common reporting and preferably on one approval language, while not reducing public consultation possibilities, to reduce delays in the EIA procedures. For large cross-border projects formal and strict governmental agreements have to be in place to allow the timely connection of the infrastructure with the hinterland.

For the three energy projects and, in particular, the two offshore components, important differences in approach can be observed. While for two gas interconnections, environmental impact assessments were undertaken to cover all on/offshore elements of the project, the electricity interconnection was subject to EIAs for both land sections, however not for the sections in international waters, which also should have an EIA (in line with 'Espoo convention').

Coordination and cooperation with other counterparts: For cross-border projects, coordination and management is often particularly complex due to different sets of regulations and laws, but even more importantly due to cultural and/or language barriers. In reality, it is not possible to regulate all aspects of the partnership and a great deal depends on the willingness of the parties to work in a constructive way (road projects 5, 6, 7, 8). Project 6, a road connection between two countries in Southern Europe, but located in one country benefited from a regional, cross-border institution that is acting as a coordination and lobby entity for the region. However, different level of governmental approval structures can hamper negotiation and decision making processes.

Even after completion, coordination problems are apparent in relation to harmonisation of regulation (project 5). Project implementation can be facilitated in particular for large-scale projects by the setting up of cross-border committees and expert panels to resolve problems at the outset. In conjunction with the physical cross-border infrastructure, mental connections have to be built, since country specific differences might hamper the exploitation of the full benefits of the connection.

The companies' management structure often depicts the cross-border dimension through shared management with board members from either country (5) as well as cross-border shareholding arrangements (7, 8, 9, 11). Cross-border shareholding has, in many cases, reinforced cooperation and integration between the national counterparts. For project 10, close cross-border cooperation since the project start made it more cost-effective and this was also used to strengthen their cross-border cooperation for other ventures. Such close cooperation has had positive effects on both technical and commercial aspects of the energy systems and cross-border cooperation has continued after the completion of the project.

Extended scope: Effectiveness analysis of previously evaluated cross-border TEN projects

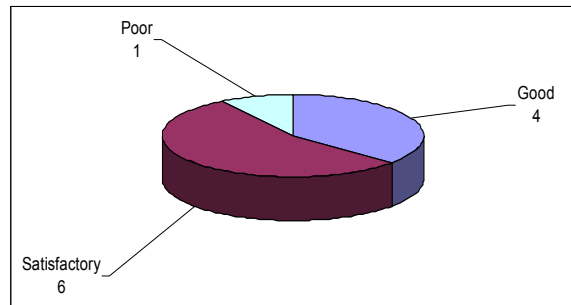
The rating of the previously evaluated operations is depicted in the following table. 81% of the in-depth evaluated transport/energy operations were satisfactory or better for effectiveness, which is in line with the findings of this study (82%) and EV's 2005 Overview Report (86%).

RATING 'EFFECTIVENESS' OF PAST EIB EVALUATED CB TEN PROJECTS					
	Good	Satisfactory	Unsatisfactory	Poor	Not rated
Railways	2	2	1	0	1
Airports	5	7	0	0	0
Roads	0	4	0	0	3
Electricity	1	0	0	0	0
TOTAL	8	13	1	0	4

3.2 EFFICIENCY

Efficiency considers whether the project objectives are achieved in a cost effective manner and the EIB uses two main measures: the FIRR and ERR (see Glossary).

All but one project had a positive rating for the Efficiency criteria (91%), which is a very good result - also when compared with previously evaluated TEN operations (46%). Four projects were rated Good (two ports, one airport and one energy interconnection), due to their very high traffic and demand increases impacting favourably on the projects' ERR, and six projects were rated satisfactory. Only one project was rated Poor, since most of the project's objectives have not been met. In addition, the evaluation confirms its lack of economic justification.



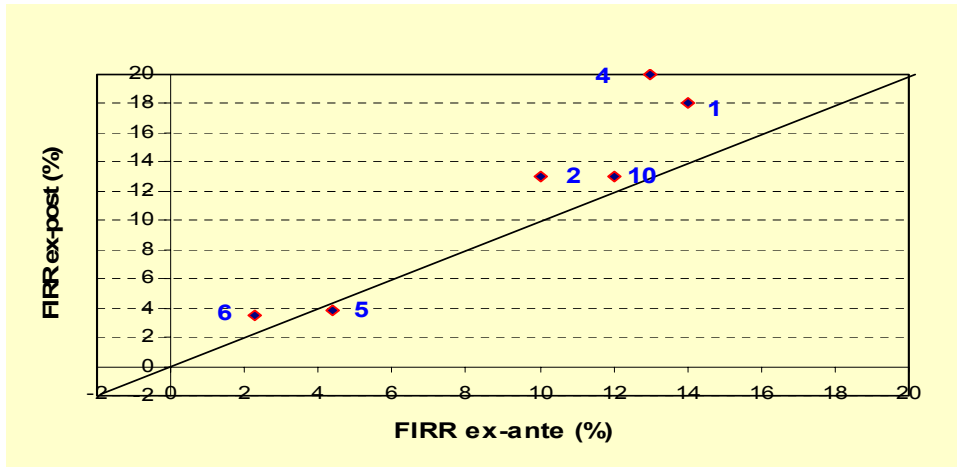
3.2.a Demand/traffic development

One key factor influencing the efficiency of the operations is the actual utilisation of the infrastructure. Looking at the operations evaluated, most of them were running smoothly, however with distinct project-specific variations. Demand/traffic development was much better than expected for some projects (1, 2 and 4). However, traffic volumes for projects 5, 7 and 8 were lower than initially forecast and induced reductions in tariffs in most cases. Demand and utilisation were as planned or better for two of the energy projects, which is confirmed by expansion plans for the projects. The utilisation rate has been very low for project 11 since the start of its operation.

3.2.b Financial Impact of the projects

For six (5 transport, 1 energy project) out of the eleven projects, FIRR have been calculated ex-ante, which were reassessed by EV ex-post. Most projects had a higher ex-post profitability; two projects (5, 6) had a financial profitability below 5%. For the energy projects, the financial profitability is usually satisfactory, reflecting reasonable tariff levels.

Comparison of ex-ante/ex-post FIRR calculations

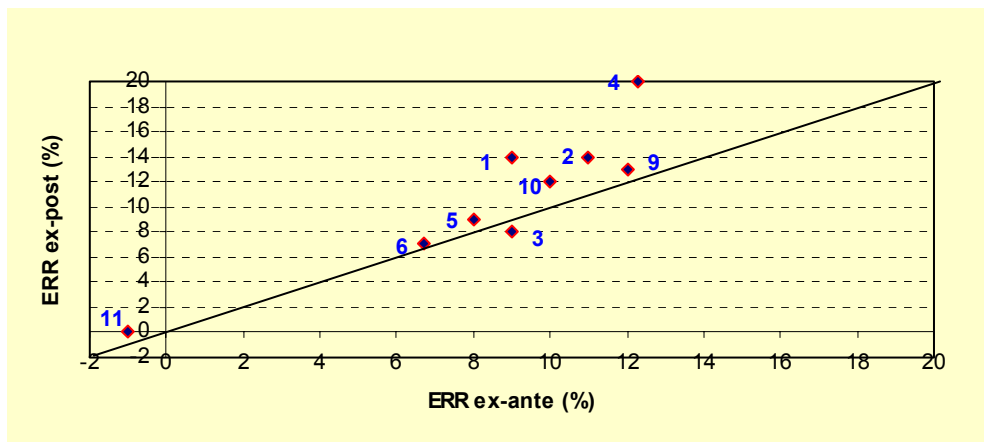


3.2.c Economic Impact of the projects

In line with standard EIB practice, ex-ante economic rate of return (ERR) calculations have been made for all but two projects (7, 8). Projects 7 and 8 consisted of rehabilitation works to increase security levels and consequently ERRs were assumed to be very high.

For most projects, the ex-post ERRs were higher than the initial ex-ante estimations (see below).

Comparison of ex-ante/ex-post ERR calculations



For Projects 7 and 8, no detailed ERRs were calculated ex-ante/ex-post, since the projects consisted of rehabilitation works to increase security levels.

With the exception of one project (11 - see also case study chapter 5), the project's economic profitability was above 7%, which is fully acceptable. For the transport projects, the ex-ante ERRs ranged between 7 and 12%, taking in account only the direct economic benefits generated by the project time and vehicle savings, increased efficiency etc. (also see chapter 6). For two energy projects the ex-ante ERR was 10% and 12% respectively, while the other energy project had an ERR of -1% at appraisal (0% ex-post).

For most projects the variations in ex-ante/ex-post results is due to higher traffic/demand than anticipated (1, 2, 4, 9, 10) and investment cost savings (2). For project 3, lower investment cost could not compensate for limited transport cost reduction and traffic below forecast. For project 6, in spite of lower traffic data, ex-post ERR results were higher than initial forecasts due to lower investment cost and larger safety improvements.

A detailed analysis was performed for project 11, which was hardly justified from a technological or economic viewpoint at the time of appraisal. From an ex-post perspective, this can be confirmed, as not only was its implementation delayed by several years, but its effective utilisation was also limited, mainly due to the lack of power capacity in one country and bottlenecks in the other. Its ERR is low and strategic political objectives, rated high at appraisal, cannot justify the project ex-post.

