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COMMUNICATION FROM THE COMMISSION

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 "Christophersen" 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.¹ 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

¹ 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

undertaken, however, without bringing forward the date of a new capital increase compared with that envisaged when the last increase was sanctioned. The limits to EIB involvement seem less likely to derive therefore from an overall capacity constraint than from the need to maintain a diversified portfolio. Prudent risk spreading is likely to limit the Bank's ability to take dominant shares in the financing of a wide range of very large projects; more usually, the Bank will wish to seek appropriate and equitable risk-sharing arrangements with other lenders.

In the case of the 10 most mature transport projects, the average cost per project is estimated at around 3-5 Becu. It is not reasonable to assume that for such large-scale projects the Bank would be able to contribute up to its formal prudential ceiling of 50% of project cost. Even in the case of Eurotunnel, where the EIB is the single largest source of debt finance, the Bank's contribution amounts to less than 15% of total estimated project cost.

- 4.6 A limited number of co-financing arrangements have been possible in the past at the level of the Community itself between the EIB and the ECSC operating under Art. 54.2 of the ECSC Treaty (consumption of Community steel), notably in the case of the financing of Eurotunnel. Such arrangements will, however, no longer be possible after July of this year following the recent agreement between the Commission and the Council to halt Art. 54.2 lending as part of the arrangements leading up to the expiry of the ECSC Treaty in 2002.
- 4.7 In these new circumstances, and depending on the results of the further work on the financing needs of individual projects, the Commission believes that it will be necessary to consider some complementary capital market funding at Community level alongside and in partnership with the EIB and EIF, which must fully respect the ceilings on the financial perspectives. Community intervention could also be viewed as a means of more equitable sharing of the costs between Member States and regions, on the one hand, and the Community on the other.

There are two broad possibilities discussed further at Annex 6:

- Special guarantees underwritten by the Community budget. Such guarantees could be made available, within a predetermined ceiling, to loans to specific projects co-financed by the EIB. As noted in para 3.4 above, the Treaty provides for the possibility of Community action in the form of guarantees. Specific arrangements for co-ordination with the EIF would have to be introduced including the possibility of joint action.
- Fund raising by the Community itself on the capital markets so as to co-finance, with the EIB, loan packages to individual priority projects where other financing sources are not available. In this case, the proceeds of the Community loans would be managed by the EIB on

behalf of the Community in parallel with its own loans to the same operations, which would be raised quite separately. Such operations would also take place within a predetermined ceiling.

- 4.8 The practical arrangements underlying this approach would be designed so as to avoid both breaching the Edinburgh ceilings and creating any overlap between the financial competences of different Community institutions. In short, the Commission would not itself become a financial institution. The EIB would be invited to take on the necessary management tasks with respect to the specific project interventions.

Under both options, moreover, decisions on support for individual projects would only be taken in coordination with the Council.

- 4.9 The advantage of such co-financing arrangements, however, would be to spread project risks between Community institutions. "Partnership" loans from the Community would have the added advantage of increasing the flexibility and the ease of funding on the markets as a result of using two separate signatures. They would also represent a particularly powerful signal to the market about the Community's commitment to the projects. At the same time, however, the Community loans would have all the underpinning provided by EIB management and the Bank's appraisal and judgement about the technical and commercial aspects of the projects.
- 4.10 Normally, Community loans should attract the same creditor status as the EIB's own loans and the interest rates applied should then be particularly fine. In certain circumstances, it might conceivably be of interest to package the Community loans in other forms so as to facilitate the entry of other financial institutions providing private finance on acceptable terms; these might include loans linked to profit-sharing or other forms of quasi-equity. But the risk and cost implications of any such innovative financing arrangements would need to be most carefully weighed.
- 4.11 Complementary Community guarantees or Community loans would be contracted with individual project promoters. They would be treated, for the purposes of compliance with convergence targets (Art. 104c of the Treaty) on exactly the same basis as EIB's own loans. Any loans directly to either public or private project promoters, including railway companies, gas, electricity, water or telecommunications operators, and which do not pass via governments are not counted as government debt under Art. 104c.

Recourse to the Budget

- 4.12 In addition to the question of loan finance, further consideration could also usefully be given to the future role of the Community budget instruments in facilitating the implementation of large-scale projects of Community interest. The provisions of the TEN budget line will provide a useful catalyst. But they provide no specific support to compensate for the financial costs deriving

from the environmental impact in transit regions. For strategic projects of Community interest, it might be appropriate to spread part of that cost to the Community as a whole, provided that this could be done within the framework of the ceilings on financial perspectives.

- 4.13 A further issue for discussion is the role which existing budgetary instruments could play, within the terms of the legislation applying to them, in meeting specific financing gaps in the market alongside the traditional form of grant aids without reimbursement. One major gap in the financial market is equity for long-term infrastructure investments. In the energy, telecommunications and water sectors, large operating companies are willing to provide risk capital for new investments. In the case of airports, there are some moves toward equity investments by industrial operators in new or expanding operations elsewhere. For the Channel Tunnel project, equity has been raised exceptionally from the general public. But generally, it has proved difficult so far to involve either contractors or suppliers to projects as equity shareholders in the transport field, or to persuade commercial banks or institutional investors to offer this form of funding.

