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## FINANCING THE TRANS-EUROPEAN NETWORKS

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### **1. INTRODUCTION**

1.1 The European Council meeting in Brussels in December 1993 set in hand three parallel exercises with respect to the trans-European networks:

- the establishment of a group of personal representatives of Heads of State and Government under the chairmanship of Commission Vice-President Mr. Christophersen, to guide and accelerate the work on transport and energy networks.
- the creation of an ad hoc group of experts, under the chairmanship of Commissioner Bangemann, to report on the information society and on measures needed to facilitate the development of networks in the information field;
- a study of the obstacles to the financing of TENs in all three sectors, as well as of the major environmental projects of Community interest covered in the White Paper on Growth, Competitiveness, Employment. ECOFIN was specifically invited in this context to study, together with the Commission and the EIB, how up to 8 billion Ecu a year of additional loans could be raised to meet the needs of project promoters, without, however, undermining the efforts to reduce public debt or compromising the stability of the financial markets. The Conclusions of the European Council laid emphasis in this context on the objective for the Community of mobilising larger amounts of private finance for these projects by reducing their financial risks.

1.2 This paper addresses these financing issues. It concentrates on the transport and energy sectors, drawing on the work of the "Christophersen" Group as well as on the reflections undertaken by the EIB and contacts between the Commission services and other financial institutions. It also presents some preliminary considerations with respect to projects in telecommunications, where, however, discussions on specific projects are not so far advanced. It does not cover the financing of TEN investments outside the territory of the Union. In agreement with the President of the European Investment Bank, a complementary note from the EIB on financing TENs is included as Annex 5.

1.3 It begins by reviewing the available information about the likely requirements for finance (Section 2). It goes on to consider the possible contributions from the public sector (including the Community budget) for these projects and the scope under present circumstances for private commitments (Section 3).

Section 4 considers first the potential problems in financing TENs. This question can be addressed by reference to the aggregate volumes of investment and corresponding financing requirements, and by detailed analysis of specific projects. Since available information, however, is inadequate to make a complete analysis of the aggregate volumes, the paper focuses by way of illustration on the financing outlook for the ten most mature priority transport projects.

Even for these selected projects, present evidence does not permit a definitive assessment. But scenarios based on available information - for these 10 projects alone - point to potential financing difficulties, possibly of a significant scale. In the Commission's view, these indications are alarming enough to invite Member States and Community institutions, as well as private operators, already now to address with urgency the steps that need to be taken to ensure the availability of finance, and especially sufficient private finance so as to maintain an adequate pace of investment.

In view of the priority given by the Union and Member States to the implementation of trans-European networks and environmental infrastructure, section 4 then goes on to outline some options for complementary financing mechanisms at the Community level intended to encourage and facilitate larger private commitments without breaching the ceilings of the financial perspectives. These will require further and more detailed examination in parallel with the further evaluation of the needs of the priority projects themselves.

## **2. THE REQUIREMENTS FOR FINANCE**

### **Volumes**

- 2.1 The total investments needed for trans-European transport networks over the period of the financial perspectives were tentatively estimated in the White Paper at 220 Becu. Discussions between the Commission and the representatives of the Member States in the working groups dealing with common interest projects in the different transport modes have led moreover to a broad estimate of total investment needs of some 400 Becu over the period to 2010. These figures compare with the more modest overall requirements for the energy sector (around 30 Becu by 2000).
- 2.2 The most mature transport projects listed at Annex 1 examined by the "Christophersen" Group represent only a fraction of these totals. But the latest cost estimates for these projects based on data from the Member States broadly confirm the expectations in the White Paper with respect to them. Total investment costs for the first ten projects are now put by the Member States at over 68 Becu in constant prices over their life-times (in most cases up to 2002). This amounts to between 4 and 6 Becu a year for the remainder of the century, depending on the phasing of expenditure (see

Annex 2). The real financial needs in outturn prices will, of course, be higher; inflation of costs by, for example, 2.5% per year, would raise the total financing requirements to an estimated 75-80 Becu, once again depending on the phasing.

2.3 A summary of these figures, together with those for the most mature energy projects, is given at Annex 2. All the figures are being subjected to further review with Member States and other interested parties through the project seminars currently under way. But the Commission sees no reason, as a result of the analysis so far, to regard the estimates given in the White Paper as overambitious. Indeed, the opposite seems more likely to be the case.