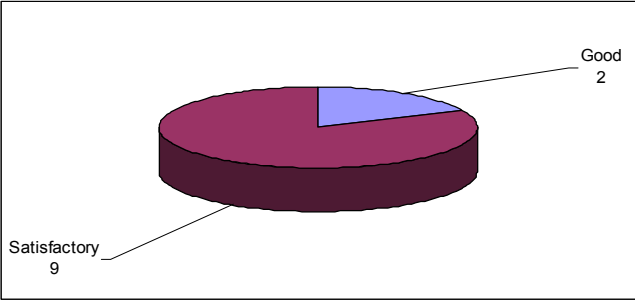
Extended scope: Efficiency analysis of previously evaluated cross-border TEN projects

The results of the usual EV efficiency measures for financial and economic performance of the analysed in-depth reports has been uneven. For the analysed portfolio, 46% of the operations had satisfactory or good ratings. Looking at the sub-sectoral division, it appears that roads had particularly few satisfactory or good ratings. It is to be noted that there is a high number of non rated projects.

RATING 'EFFICIENCY' OF PAST EIB EVALUATED CB TEN PROJECTS					
	Good	Satisfactory	Unsatisfactory	Poor	Not rated
<i>Railways</i>	2	1	2	0	1
<i>Airports</i>	4	3	2	1	2
<i>Roads</i>	0	1	3	0	3
<i>Electricity</i>	0	1	0	0	0
TOTAL	6	6	7	1	6

3.3 SUSTAINABILITY

The sustainability criterion looks at the probability that the resources are sufficient to maintain the outcome achieved over the economic life time of the projects, and that any risks need to be or can be managed. For this evaluation, the risks associated with sustainability have been grouped under physical, operational and financial.



The good rating reflects a) the promoters' technical and managerial/operational capacity to adequately maintain the projects' assets, b) the strong standing of the projects through revenue generation capacity ensured through concessions, tariff policy etc., c) the support through the project shareholders, d) the significant backing from the national/cross-border authorities providing high priority for most of the projects. In fact, even the investments in the poor performing project (project 11) are considered to a large extent as sunk and are expected to receive appropriate resources to ensure acceptable sustainability.

3.3.a Physical/Operational Sustainability

The promoters' technical and managerial/operational capacity to adequately maintain the projects' assets is given and therefore the physical sustainability is ensured. Although there were certain differences in the implementation achievements, the risk of not achieving the full economic life is considered low. For two of the port projects, a certain criticism was voiced towards the overall port investment policy impacting on its sustainability. For project 11, so far no major technical incidents have happened. Although the technology is theoretically available for repair, its feasibility remains to be confirmed from both a technological and a financial viewpoint in an emergency situation.

3.3.b Financial Sustainability

With the exception of the energy projects, where future revenues and an adequate profitability for the projects are guaranteed through the tariffication system, there is no ultimate guarantee on the financial sustainability of commercially oriented operations, even if they are (partially) owned and/or supported by the respective governments. It's either the project's long-term strength and/or the continued support of future governments to provide and ensure long-term financial support to the projects. Most of the projects depend entirely on their own revenue generation capacity for their financial sustainability, although revenue generation is influenced by tariff setting through

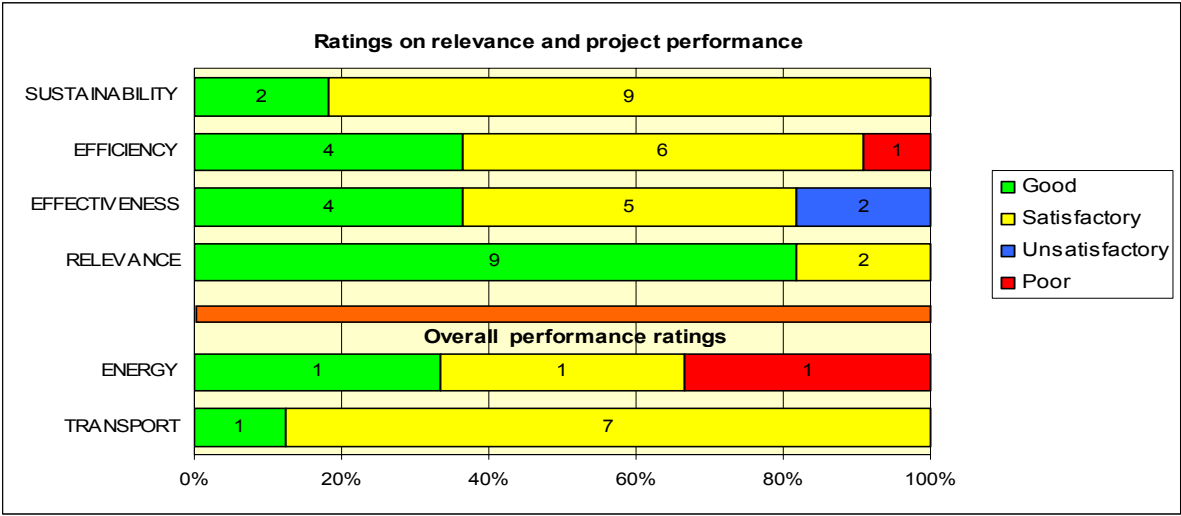
concessions (transports projects 3, 6 to 8) and/or governmental regulations (airport (4) and energy projects 9 to 11). Nevertheless, for most transport project, no financial sustainability problems are anticipated. In case sustainability problems are occurring, appropriate mitigation measures (i.e. longer concession periods, tariff increases etc.) have been implemented. Some of the projects also benefit from strong governmental support. For the three energy projects, the financial sustainability seems ensured through tariff regulation for the network, which limits financial risks and secures a satisfactory financial profitability. In addition, shareholders with strong operating cashflows back the energy projects.

Extended scope: Sustainability analysis of previously evaluated cross-border TEN projects
Sustainability of the operations was positively (Satisfactory/good) rated in 62% of all projects.

RATING 'SUSTAINABILITY' OF PAST EIB EVALUATED CB TEN PROJECTS					
	Good	Satisfactory	Unsatisfactory	Poor	Not rated
Railways	2	3	0	0	1
Airports	4	5	3	0	0
Roads	0	1	1	0	5
Electricity	0	1	0	0	0
TOTAL	6	10	4	0	6

3.4 OVERALL PROJECT RATINGS

Ratings on relevance and project performance: As outlined in the introduction, the operations were evaluated on the basis of internationally accepted evaluation criteria of Relevance, Efficacy, Efficiency and Sustainability (see graph below).



The overall ratings confirm that the Bank is financing good performing projects. Relative deficiencies linked to cost overruns, extended delays, partial non-achievement of initial objectives are in many cases counterbalanced through positive management actions. The under-performance of one project for the efficiency criterion, which was in fact also negatively rated at appraisal, was mainly due to the low utilisation of the equipment (see case study p. 25). Although it was a priority project, it remains a poor project.

The environmental handling is in general satisfactory, although many projects faced significant challenges (i.e. change in scope and/or requirements, coordination problems etc.). A number of important lessons can be drawn from the observations made.

Extended Scope: Survey of Transport and Energy-TEN Self Evaluation Procedure through Project Completion Reports (PCRs)

41 PCRs (14 from 2004 and 27 from 2005) were included in the TEN Completion Report Survey. All the PCRs included in the desk study were eligible under the objective 'Development of Trans European Networks'. The sub-sectoral split of the PCRs is as follows: roads (54%), air transport (24%), railways (7%), gas (7%), water transport (5%) and various (2%). 36 out of the 41 PCRs were based on projects financed within EU-15, 4 in New Member States, and one in Acceding Countries (Romania). By monitoring category, 12/15/13 projects were classified in category 1/2/3 respectively and one project was not classified. Monitoring category 3 was only attributed to railway and road projects.

RATINGS

- Value Added Pillar 1 -

The contribution to EU objectives was considered "high" in 63% of the present desk review portfolio; "medium" in 24%, and as "moderate" in 5% of the projects in the sample. 7% of the PCRs did not receive any rating for VA Pillar 1 and none were judged "not acceptable".

Sector	High	Medium	Moderate	Blank
Air transport	4	5	1	-
Railways	2	-	-	1
Roads	16	4	1	1
Water Transport	1	1	-	-
Various (transport)	1	-	-	-
Gas	2	-	-	1
TOTAL	26 (63%)	10 (24%)	2 (5%)	3 (7%)

- Value Added Pillar 2 -

The projects' quality and soundness were considered as "good" in 61% of the projects, "satisfactory" in 27%, and "unsatisfactory" in 10%. There was one project that was not rated under the VA Pillar 2 and again none were judged "not acceptable".

Sector	Good	Satisfactory	Unsatisfactory	Blank
Air transport	6	3	1	-
Railways	1	-	1	1
Roads	13	7	2	-
Water Transport	2	-	-	-
Various (transport)	1	-	-	-
Gas	2	1	-	-
TOTAL	25 (61%)	11 (27%)	4 (10%)	1 (2%)

- Value Added Pillar 3 -

Value Added Pillar 3, "Financial benefits obtained by use of EIB funds" was not reported in any of the PCRs analysed and clear procedures have to be established.

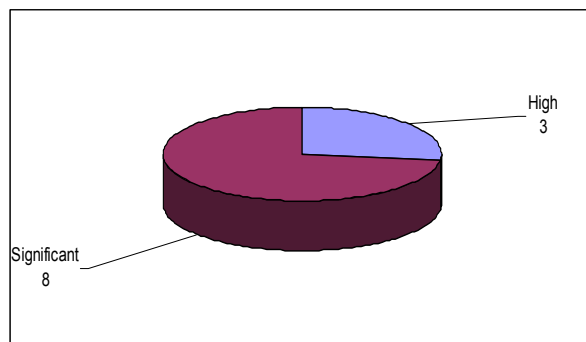
There could be a potential bias of project analysts towards good ratings during monitoring/self-evaluation; further supervisory control has been introduced during the period of this evaluation.

4. EIB CONTRIBUTION

The Bank's main strength in the projects evaluated resided in its role of providing the required, often very large, financial resources in tune with the needs of the promoter and at competitive rates and terms. In addition, there was an important non-financial contribution for some projects.

EIB has experience and particular knowledge in cross-border projects and the EIB's presence since the early development stages in the structuring of projects can allow a timely agreement on the corporate, project and financial structure and it can be a catalyst for other financial institutions. Appropriate conditions for TA support have improved project realisation.

Overall, three projects were rated High, since financial and non-financial value added provision were important. In the other cases, the projects benefited mainly from significantly better financial terms than the alternative funding available.



4.1 FINANCIAL VALUE ADDED

The significant financial value added (FVA) of the Bank, as the leading EU long-term infrastructure lender, lies according to all promoters in its terms, which are characterised by favourable interest rates and long loan maturities/grace periods. In fact funding advantages were reported to be as high as 110 bp at appraisal (project 4). In some cases (2, 3) the counterparts did not give an official appreciation on the FVA of the EIB loan, which made it difficult to assess it in relation to other alternatives. Although the EIB loan was critical at the time the loan was signed, for almost all project promoters, the EIB funding advantage has decreased in line with the increased competitiveness of the European banking sector and the improved sovereign ratings. This was particularly mentioned for certain projects (2, 3, 5, 9).

One project (9) benefited from the 'Edinburgh facility'²¹, whereby the EIB was able to apply higher ceilings in relation to total investment cost (see box p. 25).

Furthermore, the promoters have reported a number of other forms of FVA:

- a) Availability: The Bank's loan financing was particularly important for projects, where alternatives for long-term infrastructure loans were not readily available (projects 1, 6) or promoters were constrained by limited financing possibilities from own resources (project 7). For project 5, in particular during the early years of the project, the EIB was a good option due to the significant available loan volumes and long maturities.
- b) Flexibility: For several projects the flexibility of the EIB loan with regard to repayment schedules, maturity and disbursements was mentioned.
- c) Catalytic effect/EIB presence: This was reported in three projects, where the EIB had an important catalytic effect to trigger financing from other sources. The Bank's presence in the financing was also valuable when borrowers were relatively new to the market.

²¹ The "Declaration on promoting economic recovery in Europe" adopted by the Edinburgh European Council in December 1992 invited the Council and the EIB in consultation with the Commission to give consideration to a new, temporary lending facility within the EIB, which was mainly focussed towards TEN projects within the EU.

EIB TEN FINANCING MECHANISMS

The European Action for Growth Initiative (2003 - see chapter 2) required major investment in transport and energy networks across Europe, and the Bank was invited "to implement the financial instruments aiming at leveraging private capital". The Bank has responded through the improvement of financial instruments, additional risk taking and an increase of EIB resources with a new TENs Investment Facility (TIF) designed to invest EUR 50 billion until 2010.

The Bank's financial operations cover traditional long-term lending products from own resources (senior loans, PPP loans, securitised loans etc.) with long maturities and grace periods. In exceptional cases, the Bank can, under this Facility for investment grade projects, provide long maturities of up to 35 years and finance, in exceptional cases (specific cross-border projects), up to 75 % of project costs. In addition, new financial instruments were designed to take more risks and serve as a catalyst for private sector financing in TENs, namely:

- a) Structured Finance Facility (SFF) for financing special purpose vehicles (in particular in cross-border PPP projects) on a risk-sharing basis;
- b) TEN Risk Capital Facility established with the support of Community budget to directly assist projects or via specialised venture capital companies;
- c) Guarantee schemes for both senior and junior debt. In addition to EIB guarantees, the Bank is actively contributing to the setting up of the Loan Guarantee for TENs Transport (LGTT) to provide additional support for projects' post-construction risks.

Besides new and enlarged financial instruments, the Bank has also responded to the AGI challenges through the establishment of an internal specialised centre of expertise for TENs as well as through direct organisational changes. It plays an important role in boosting private sector support in TENs through its increased support to PPPs in TENs, but also through the organisation of PPP conferences and the participation in a European PPP expertise centre. Closer collaboration between EIB and the Commission and other important stakeholders has been set up. The EIB is acting as an advisor to the Commission, Member States and Public Authorities on TEN, PPP financing and other institutional issues. In 2005, the EIB signed a Memorandum of Understanding with DG TREN to formalise the existing cooperation between the Bank and the Commission in support of transport and energy TEN projects. This agreement concerns policy definition and formulation as well as specific project financing.

4.2 OTHER CONTRIBUTION

The EIB added a significant or high non-financial contribution to 5 projects. Appropriate conditions for technical assistance have proven to be helpful for the project follow-up during its implementation (project 2 to 4), although the promoter did not share this appreciation in all cases. For project 4, the TA component foresaw support to the borrower in the international tendering and contracting process and the appointment of an independent consultant to assist with the supervision and reporting of the works, which in both cases provided a high contribution to the project. For one project (10), the EIB support during the preparation period for a not yet operational project company was especially highlighted.

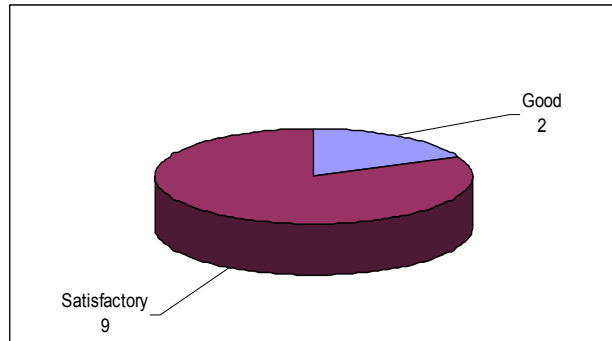
Case study – One project (9) benefited from the Edinburgh facility, whereby for specific TEN projects the EIB finance was able to apply higher ceilings in relation to total investment cost (from 50% to 75% for EIB loans). The increased loan amount combined with the FVA provided by the EIB, and the competence of the EIB in the energy sector allowed the creation of a significant competitive advantage. Furthermore, the EIB was involved from the beginning in the financial and contractual structuring of the project, which enabled a timely agreement on the overall corporate, project and financial structure. The promoter explicitly mentioned the importance of the EIB with regard to 'giving' authority to the project, facilitating the negotiations with contractors and ensuring the required political commitment (at both EU and national levels). This catalytic process gave access to other funding sources, which were not readily available.

Another aspect of cross-border TEN projects can be highlighted, since there appear to be two main categories of cross-border TEN projects. On the one hand, projects impacting mainly at national level and often promoted by private sector operators (typically energy projects) and, on the other hand,

projects with a more direct, regional/local impact (typically transport projects), where the catalytic effect of the EIB can be higher.

5. EIB PROJECT-CYCLE MANAGEMENT

As a major player for infrastructure financing throughout Europe, the Bank has developed good long-term relationships with many of the main counterparts in the sector. Project appraisal was well structured and systematic. The Bank's knowledge of infrastructure related project issues, built on its experience both within the EU and outside, has enabled the Bank's experts to identify most of the major issues of the projects evaluated.



Consequently, the overall Bank's performance on project-cycle management has been more than satisfactory for the projects evaluated. Nevertheless, from the evaluation emerge three areas, where improvements could be made: contract follow-up, physical monitoring and organisation.

5.a Project identification and selection: The Bank has good relationships with many of the main counterparts, which are often repeat borrowers. Most of the projects evaluated in-depth were identified responding to requests from existing customers or as a follow up from earlier projects. Once identified, the projects went through the initial internal screening process, which has contributed to allow the selection of sound projects in most cases. Selection for project 11 was very lengthy, since the Bank's project staff was not satisfied with its economic justification. The Bank's initial reaction was negative and a multitude of meetings and exchanges took place (see also box below).

5.b Appraisal: Project appraisal was usually well-structured and systematic. In most cases, the reports were focussed and appraisal was a relatively rapid process. Most of the evaluated projects' major risk issues were identified and documentation was sufficiently detailed. Some projects provided a particularly thorough analysis (5, 9 to 11). Conditions and undertakings included in the finance contract were considered appropriate, but they were not always fulfilled by the promoter, which should be ensured through appropriate monitoring. For three projects, specific technical assistance was recommended, which improved the project implementation (see chapter 4.2).

Case study - project (11): The appraisal for this priority project took almost two years and a comprehensive analysis of all major project aspects was carried out. The project was subject to discussions both at CD and CA level. From an ex-post perspective, the Bank's services' ex-ante opinion was confirmed, and the negative appraisal opinion was justified by sound arguments detailed in the project evaluation files. The conclusions were presented in a fully transparent way. Economic viability was rated poor both ex-ante and ex-post and the project's utilisation rate is low. Consequently, its overall performance can only be rated as Poor.