2.4 As far as telecommunications are concerned, the White Paper proposed three major development areas for the Information society:

- the physical information infrastructure;
- basic services;
- new applications of common interest.

Priority was placed on the interconnectability of the networks and the interoperability of the services across Europe. Within this framework, a number of actions will be proposed. For physical infrastructure, the implementation of an integrated broadband network and the consolidation of the ISDN network; for generic services, electronic mail, remote database access and interactive video; and for applications, tele-working, tele-training, tele-medicine, and tele-administration.

The investments necessary to implement the objectives of the White Paper for the Information Society were estimated at 150 Becu for the next ten years. The priority projects were estimated to require an investment of 67 Becu. A more precise evaluation is not possible at this stage. It is not expected, in any case, that substantial public intervention will be required to help finance these investments, for the reasons discussed in paragraphs 3.1 and 3.6.

#### Special Characteristics

2.5 The "Christophersen" Group has emphasised that all the priority transport and energy projects must satisfy the test of economic viability. They should be expected to produce a substantial net benefit to society, taking into account the external costs and benefits as well as the direct ones. They should positively contribute to the competitiveness and the technological development of the Community economy. In the transport field, this requirement, however, does not mean that the projects will necessarily be viable in strict financial or commercial terms, i.e. that their revenues will be

sufficient to cover all their costs and produce an adequate return to investors without subsidy. Few of the transport projects are likely to satisfy this test of pure financial viability. Estimated financial rates of return for individual projects range from 3-8%, which means that some form of public support will be required, unless external costs and benefits can be internalised through user charges or other revenue-generating mechanisms.

2.6 This financial viability is influenced by several factors:

- Long, sometimes uncertain and expensive construction periods (6-7 years or more is not uncommon) without any revenues to meet financing charges. It is much more difficult for private sector investors to get an early return on their investment than from industrial or commercial projects.
- These projects may be affected by a geographical asymmetry between the benefits at Community level and the financial costs associated with the externalities, especially the environmental impact, which occur more regionally or locally.
- For transfrontier projects, the need to satisfy different national administrative and legal requirements.
- On the revenue side, the single most important factor affecting financial viability is uncertainty about traffic forecasts, both the rate of build-up and the level of traffic flows.

2.7 In telecommunications, on the other hand, the situation is somewhat different. The development of physical infrastructure requires heavy investment, but this has so far proved to be highly profitable from a commercial point of view. The greater uncertainties about commercial viability apply to the development of services and applications, which will be conditioned by access to the physical networks at acceptable prices and by the opening up of new markets; in most cases, however, the investments in services and applications enumerated in paragraph 2.4 above will be on a smaller scale with more rapid completion than in the case of transport and energy.

### **3. EXISTING SOURCES OF FINANCE**

#### **Public/Private Sector Partnerships**

3.1 The White Paper noted that the major share of the finance needed for TEN investments would be raised at the level of the Member States, either through public budgets, public enterprises or private investors and lenders. Given the nature of the projects in the transport sector, and for the reasons discussed above, the public sector is likely to remain the most important

source of finance in transport. In energy and telecommunications, the situation is different. Here the role of the private sector is already established and growing in importance as a result of liberalisation, competition and privatisation.

3.2 Given the constraints on public budgets, which limit the scope for direct financing of investment by the public sector, the rapid realisation of the ambitious TEN programmes will, however, demand recourse to different forms of partnership between private and public sectors also in transport. The "Christoffersen" Group, in conformity with the emphasis given by the European Council in Brussels, has stipulated that the priority projects in transport should allow scope for private involvement in a broad sense. Apart from easing the burden on public budgets, private participation should introduce competitive mechanisms, thereby improving cost-effectiveness in project planning, construction and operation. Some Member States are already developing approaches such as minimum bids for public budget contributions through tender offers which are intended to minimise the contribution from the public sector and maximise that from the private sector. Possible forms of private involvement are: as a shareholder; as operator of the project under a concession; as a risk-sharing contractor; or as a provider simply of debt finance. One essential requirement is the creation of an appropriate legal and administrative framework for risk-sharing, including where necessary the granting of rights to build, own or operate TEN projects. A second is a closer targeting of public sector support so as specifically to facilitate private sector involvement. This targeting must take into account the specific constraints on the supply of private money, viz:

- most private investors have a shorter time-horizon than the public sector;
- the levels of return which they require will be commensurate with risks;
- they may be concerned, in the case of physical infrastructure projects, not simply with commercial risk but also "public policy" risk (changes in legislation or future public investment decisions which affect viability).