Demand and cost forecasts, in particular for large greenfield projects, are inherently difficult. While for some projects traffic projections were rather conservative, optimistic assumptions towards traffic development and ramp up periods was found in a number of projects (3, 5, 7, 8). In regulated markets, the appraisal should always reflect the volatility of future regulatory changes and the relevant authorities for tariff structures (i.e. regulators) should be visited (project 4). Traffic forecast, ramp up periods and cost estimates for infrastructure projects have to be prudent and should consider the identification of possible and unexpected market evolutions, particularly if the appraisal is done at an early stage.

The internal handling of environmental issues during the approval process could have been better in at least one case (1), since only external pressure triggered appropriate handling of the environmental issues. Internal data management could be improved and inconsistencies in the profitability calculations should be avoided.

5.c Project Implementation/Financing Arrangements: Most of the projects' promoters were satisfied with the EIB's internal handling and procedures to support a smooth project implementation, although some promoters considered EIB loan procedures as heavy and some procedures as lengthy. One promoter particularly appreciated the Bank's management of the project and the personalised relationship, as opposed to a "file-based" approach from other institutions. The Bank's procedures were adequate to support the promoters' timetable for the implementation of most projects. However, changes in project scope were either not recorded or not reflected in contract amendments. In addition, conditions/undertakings have not been fulfilled in all cases. It is important that conditions are both enforceable and can be followed up accordingly, possibly impacting on the disbursement pace. According to the promoters, all projects benefited from a smooth disbursement process in line with size and project implementation schedule and no specific disbursement issues were mentioned for the projects evaluated. In one case, more than 50% of total EIB funds were disbursed to the promoter after the physical completion of the project.

5.d Monitoring²²: Project follow-up and physical monitoring during project implementation has been limited, which was, in most cases, justified from an ex-post perspective. Regular monitoring has been facilitated by technical assistance and/or project implementation units. Project Completion Reports (PCRs) have been prepared for all but one project (3), since this project will be only fully completed by end 2006. In most cases, the assessment from PJ's self-evaluation process can be confirmed. For project 5, a very comprehensive PCR has been produced by PJ (including mission). Nevertheless, reporting from the promoter and physical monitoring of the projects still has a number of weaknesses. Usual EIB/European funding thresholds (50% of project cost/90% of cumulated EU funding) were exceeded (project 6) without evidence of monitoring of this fact by the Bank. Two recent PCRs (projects 8 and 11) contained factual errors and consequently came to overly positive self-evaluation conclusions for the projects, which could not be confirmed ex-post. Monitoring is currently in the process of being enhanced and further supervisory control has been introduced during the period of this evaluation. Procedures for the documentation of the third pillar of value added (FVA) in the PCRs have to be established.

Significant organisational changes have been implemented in the EIB over recent years, such as a multi-directorate Centre of Expertise (CoE) on TENs/PPPs and more recently (January 2006) on the lending side, the establishment of a new horizontal department within OPS-A 'Action for Growth Instruments (AGI)'. Coordination between sector experts (energy and transport) should be improved on TEN matters.

Many projects have seen significant changes in operational staff, which has limited the extent to which the "institutional memory" could be consulted in the framework of the evaluation. It is suggested that a common, cross-departmental inventory of good practices for (cross-border) TENs (similar to the one for PPPs), ideally on the EIB intranet site, is established to improve the sharing, management and dissemination of knowledge²³. Appropriate measures should be taken to ensure that the brain/knowledge drain is limited, when staff mobility/departure is increased.

5.e Coordination and cooperation with other institutions: In most cases, coordination and cooperation with other institutions (EU Commission, International Financial Institutions) and banks was unproblematic. The recent signature of the Memorandum of Understanding between the Commission and the EIB further formalises the cooperation between these institutions.

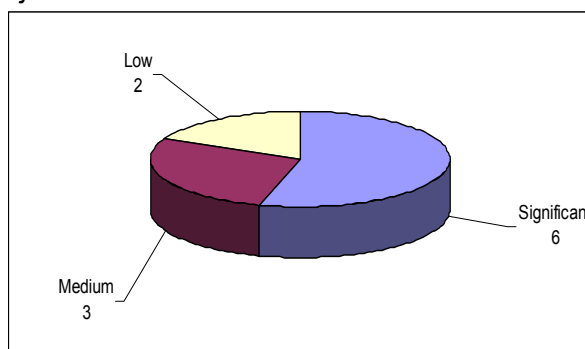
²² Physical monitoring, mainly during implementation.

²³ Similar efforts are currently underway for PPP's.

6. REGIONAL IMPACT ASSESSMENT

The relationship between infrastructure investments and economic development is highly complex. Regional impact assessments for all evaluated projects have been made.

Methodologically, an explorative mapping approach was developed, where indicators for regional impacts (quantitative and qualitative), in combination with expert assessments given by a broad range of regional and national stakeholders, were used. The types of impacts are grouped into four themes: employment, accessibility, efficiency and output, and social inclusion. The results are presented in the graph and they are in line with the ERR conclusions for the projects. Their inclusion would not have changed EIB's financing decision for the evaluated projects.



Furthermore, the evaluation asked whether it was possible that levels of regional impacts depend on supporting policy actions. In fact, deliberate policy actions initiated by regional stakeholders appear to have contributed greatly to positive regional impacts.

6.a Introduction and approach: The relationship between infrastructure investments and economic development is highly complex. While there are successful regions in the European core, there are also centrally located areas suffering from industrial decline and high unemployment. At the same time, some of the poorest regions in the EU are in the periphery, but there are also prosperous, high growth peripheral regions, such as the Scandinavian countries. Similarly, successful regional development and economic growth is impacted by a wide range of different elements and policy areas, whereby large scale infrastructure projects are only one, often relatively small, component in the overall set of available policy instruments. Good infrastructure is in most cases a required, but not a sufficient, condition for sustained economic growth.

Given this context, the EIB, as the EU's policy oriented bank, also aims at contributing to reduce regional disparities between regions through the development of TENs. Therefore, regional impact assessments for all projects have been made. General conclusions can be drawn, but the statistical representativeness will naturally be limited.

The **methodology** (see also appendix 1) was developed in observance of the fact that there is no recognised standard approach to ex-post regional impact assessment of infrastructure projects (HEATCO, 2006; OECD 2002, IASON, SASI). Instead, an explorative mapping approach was developed where indicators for regional impacts (quantitative and qualitative), in combination with expert assessments given by a broad range of regional and national stakeholders, were used to form conclusions on the regional impacts. Specifically, the approach consisted of a five-step procedure that progressively moved the evaluation from conceptual clarification to data compilation and analysis. The strength of this design turned out to be its ability to provide, within a short period of time, basic insights into types, sizes and causes of regional impacts. This is essential for the ability to formulate hypotheses for future research. It is a limitation, however, that the evaluation cannot compare the observed impacts against predefined objectives, and that the judgements given are, to a large extent, based on information provided by regional stakeholders, which could lead to biased assessments. The evaluation applies two region definitions: a) impacts within the NUTS 3²⁴ region(s), b) broader regions beyond the NUTS 3 level regions. A cross-border region is made up of the two neighbouring NUTS 3 regions - i.e. one region from each country is involved.

²⁴ The EU has established a common classification of territorial units (NUTS) to be used in its data collection, analysis and dissemination cf. Regulation (EU) No 1059/2003 of the European Parliament and of the Council of 26 May 2003 on the establishment of a common classification of territorial units for statistics (NUTS). The classification criteria used include: Existing administrative units within the member states and similarity in size between the regions (at the given NUTS level) with respect to population.

All the projects have been supported by the EIB mainly for their ability to contribute to transport and energy policy objectives (see chapter 2), while regional development *per se* has often not been an explicit objective for the projects.

6.b Regional impact types: The types of impacts are grouped into four themes: Employment, accessibility, efficiency and output, and social inclusion. For these categories, the evaluation shows the following:

- Temporary and permanent *employment effects* are often an important policy objective and concern for regional politicians promoting a project. The direct employment effects of the projects, covering jobs related to constructing and operating the infrastructure project, have not been significant. This indicates that the regional employment effect of a large infrastructure project cannot be taken for granted. Furthermore, if the regional work force is not subject to skills-upgrading, the longer-term effects will be very limited. Only, the port and airport projects had important long-term employment effects.
- *Accessibility.* The projects aim to increase the accessibility of a given region by reducing travel costs/time and/or energy costs, thereby possibly attracting new enterprises. For three of the projects clusters of project-related industries were created; hence the location effects were significant and were probably the single most important long-term regional development effect of the projects to be observed within the NUTS 3 regions.
- *Efficiency and output* impacts of the transport projects were noted in the form of a reduced number of road transport induced casualties. The energy projects saw moderate efficiency gains within the NUTS 3 regions, but the broader impacts beyond the NUTS 3 regions were generally significant. The gas interconnection projects resulted in increased security of gas supply, fewer price fluctuations and, on average, lower gas prices for the markets affected.
- Under the label of *social inclusion*, the evaluation analysed whether the projects have contributed significantly to reducing unemployment levels, through their direct/wider impacts, which was only found to be very limited.

The evaluation indicates that the most important regional impacts within the NUTS 3 regions are related to accessibility: the possibility to attract new - often project related - industries and socio-economic activities. Looking beyond the NUTS 3 regions, the most significant effects are efficiency gains achieved by the energy projects in the form of reduced energy prices and better energy supply. The specific regional effects obviously differ from project to project.