#### Public Sector Budgets

3.3 As far as grant support is concerned, Member States themselves will provide the vast bulk of the necessary funding. For the 10 most mature projects in transport, this seems likely on present planning to amount to 15-20 billion Ecu over the life of the projects (or between one-quarter and one-third of total investment cost).

3.4 The Community also has a specific and complementary role, alongside the Member States, in giving financial support for TEN projects of common interest.

For the Union territory as a whole, Article 129c of the Treaty foresees Community resources especially for feasibility studies (pre-investment), for interest subsidies on loan finance and for guarantees.

TEN projects in eligible regions are also financed by the ERDF and the Cohesion Fund inasmuch as they contribute to the broader objectives of these instruments in the context of economic and social cohesion. The Cohesion Fund (with respect to environment and transport) and the ERDF (in all the TEN sectors) can finance both grant aids and technical assistance.

- 3.5 The Commission has already put forward to the Council and Parliament a proposed Financial Regulation covering the expenditure (about 300 Mecu a year up to 1999) from the specific TEN budget derived from Article 129c.<sup>1</sup> The Commission's proposals are intended to permit the most effective use of the limited funds available so as to facilitate access by these projects to capital market finance and, where appropriate, to other forms of private sector involvement. It proposes, notably, that promoters should seek the most appropriate lending structure for a project, with the possibility, however, of eligibility for help with interest charges equivalent to up to 10% of the investment cost. It also proposes that the budget could help to meet the costs of underwriting some of the lending arrangements by covering at least a share of the costs of premiums on guarantees.
- 3.6 The transport projects, by virtue of their scale and their maturity, are likely to need the greatest recourse to these latter instruments.

In the energy field, the Structural Funds will probably be an important source of assistance for the realisation of projects in eligible areas. Article 129c will be mainly used for the promotion of feasibility studies with a view to speeding up the definition and the launching of less advanced projects or to favouring the putting-together of finance for certain projects. In some cases, for example, security of energy supply for one Member State depends on the acceptance by other Member States of the construction of the necessary networks. The Community support for the preliminary phase of studies may constitute the catalyst for demonstrating the project's feasibility.

In the case of telecommunications, the financing of trans-European network (information society) projects will primarily be market driven and profitable. Public investment will have a role to play, but it will refocus rather than increase the level of public expenditure. Most of the investments to be undertaken by public authorities are expected to generate major productivity gains and an improvement in the quality of services which could lead to

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<sup>1</sup> Ref.: COM(94)62 final, 02.03.1994. Proposal for a Council Regulation laying down general rules for the granting of Community financial aid in the field of trans-European networks.

savings in public expenditure. In addition, public involvement might be necessary in order to play a catalytic role and in that case, its form will depend upon the phase of the project, e.g. initial studies, feasibility studies or actual implementation.

Aside from recourse to funding for feasibility studies and other possibilities offered by the TEN line, the telecommunications sector should be able to benefit from Community R&D programmes and the Structural Funds. With respect to individual projects here as in other sectors, an appropriate co-ordination among various sources of Community finance will be important.

### Other Community Instruments

#### EIB

3.7 The largest single source of finance for the TENs at Community level will be the EIB. In 1993 alone, it lent, through normal lending and its special temporary lending facility ("Edinburgh facility"), some 7.5 billion Ecu to projects of Community interest in transport, energy and telecommunications as well as 3.5 bn to major environmental projects. Its role in support of the TEN projects in general and the priorities in particular, will therefore be of particular significance. The "Christophersen" Group has been able to benefit from the advice of the EIB on the financing aspects. The Commission welcomes the attention which the Bank is giving to this issue and its commitment to making a major additional effort in support of TENs. Specifically, the EIB has identified six areas where additional financial efforts on its part may be useful in some cases, notably with respect to transport projects, viz.:

(i) Financing of Interest During Construction

The EIB already finances interest during construction as part of project costs. It may be possible, with recourse to appropriate funding arrangements, for the Bank to offer also lower rates during construction, recouping the shortfall through capitalisation of interest to be repaid over the life of a loan. Such a facility could provide a useful complement to the availability of interest subsidies from the TEN budget line in reducing the debt service burden in the early stages of projects ;

(ii) Extended Grace Periods for Capital Repayment

TEN projects often also need to have an extended capital grace period because of the absence of revenues during construction and the slow build-up of positive cash-flow after operations begin. The EIB already offers such facilities in some cases and it has in the past provided "bullet" loans, where capital is repaid in one lump sum at the end of the



life of the loan. The Bank is prepared to consider extending this formula more widely to TEN projects.