Case study project 4: Airport infrastructure investment and regional development: It is difficult to assess the impact of an airport development on regional development. Nevertheless, the following points show that the project is likely to have contributed to the regional development: The airport has contributed to the mobility of people and goods by providing a safer and more comfortable mean of transport to and from the country. The airport is an important employer and its importance is growing. Furthermore, it has contributed to the integration of the country into the EU by encouraging private and business exchanges. Figures of tourism (which include traveling for business purposes) largely confirm this analysis. Foreign visitors to the country have more than doubled over the last six years.

One of these examples of successful airport development for triggering a region's development was presented in a recent EIB conference and paper (EIB Paper Vol. 5 no.1 2000 – Regional development in Europe: An assessment of policy strategies). *The (airport) investment in a key strategic infrastructure was instrumental to improve economic performance of the region. A critical factor in the take off of the region was the development of the tourism industry, which would not have happened without the construction of international airports. The tourism industry was linked into the local economy through networks of suppliers, permitting a relatively broad-based development of the regional economy.*

6.c Project specific results: The EIB four-point rating system used in ex-post projects evaluations was adopted, so that the projects are rated as either having a high, significant, medium or low level of regional impacts.

To qualify for a 'high' score, a project - besides contributing toward regional development within the national regions - should add significantly to establish or strengthen cross-border cooperation thereby acting as an instrument for cross-border integration.

There is a tendency that the projects either provide significant impacts to one or two of the neighbouring cross-border regions or provide broader impacts beyond the NUTS 3 levels while, to a lesser degree, inducing cooperation and integration between the two NUTS 3 regions forming the cross-border region. Hence, the genuine cross-border dimension of the projects was less prominent than other regional effects. This is probably to be expected when taking into account the 'natural' barrier effects of national borders but it nevertheless draws attention to the need to ensure that the potential benefits of projects, labelled as cross-border, are fully explored.

Projects	1	2	3	4	5	6	7	8	9	10	11
<i>Impacts within NUTS 3 regions (and the cross-border region formed by the two NUTS regions – for projects 5-11)</i>											
Employment	S	S	S	S	L	M	L	L	M	S	M
Accessibility	S	S	S	M	S	S	L	M	S	S	L
Efficiency and output	S	S	M	M	S	S	M	M	L	S	L
Social inclusion	M	M	M	M	M	S	L	L	L	M	L
<i>Broader impacts beyond the NUTS 3 regions</i>											
Broader impacts	M	M	M	M	L	M	L	L	S	S	M
<i>Total regional impacts</i>											
Overall rating	S	S	S	M	S	S	L	M	M	S	L

S – Significant; M – Medium, L - Low

Why did some projects have a higher impact on regional development than others? And which factors explain successes/failures in generating regional impacts? In light of the evaluation results, four hypotheses can be formulated.

According to the first hypothesis, NUTS 3 regional impacts are higher for transport projects than for energy interconnection projects; hence levels of regional impacts deviate systematically from sector to sector. Although there is one example of an energy project (a gas interconnection project) having significant regional impacts at NUTS 3 level, it seems plausible that energy projects will primarily yield regional impacts near transformation centres, and on average generate fewer regional impacts at NUTS 3 region level.

The second hypothesis claims that the larger the project, the higher the regional impacts. For the projects under consideration this relation cannot be validated. The most expensive project has generated significant regional impacts, but so has the smallest project. However, it is conceivable that, on average, larger projects will have higher impacts than smaller projects, but also that there is no fixed relation between size and impacts.

A third hypothesis is that other factors, such as macroeconomic development, geography and the occupational profile in the region are relative to a project's impact on the level of regional impacts. It is likely that such factors impact on levels of regional impacts, but this has not been analysed.

Finally, the evaluation asked whether it was possible that levels of regional impacts depend on supporting policy actions within the cross-border regions. In the literature it is increasingly recognised that large infrastructure projects do not 'automatically' boost cross-border regional development (e.g. OECD, 2002). But can they be turned into a regional development success by deliberate actions?

The hypothesis was tested on the basis of a review, for six of the projects, of the following **enabling factors**:

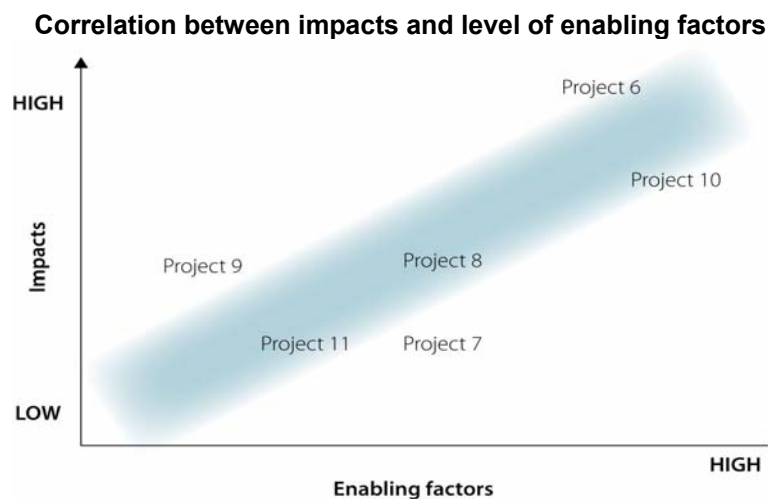
- Culture & tradition: Whether there is a tradition of cross-border cooperation;
- Experience: Whether similar cross-border projects have been implemented;
- Window of opportunity: Whether the project is perceived and acted upon as an opportunity to launch a broad range of supporting activities;
- Strategic framework for cross-border cooperation: Whether there is a policy framework for cross-border cooperation.

Case study project 5 – a cross-border transport connection: The main objective of the project was to allow the two regions to develop as a single, cross-border region. Although it was part of the pan-European corridors to improve long-distance connections this was only a secondary objective. In this sense, this project has a high regional development dimension, while it has lesser impacts on long-haul traffic.

Cross-border impact: It is difficult to identify clear effects of the project on the region based on socio-economic analysis, because it is not possible to isolate the effects on the new infrastructure from other variables. Therefore, it is only possible to examine the evolution of the integration process in the region by taking into account different dimensions. Integration is affected by several factors, such as accessibility, improved competitiveness, urban development initiatives, increased trans-border trade, and extra tourism etc. The highest influence of the connection is expected to be on accessibility. Yet, results showed that during the first period, traffic was lower than expected. Several factors seem to explain why labour markets had not successfully integrated and many of these factors are “soft” ones: differences in language, the currency and above all national institutions and laws, such as legislation frameworks, administrative procedures, mutual recognition of education and qualifications, and welfare benefit systems. Two aspects are of particular importance. First, there are incentives to work in one country and to live in the other. Differences in the fiscal architecture therefore exacerbate a spatial trend. This is influenced by higher salaries in one country and lower housing and living expenses in the other. Second, administrative complexities create numerous disincentives to set up businesses and subsidiaries or to share working time between both countries. Although the government is paying a lump sum to compensate for this, actors at regional and national levels wish a renegotiation of the tax agreement. In this respect, the role of public authorities is crucial to fully profit from the benefits of the improved infrastructure. While the governments have supported the development of the project, and continue to work to solve a number of constraints, some actors wish a more pro-active attitude.

As a conclusion, deliberate policy actions have contributed greatly to intensify positive regional impacts. One of the main lessons to be drawn from this project is that for a cross-border project to work the demand should pre-exist or at least it should be actively encouraged from the start. Governments have an important role to play, as often drawbacks for further integration are administrative or regulatory constraints. An additional lesson is that a cross-border project offers new possibilities, but a proactive attitude is needed to profit from these. Public, private and shared initiatives are crucial for exploiting the benefits. The most important conclusion is that increased physical accessibility per se is not sufficient to reap full benefits of cross-border integration.

The four enabling factors were made operational in the form of indicators and subsequently measured. A positive correlation between levels of regional impacts and levels of enabling factors can be observed.



It appears intuitively plausible that if actors in the cross-border region devote energy and attention to seize the opportunities that arise from a significant public investment, then the likelihood of regional impacts will be greater than if the investment is being neglected. An example of this dynamics can be found in one project (a motorway construction project). A group of mayors and other regional decision-makers launched various initiatives *before* the project was implemented. They took action in anticipation of the coming investment, and it gave an air of excitement and expectation in the region.

They clearly saw the project as a 'window of opportunity' for establishing new fora for cooperation, preparing strategies, and modernising industrial structures.

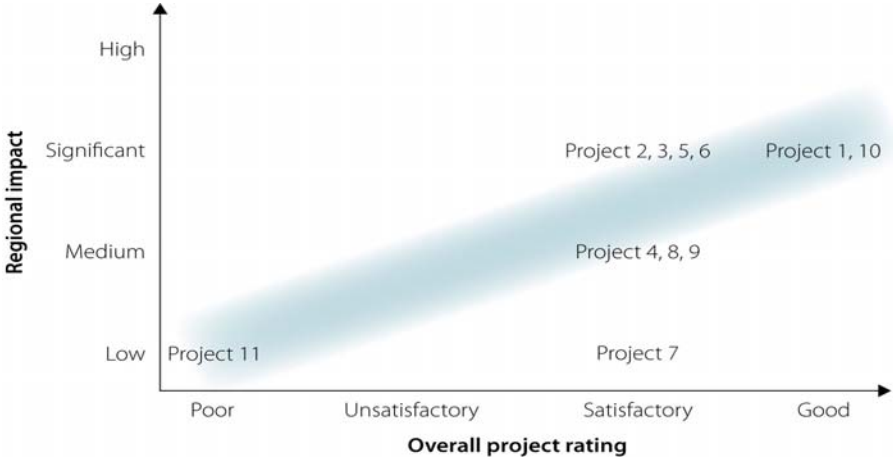
The evaluation therefore supports the proposition that regional impacts, to some extent, depend on supporting policy actions within the cross-border region; a feature, which can be labelled the 'policy-multiplier' (i.e. concerted policy actions initiated by regional authorities and stakeholders to optimise regional impacts of an infrastructure investment). This optimistic conclusion needs to be substantiated with insights into why in some cases, the regional actors take action to prepare a region for a project while, in others cases they do not.