(iii) Provision of very long Maturities

This is a further mechanism intended to minimise the amount of project cash flow which has to be devoted to debt repayment in the early years. The EIB is prepared to provide maturities in excess of 20 years where this is suitable.

(iv) Fixing Loan Rates in Advance of Drawdown

Advance funding enables project promoters to protect themselves against any increases in interest rates that may occur between the establishment of borrowing facilities and the time that the borrowed funds are needed to finance construction or other costs. The EIB is prepared to establish such facilities where formal commitments have been made to implement the project and where there is a framework agreement between the EIB and the promoter that the funds raised for the promoter's benefit will be duly drawn down.

(v) Cofinancing of Project Debt

Many banks are prepared to provide construction finance but do not wish to be tied into the project and take revenue risk over a long period. They therefore wish to have arrangements to take them out of the project when it is complete. The EIB is willing to consider structures provided that a framework agreement to this effect has been put in place from the outset as an integral part of the financing arrangements for the project.

(vi) Framework Credit Agreements

In the case of suitable projects, the EIB will be prepared to enter at an early stage into a framework credit agreement under which it will undertake to provide a substantial part of the finance required, provided that the project promoter meets certain commitments. The amount will obviously vary with circumstances. Disbursements under framework agreements are made through open rate contracts which give the promoter the possibility, without commitments fees, to draw upon the agreed line of credit at the rate of interest prevailing on capital markets at the time of drawdown (as distinct from the time of the initial commitment).

3.8 In addition to these specific financing arrangements which should help to attract other sources of finance, the Bank has also offered to play a role in helping to structure the contractual and financing arrangements for priority TEN projects, in collaboration with the promoter and its advisers, the

Member States, the Commission and other parties. The EIB's role would be quite specifically to help to devise ways to limit the construction and financing costs and risks of the project.

### EIF

- 3.9 A further important contribution to facilitating access by these projects to capital market finance should also come from the European Investment Fund, which will now be inaugurated in June. The EIF will work with the private sector and with public/private partnerships in helping to allocate and manage risks. The EIF is intended to be a key co-financing partner with the EIB and other financial institutions in the financing of TENs and SMEs; within the financial ceilings set by its Statute and operating on the basis of proper commercial principles. The EIF should encourage and facilitate various forms of project finance, where debt is backed essentially by cash-flow. This should in time draw institutional investors into these projects. It should also be able to operate closely as a partner with Community budgetary and financial instruments, facilitating their involvement in joint private-public operations. It would be possible, for example, to envisage a TEN financed partly with an EIB loan, partly an EIF guarantee (as on a third party loan), partly with a contribution from the TEN budget line to the EIF premium.

## **4. COMPLEMENTARY FINANCING**

- 4.1 After reviewing the information presently available about the costs of the TEN programmes, the Commission considers, however, that the existing sources of finance will not be sufficient to cover all the financing needs of the TEN programmes if an adequate pace of investment is to be maintained and their contribution to competitiveness, and hence to growth and employment is to be maximised. This judgement is shared by many of the financial institutions contacted by the Commission services (Annex 3). Both they and the EIB have emphasised, however, the considerable uncertainties attached to all the estimates of costs of such large projects.

Of the total investments in transport TENs to 1999 of 220 Becu (para 2.1 above) the Commission estimated in the White Paper that only some 90 Becu could come from budgetary resources (national and Community). On the assumption that around one quarter of the remainder could come from the private sector and railway companies (an assumption extrapolated from the more detailed information available for the first set of projects), additional finance of some 100 Becu is likely to be needed for transport alone. The EIB consider that on present information they could be asked to provide 2-5 bn Ecu a year for TEN investments in addition to their current efforts. Even if the top end of that range were to be achieved, there would remain a sizeable gap.