Case study: Ports and regional development: Ports are important international/regional connection points and gateways with significant cross-border activities. For **project 1**, the port economy represents the largest, traditional and most international segment of the city's metropolitan region. Its activities exploit a significant role both on regional employment and on economic growth. Many jobs in a multitude of sectors depend on the port. Official estimates suggest that for every job in sea transport or cargo handling, seven more jobs depend directly or indirectly on the port. The local economy is influenced through the activities at the port by cross border transactions and significant flows of foreign trade. Also for **projects 2 and 3**, the importance of the port in terms of direct and indirect employment and overall economic importance (GDP contribution, value added) was high.

6.d Comparing regional impacts with the general quality of the projects: The EIB has long experience and well-developed processes for project analysis, and is also used to covering some aspects in the field of regional development impact (e.g. employment, traffic forecasts, traditional Cost-Benefit Analysis (CBA)).

The analysed projects have been subject to EIB's standard ex-post project evaluation procedures, which assess the quality of the projects with respect to effectiveness, efficiency, sustainability and the EIB's contribution to the project (see chapters 2 and 3).

The majority of projects (6) were rated Significant for the regional impact criterion, while 3 projects received a Medium rating and only two projects were rated Low. The impact results are in line with the ERR conclusions for the projects and their inclusion would not have changed EIB's financing decision for the evaluated projects. Large cross-border infrastructure projects are not a sufficient condition for long-term growth, since the regions concerned have to exploit their respective competitive advantages.



EVALUATION PROCESS, CRITERIA AND METHODOLOGY

Background:

In accordance with EV's Terms of Reference, the objectives of this evaluation are threefold:

- to assess the quality of the operations financed, which is assessed using generally accepted evaluation criteria, in particular those developed by the Evaluation Cooperation Group, which brings together the evaluation offices of the multilateral development banks. The criteria are:
 - a) **Relevance** corresponding to the first pillar of value added: is the extent to which the objectives of a project are consistent with EU policies, as defined by the Treaty, Directives, Council Decisions, Mandates, etc., the decisions of the EIB Governors, as well as the beneficiaries' requirements, country needs, global priorities and partners' policies. In the EU, reference is made to the relevant EU and EIB policies and specifically to the Article 267 of the Treaty that defines the mission of the Bank. Outside the Union, the main references are the policy objectives considered in the relevant mandates.
 - b) Project performance, measured through **Effectiveness (efficacy)**, **Efficiency** and **Sustainability** – second pillar of value added.
 - Effectiveness** relates to the extent to which the objectives of the project have been achieved, or are expected to be achieved, taking into account their relative importance, while recognising any change introduced in the project since loan approval.
 - Efficiency** concerns the extent to which project benefits/outputs are commensurate with resources/inputs. At ex-ante appraisal, project efficiency is normally measured through the economic and financial rates of return. In public sector projects a financial rate of return is often not calculated ex-ante, in which case the efficiency of the project is estimated by a cost effectiveness analysis.
 - Sustainability** is the likelihood of continued long-term benefits and the resilience to risk over the intended life of the project. The assessment of project sustainability varies substantially from case to case depending on circumstances, and takes into account the issues identified in the ex-ante due-diligence carried out by the Bank. Evaluations take due account of the analytical criteria used in the ex-ante project appraisal and the strategy, policies and procedures that relate to the operations evaluated. Changes in EIB policies or procedures following project appraisal, which are relevant to the assessment of the project, will also be taken into account.
- to assess the EIB performance and contribution:
 - EIB Financial value added (Third Pillar of value added)** identifies the financial value added provided in relation to the alternatives available, including improvements on financial aspects as facilitating co-financing from other sources (catalytic effect).
 - Other EIB contribution (optional)** relates to any significant non-financial contribution to the operation provided by the EIB; it may take the form of improvements of the technical, economic or other aspects of the project.
 - EIB Management of the project cycle** rates the Bank's handling of the operation, from project identification and selection to post completion monitoring
- Furthermore, the project analysis was extended to appropriately reflect the **regional dimension** of the projects.

General approach, methodology and timing:

The evaluation has been developed in four distinct phases – scoping, review, in-depth evaluation and synthesis. The EIB team comprised Werner SCHMIDT (team leader), Monica LLEDÓ MORENO (evaluation officer), Ivory YONG (senior evaluation officer) and Monique BIANCHI (evaluation assistant). Furthermore, a team of five consultants was included in the evaluation team. OPS, PJ and RM were fully involved in the various stages of the Evaluation.

- **Scoping / development stage:** The main output from this stage is a) the Issues Paper, which focusses the evaluation by clearly delineating the objectives of the evaluation, the research population and relevant sector issues, and b) Terms of Reference for consultants. Given the diverse spectrum of sectors and considering EV's recent and future work programme, some prior selection criteria were applied on appropriate sector and project selection and coverage. In the framework of the current EV programme of 'Innovation 2010 Initiative (i2i)' evaluations, a specific 'Information and Communication Technology (ICT)' evaluation will be launched in the near future and consequently e-TEN projects are not included in this evaluation. For transport-TENs the following selection criteria are applied: a) exclusion of railway projects (see EV report 2005²⁵) and EU-15 airport infrastructure (see EV report 2005²⁶). In view of their potential significance for economic and social cohesion, EV has opted to include airport projects (as international/regional connection points) in the New Member States in the portfolio sample for the evaluation. Water transport infrastructures, such as ports, have not been evaluated so far. In view of their important transnational/cross-border dimension, as hubs for transit and transshipment, they have been considered in this evaluation.

The issue paper laid down the detailed scope of the evaluation and projects selected for individual evaluation met the following criteria:

- cross-border TEN projects in all EU-25 countries as well as selected cross-border TEN operations with neighbouring countries, which have a distinct importance for European integration.
 - projects (in particular road projects) going up to the border, but having a distinct cross-border dimension, even if they are located in only one member state.
 - Direct loans, including project finance operations for projects, which have a 'TEN' eligibility.
 - 'active' projects (disbursed and completed) with loan contracts signed between 01 January 1995 and 31 December 2004.
 - Since this evaluation has the specific remit to analyse the regional development dimension of cross-border TEN projects, the sample has been selected to include also projects, which have already been completed for significantly longer than one year. Some projects might develop their regional impact in a relatively short time, but for others spill-over effects to ancillary regions and/or sectors of the economies can only be noticed in the medium to longer term.
- **Review:** During this phase, ex-post project analysis working from internal documentation and information in the public domain was done, plus personal interviews with relevant EIB staff from the operational directorates were conducted. The operational framework set up by the EIB for TEN projects was reviewed.

²⁵ See "Evaluation of EIB Financing of Railway Projects In the European Union", June 2005.

²⁶ See "Evaluation of EIB Financing of Air Infrastructure", January 2005.

APPENDIX 1
Page 3

As an output, the following base documents were prepared:

- a) Project completion report review - based on an analysis of Transport and Energy-TEN Project Completion Reports²⁷ (PCRs) issued by PJ in 2004 and 2005. 41 PCRs (14 from 2004 and 27 from 2005) were included covering the following sub-sectors: Energy (gas) and Transport (railways, air transport, water transports and roads); one sub-sector "various", covering one multimodal transport projects. Besides a general analysis of the PCR portfolio, the findings of the overall ratings are presented and then the details on Value Added Pillar 1 and 2 are analysed.
- b) Portfolio review – analysing EIB financing trends, sector and country distributions for Transport and Energy TEN between 1.1.1995 and 31.12.2005. In addition, approval, signature and disbursement trends for this time period were analysed.
- c) Analysis of previous TEN evaluations: Since the inception of EV, energy and infrastructure projects have been evaluated at several occasions. In order to increase the informational value of this cross-border TEN evaluation, an analysis of the results of already evaluated cross-border TEN transport²⁸ and energy projects has been performed. A total of 26 in-depth project evaluations were included in this analysis, some of them with a clear cross-border dimensions, which have been evaluated in the framework of six earlier evaluations (EIB Financing of Urban Development Projects in the EU - 2003, EIB Financing of Air Infrastructure - 2005, EIB Financing of Railway Projects in the EU – 2005, Evaluation of Transport Projects in Central and Eastern Europe – 2003, Evaluation of PPP Projects financed by the EIB – 2005, Evaluation of the Impact of EIB Financing on Regional Development in Greece – 2003).
- d) Detailed desk reviews of all 17 projects from the project list were conducted to get a better understanding of the central issues of the evaluation and helps to prepare the in-depth evaluation of the projects in the field sample. Based on this desk review the final project sample to be analysed was selected. Considering the above mentioned selection criteria, the final project selection of eleven projects for individual evaluation was done to represent a good selection in terms of country coverage, loan volume, sector, size and type of operation, while duly considering the already evaluated project sample. The following table summarises the main features of the selected projects, covering 13 EU member states:

Project	Sector	Size*	Operation	Counterpart
1	TR - Port	Medium	Greenfield	Private
2	TR - Port	Small	Modern. /Expansion	Public
3	TR - Port	Small	Modern. /Expansion	Public
4	TR - Airport	Small	Modern. /Expansion	Public
5	TR - Road & Rail	Large	Greenfield	Private
6	TR - Road	Medium	Greenfield	Private
7	TR - Road	Small	Modernisation	Public
8	TR – Road	Small	Modernisation	Private
9	EN – Gas	Large	Greenfield	Private
10	EN – Gas	Medium	Greenfield	Private
11	EN – Electricity	Medium	Greenfield	Private

* Loan size – small < 100 million, large > 250 million

²⁷ All the PCRs included in the desk study were eligible under the objective 'Development of Trans European Networks' (TEN).