4.2 The reasons for the Commission's concern about the availability of adequate finance are highlighted by an analysis of the more detailed information available with respect to the first ten most mature priority transport projects. The scenarios presented below of the likely investment needs and possible sources of finance for these ten projects up to and including 1999 use aggregate figures built up from a case-by-case examination. The assumptions underlying the figures are given in detail in Annex 4.

Most Mature Priority Transport Projects - Financing Scenarios 1994-1999

Becu

Estimated investment costs	Possible Government contributions (nat., reg., local)	Max. likely Community contribution	Railway companies	EIB Hypothetical additional contribution	Possible Private	Potential Shortfall
31.8	11.0	3.8	1.6 - 2	a. <u>up to 15%</u> 2.0 b. <u>up to 25%</u> 3.0 c. <u>up to 50%</u> 5.3	7 - 8	a. 5.0 - 6.4 b. 4.0 - 5.4 c. 1.7 - 3.1

The Commission has concentrated on the period to 1999 since this corresponds to that of the financial perspectives and represents a reasonable programming period for public expenditure. In fact, however, expenditure on most of these projects is currently scheduled to continue well beyond 1999, with investment in many of them peaking in the years 1997-2002. Heavy expenditure in the case of one project (the Brenner tunnel and rail links) moreover could occur through to 2010 and even beyond. The expenditure considered by the Commission in its scenarios represents therefore less than half (32 Becu) of total estimated expenditure over the life-time of construction of the projects (68 Becu).

Even for the period to 1999, however, the analysis reveals very major uncertainties about how this group of projects will be financed. Taking together the best available estimates of possible Government and railway company expenditure; the maximum likely contribution from the Community budget; and, compared with historical experience, optimistic assumptions about private capital, there remains a sizeable potential financing shortfall. Such a shortfall could not be covered by the EIB alone. The table reflects three scenarios for hypothetical EIB involvement. These figures are purely illustrative and do not represent commitments by the Bank. They only cover those projects where sufficient other sources of finance are not foreseen. The first (scenario a) is that the Bank would be able to contribute up to 15% of total investment cost for those projects in need of additional finance; this percentage corresponds to existing EIB practice with respect to very large

projects with similar technical, economic and financial characteristics. The second (scenario b) is that the Bank would contribute up to 25% where necessary, reflecting a specific additional effort for these projects. The third (scenario c) reflects the formal ceiling of 50% that applies to all normal EIB loan commitments (except those under its temporary lending facility). Even in this latter extreme case, there remains a potential shortfall of 1.7-3.1 Becu. In the case of an EIB contribution of up to 15%, the shortfall could exceed 6 Becu.

If the projects were to be accelerated, corresponding to the European Council's wish to ensure the rapid completion of priority investments, and some of the heavy expenditure scheduled for the years 1999-2002 brought forward into 1994-1999, the shortfall would be correspondingly greater.

The uncertainties about possible financing sources are magnified if the whole period of construction is taken into account. On different assumptions about public and private sector contributions, together with scenarios for the EIB involvement, a potential shortfall of 7-20 Becu could occur.

If this analysis is confirmed by the further work on the individual projects, the Community will face a choice between a slowing down of the pace of investment or envisaging complementary financing mechanisms.

#### Loans and Guarantees

- 4.3 The constraints on the existing Community financial instruments derive both from capacity and risk-spreading considerations.
- 4.4 In the case of the EIF, the initial capital base (2 billion Ecu when all the subscriptions are taken up) combined with the need to establish itself in the market, will limit both the amount exposure to individual projects and the number of projects that can be underwritten at any one time. In the initial phases of its operations, the Fund will not be able to carry more than 6 Becu of loans on its books. Even later, the prudential ceiling has been set at 16 Becu on the present capital base. These volumes moreover are not available for TENs alone, since the EIF also has a mission to support investments by SMEs. In all cases, the EIF will work in close collaboration with other market operators. The possibility of increasing the EIF's capital could be envisaged later; this would require the agreement of each of its groups of shareholders (the EIB itself, the other financial institutions and the Community acting through the Commission).
- 4.5 For the EIB, the volume constraint is less serious. Member States have confirmed that the Bank's first priority remains regional development and they have already committed themselves, in the context of economic and social cohesion, to look sympathetically at the need for a further increase in the capital of the Bank should the development of operations warrant it. The Bank considers that some additional effort in favour of TENs could be