²⁸ Rolling stock investments have been excluded.

- **Individual evaluation of 11 cross-border TEN projects:** During this phase, detailed project analysis and field visits for all projects have been conducted. Individual evaluations involved meetings with the organisations for project implementation, operation and policy. Site visits included meetings with both cross-border responsible organisations together with meetings with Ministries, Chambers of Commerce, representatives from local and regional authorities and academia. Following the site visit, an individual evaluation report was prepared based on the pre-mission analysis and the data and information gathered on-site. These reports were discussed with the operational staff associated with the project, and the main elements were provided to project promoters for their comments. The information contained in these reports is of a confidential nature and availability is restricted to EIB staff. They will not be released to outside parties and the EIB will not approach promoters for their permission for a wider circulation.
- **Synthesis** report presenting the main findings of the previous phases, the individual evaluations and drawing conclusions and recommendations and considers a total of 84²⁹ TEN projects for its conclusions.

Regional impact assessment methodology:

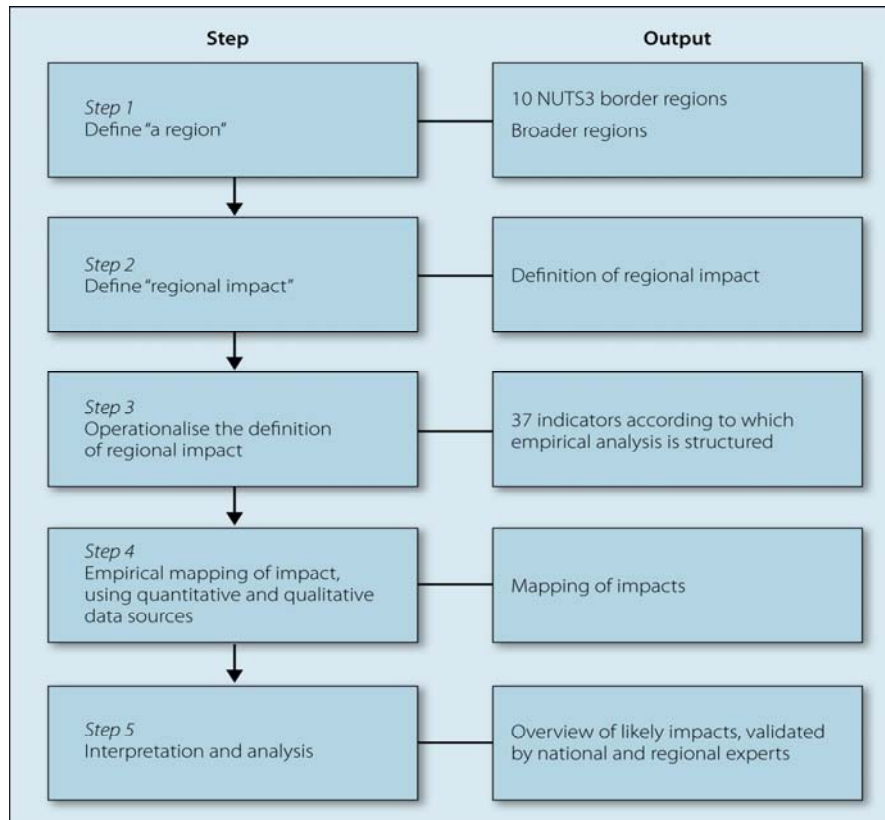
The purpose of the regional impact evaluation is the actual assessment of the impacts - i.e. *the long-term effects* - of the cross-border TEN projects on regional development.

The **methodology** developed as part of the present evaluation observe the following issues. First, it observes that there is no recognised standard approach to ex-post regional impact assessments of infrastructure projects (HEATCO, 2006; SIKA 2002), and in practice only few such evaluations have been carried out. Second, the methodology acknowledges that none of the evaluated projects have been subject to ex-ante regional impact assessments and therefore no specific regional development objectives together with corresponding indicators have been set prior to project launching. These observations imply a need to consider, carefully, the methodology - elaborated on at some length in the following paragraphs.

An **explorative and comparative mapping approach** has been developed and applied - consisting of a five-step procedure that progressively moves the evaluation from conceptual clarification to data compilation and analysis. The explorative element consists of a detection of a broad range of possible regional impacts without prior hypothesising on the size of these impacts; and an initial search for possible causalities between institutional factors and the levels of the regional impacts. The different infrastructure projects are addressed in a similar way across the project sample in order to identify general tendencies - hence enabling comparisons. It is a mapping approach therein that a total of 38 indicators (i.e. employment: direct/indirect - temporary/permanent, share of local and unskilled/lower skilled people, salary level, HR development, technology transfer, improved labour market; traffic volume/accident developments; location of activities, energy prices, value of land, quality of public transport; private/public investment in local/regional infrastructure, move of people into the region, cross-border trade/education/cultural event; cross-border coordination and administrative procedures; network importance, influence on other major developments, etc.) were used to map regional impacts.

²⁹ 11 in-depth and desk review, 6 additional desk reviews, 26 evaluated cross-border TEN projects and 41 PCR reviews of TEN projects.

Overview of five-step procedure for assessing regional impacts (NUTS³⁰ regions)



Defining regional impacts: An infrastructure investment has an impact on economic development - in the region it takes place and often elsewhere. The size of the area affected depends on the type and size of the investment. It will furthermore differ between a transport infrastructure investment and an energy infrastructure investment, and it will depend on the economic situation in the region in general. Relevant studies suggest various typologies to handle the complexity of impacts. For this evaluation, two main distinctions were applied in the empirical analysis:

- transport and energy infrastructure projects will improve transportation and energy markets, and thus change user behaviour directly in the form of new consumption patterns brought about by travel time savings or by energy cost reductions. It is increasingly recognised that wider impacts might also be expected. Such wider impacts include changes to the labour catchment areas and hence on labour costs; stimulation of investment; and unlocking inaccessible sites for development.

³⁰ The EU has established a common classification of territorial units (NUTS) to be used in its data collection, analysis and dissemination cf. Regulation (EV) No 1059/2003 of the European Parliament and of the Council of 26 May 2003 on the establishment of a common classification of territorial units for statistics (NUTS). The classification criteria used include: Existing administrative units within the member states and similarity in size between the regions (at the given NUTS level) with respect to population.

HEATCO and OECD studies: It is a matter of discussion to what degree infrastructure projects lead to increased economic activity - and if so; how to measure such impacts. In this endeavour, two of the essential studies are the HEATCO research project on harmonisation of approaches to transport costing (2006) and an OECD study on impact of transport infrastructure investment on regional development (2002). There are several similarities between the two studies in that they:

- argue for the need to assess the wider economic effects of infrastructure;
 - agree that these wider impacts are not fully covered by traditional Cost-Benefit Analysis (CBA);
 - nevertheless find that main impacts will be captured by a CBA;
 - consider the wider effects to take place over a longer period of time than the direct impacts; and
 - find that the wider effects are particularly important to consider when a new infrastructure brings about large changes in generalised travel costs, for instance new cross-border connections.
- to underline the differences in the types of impacts, they are grouped into four categories:
 - *Employment*. Regional employment is often an important policy objective and probably often a dominant concern for regional politicians promoting a project. The impacts appear during the construction phase - often as temporary jobs, and as permanent jobs in the operation phase.
 - *Accessibility*. Transport projects often aim to increase accessibility of a given region by reducing travel costs/time. In the evaluation, accessibility is covered with respect to cultural integration and location of enterprises.
 - *Efficiency and output*. Infrastructure projects have impacts on economic growth in the region, for example, via possible lower transport and energy costs, via skills increases of local employees, and via the possible transfer of technology to the region. Hence, under the broad heading of efficiency and output we look at consequences of e.g. technological transfer, human development, investments, and sector specific outputs.
 - *Social inclusion*. Infrastructure projects may not be pareto-optimal as they can produce both winners and losers. In particular, for transport projects, the concept of transport poverty has been used to capture the situation where projects leave some users with less opportunities for participation on societal activities than prior to the project (e.g. where public transportation is reduced).

Measurements of regional impacts: EV has developed a four-point rating system used in its evaluations. Ratings are provided for the quality of the EIB operations and on the compliance of the operations with the EIB objectives. In addition, a new rating system for the spatial dimension of the projects has been adopted for this evaluation.

Regional development is a dynamic process, and in the absence of regional impact indicators at the appraisal stage, it can be difficult to identify the crucial factors *ex post*, and to assess to what degree the post-project situation is related to the project or determined by other factors. In meeting this challenge, it is sometimes argued (e.g. HEATCO, 2006) that if the regional impacts of a given project can be expected to be large, special economic models shall ideally be used³¹ - while it is recognised that high costs hereof and insufficient availability of data often prohibit such an approach and hence a qualitative assessment becomes an alternative.

Neither time nor data³² have allowed a modelling approach, and instead the approach for this evaluation can be summarised as follows a) indicators for regional impacts (quantitative and qualitative) in combination with, b) experts assessments, given by a broad range of regional and national stakeholders are used to form, c) conclusions of a preliminary nature. The evaluation cannot

³¹ Such as the CGEurope model, a general equilibrium model dividing the world into 1341 regions, connected to each other via endogenous trade relations

³² Eurostat data availability at NUTS 3 level is for instance low which of course constitute a significant problem for the evaluation with its focus on NUTS 3 level. As a consequence, some of the indicators that was planned to be covered quantitatively could only be assessed qualitatively on the basis of meetings with regional stakeholders and experts.

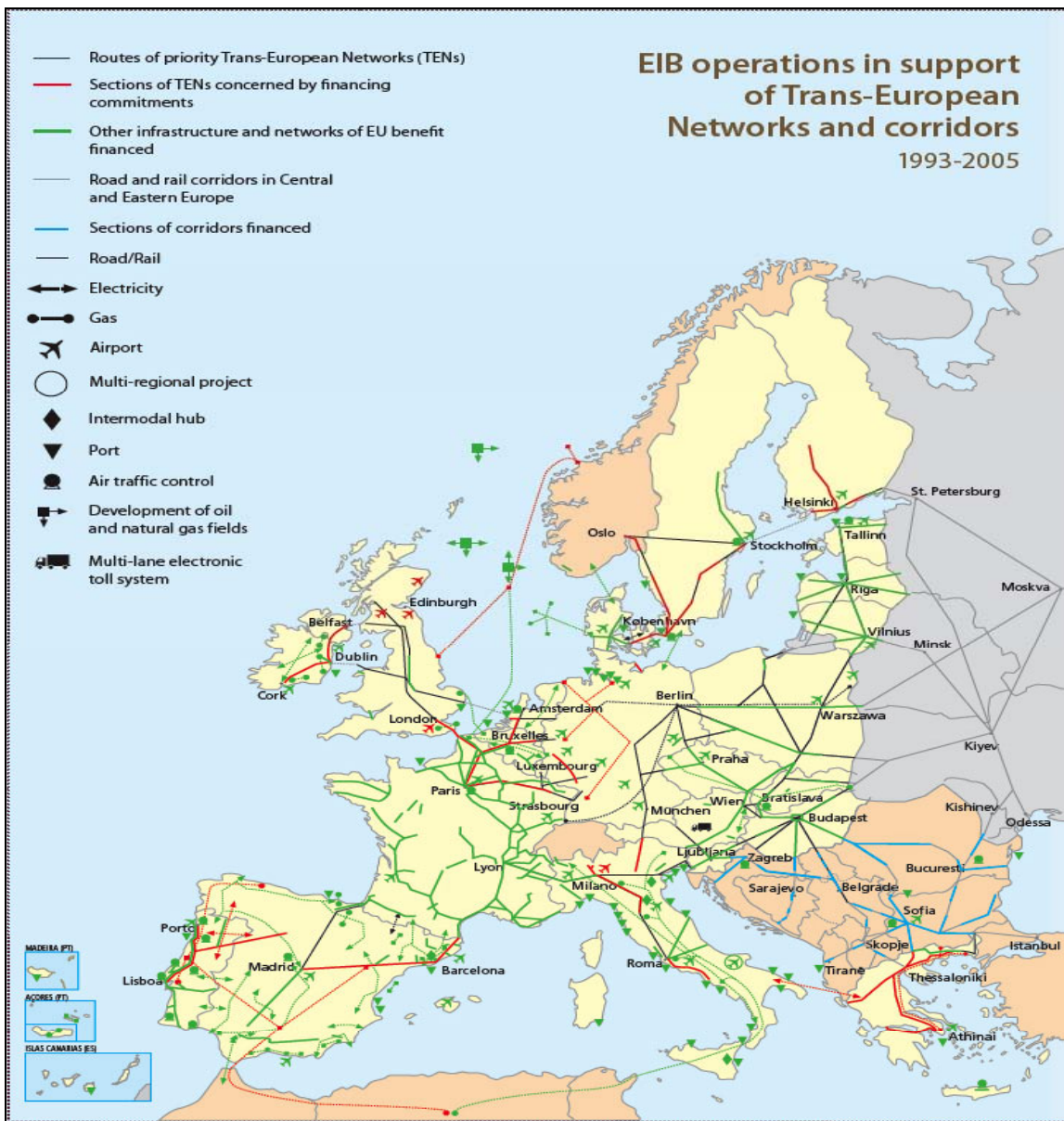
fully document (the size of) the impacts but can indicate the impacts and make plausible that they stem from the project.

In sum, the strength of this methodology is its ability to provide, within a short period of time, basic insights into types, sizes and causes of regional impacts. This is essential for the ability to formulate hypotheses for future research, and as such this evaluation contribute to the accumulation of knowledge. It is a limitation, however, that the evaluation cannot compare the observed impacts against predefined objectives and also that the judgements given to a high degree are based on assessments and information provided by regional stakeholders which could lead to biased assessments.

Measuring regional impacts in practice: The evaluation proceeded as follows:

- Inception phase; providing methodological clarification and the organisation of field visits.
- Data collection; including field visits and interviews with project promoters and regional stakeholders such as regional and local authorities and cross-border organisations.
- Analysis and reporting.

APPENDIX 2



APPENDIX 3

Map of Motorways of the Sea



EUROPEAN INVESTMENT BANK OPERATIONS EVALUATION (EV)

In 1995, Operations Evaluation (EV) was established with the aim of undertaking ex-post evaluations both inside and outside the Union.

Within EV, evaluation is carried out according to established international practice, and takes account of the generally accepted criteria of relevance, efficacy, efficiency and sustainability. EV makes recommendations based on its findings from ex-post evaluation. The lessons learned should improve operational performance, accountability and transparency.

Each evaluation involves an in-depth evaluation of selected investments, the findings of which are then summarized in a synthesis report.

The following thematic ex-post evaluations are published on the EIB Website :

1. Performance of a Sample of Nine Sewage Treatment Plants in European Union Member Countries (1996 - available in English, French and German)
2. Evaluation of 10 Operations in the Telecommunications Sector in EU Member States (1998 - available in English, French and German)
3. Contribution of Large Rail and Road Infrastructure to Regional Development (1998 - available in English, French and German)
4. Evaluation of Industrial Projects Financed by the European Investment Bank under the Objective of Regional Development (1998 - available in English, French and German)
5. An Evaluation Study of 17 Water Projects located around the Mediterranean (1999 - available in English, French, German, Italian and Spanish).
6. The impact of EIB Borrowing Operations on the Integration of New Capital Markets. (1999 – available in English, French and German).
7. EIB Contribution to Regional Development A synthesis report on the regional development impact of EIB funding on 17 projects in Portugal and Italy (2001 – available in English (original version), French, German, Italian and Portuguese (translations from the original version)).
8. Evaluation of the risk capital operations carried out by the EIB in four ACP countries 1989-1999 (2001 - available in English (original version), French and German (translations from the original version)).
9. EIB financing of energy projects in the European Union and Central and Eastern Europe (2001- available in English (original version), French and German (translations from the original version))
10. Review of the Current Portfolio Approach for SME Global Loans (2002 – available in English (original version), French and German (translations from the original version)).
11. EIB Financing of Solid Waste Management Projects (2002 – available in English (original version), French and German (translations from the original version)).
12. Evaluation of the impact of EIB financing on Regional Development in Greece (2003 – available in English (original version) and French (translation from the original version)).
13. Evaluation of Transport Projects in Central and Eastern Europe (2003 – available in English (original version)).
14. EIB Financing of Urban Development Projects in the EU (2003 – available in English (original version), French and German (translations from the original version)).
15. Evaluation of the Projects Financed by the EIB under the Asia and Latin America Mandates (2004 – available in English (original version), French, German and Spanish).

EUROPEAN INVESTMENT BANK OPERATIONS EVALUATION (EV)

16. Evaluation of EIB Financing of Airlines (2004 – available in English (original version) French and German)
17. Evaluation of EIB Financing of Air Infrastructure (2005 - available in English (original version))
18. EIB financing with own resources through global loans under Mediterranean mandates (2005 - available in English (original version) German and French.)
19. Evaluation of EIB Financing of Railway Projects in the European Union (2005 - available in English (original version) and French.)
20. Evaluation of PPP projects financed by the EIB (2005 - available in English (original version).
21. Evaluation of SME Global Loans in the Enlarged Union (2005 - available in English (original version) and German.)
22. EIB financing with own resources through individual loans under Mediterranean mandates (2005 - available in English (original version) and German.)
23. Evaluation of EIB financing through individual loans under the Lomé IV Convention (2006 - available in English (original version) and French.)
24. Evaluation of EIB financing through global loans under the Lomé IV Convention (2006 - available in English.)
25. Evaluation of EIB Investments in Education and Training (2006 - available in English.)
26. Evaluation of Cross-border TEN projects (2006 - available in English.)

These reports are available from:EIB website: <http://www.eib.org/publications/eval/>.
E-mail: EValuation@eib.org