Key reasons for the absence of private equity funds are the slow and inadequate returns (an equity investor who is in a subordinated position to providers of debt finance naturally seeks a higher return), and the inability to spread risks across a portfolio of projects. With a view to encouraging the development of this market and a cost-effective use of public money, it may be appropriate to consider whether, especially for private projects requiring some public budget support, some of that support itself might take on equity features (e.g. reimbursable or profit-sharing grants). Such considerations would apply to some forms of national as well as Community grant aid. In the latter case, it might specifically be considered whether the exceptional funding of direct investment in TENs by the Community envisaged in Art. 5.4 of the proposed Regulation on financing the TENs² could take the form of grants with equity features.

² COM(94)62 final of 02.03.1994.

5. CONCLUSIONS

- 5.1 The detailed and ongoing work on the priority projects underscores the large volumes of finance that will be needed. A share of these large volumes will be available in the market-place to the extent that the financial returns are sufficiently high as to meet the criteria of private investors. But in many cases, the financial returns are likely to fall short of private sector requirements despite the significant and wider benefits of the projects to the Community economy.
- 5.2 For projects of interest at the level of the Community, the Community will work alongside the Member States in helping to fill the financing gap at least cost. The Commission welcomes the willingness of the EIB to make a major effort to help, and it looks forward to an important contribution from the EIF. If an adequate pace of investment is to be maintained, however, the Commission believes that it may be necessary and desirable for the Community also to use its separate financial muscle to borrow on the markets or to provide guarantee support, working in partnership with the Bank, since EIB and EIF resources may well not be sufficient.
- 5.3 Further consideration needs to be given to the treatment, as far as financing is concerned, of the externalities related to TEN projects, notably those linked to the environment.
- 5.4 With a view to facilitating equitable partnerships between private and public sectors in funding TEN projects and to optimising the catalytic effect of budget money, it would be appropriate to consider the possibility of new forms of intervention by budget instruments (e.g. reimbursable or profit-sharing grants).
- 5.5 The Commission intends to develop these ideas further in the light of the views of the Council, as well as of the EIB and the EIF, and taking fully into account the results of the detailed discussions on the most mature priority projects still underway. It considers that it is vital for the competitiveness of the Community to ensure that there are no financial obstacles to the acceleration of these projects. It will therefore come forward with the necessary proposals when the evaluation of the priority projects is completed.

Annexes:

- **Annex 1:** List of most mature priority transport projects
- **Annex 2:** Estimated financing needs for priority transport and energy projects
- **Annex 3:** Results from contacts with financial intermediaries
- **Annex 4:** Most mature priority transport projects: Financing scenarios 1994-1999 and their assumptions
- **Annex 5:** EIB Financing for TENs Projects: Note from EIB
- **Annex 6:** Options for TENs financing through Community Loan and Guarantee Mechanisms

MOST MATURE PRIORITY TRANSPORT PROJECTS*

- 1. Brenner axis - rail tunnel and associated links**
- 2. High Speed Train PBKAL**
 - PBKAL Belgium
 - London Channel Tunnel access
 - PBKAL Netherlands
 - (Aachen)-Cologne-Rhein/Main
- 3. High Speed Train South**
 - Madrid-Barcelona-Perpignan
 - Madrid-Vitoria-Dax
- 4. High Speed Train East**
 - French part: Paris-Metz-Strasbourg-(Karlsruhe) including sections Metz-Saarbrücken-Mannheim and Metz-Luxembourg
 - German part: München-Nürnberg-Erfurt-Halle/Leipzig-Berlin
- 5. Betuwe line (rail freight)**
- 6. High Speed Train/Combined Transport France-Italy**
 - Lyon-Turin
- 7. Motorway Patras-Greek/Bulgarian border jointly with Via Egnatia**
- 8. Motorway Lisbon-Valladolid**
- 9. Cork-Dublin-Belfast-Larne-Stranraer Rail link**
- 10. Airport Malpensa**

* List established as a result of analysis by the "Christophersen Group".

**TEN PROJECTS: ESTIMATED FINANCING NEEDS
FOR THE PERIOD 1994-2010**

(Possible scheduling based on current plans and available information)

in Becu

	Total Cost (Constant prices) 1994-2010 ¹	of which 1994-1999	Average 1994-1999
Transport first list of projects ²	68.5	31.8	5.3
Energy list A	5.0	5.0	0.8
Total cost first list	73.5	36.8	6.1

	Total Cost (Constant prices) 1994-2010	of which 1994-1999	Average 1994-1999
Transport second list of projects	17	7	1.2
Transport third list of projects	26	13	2.1
Energy list B	8.0	5	0.8
Total cost second + third lists³	51	25	4.2

- 1 Including investment costs to be incurred after 2010: BECU 3.7
- 2 Assuming inflation of 2.5% p.a. total cost for transport first list in current prices of each year amounts to 81.7 for the whole period, and 36.2 Becu for 1994-1999.
- 3 Figures for second and third lists are approximations as complete data for some projects have not been provided.

TENs FINANCING

RESULTS FROM CONTACTS WITH FINANCIAL INTERMEDIARIES

1. Commission services have had recently extensive contacts with some of the main intermediaries (commercial banks, investment banks) active in project finance focusing on the priority list of transport projects with a view to:
 - a) evaluate the costs of the TEN priority projects and
 - b) estimate to what extent the private sector would be ready to finance the projects, complemented if necessary by public financing, and what could be the remaining financial gap.
2. In sum the following answers have been received.
 - a) Most banks are of the view that 100 % private financing of TEN projects is not a realistic option, taking also into account the Eurotunnel financing experience and that available government subsidies will not be sufficient to provide the balance leaving a "gap" to be financed.¹
 - b) Some of the priority projects are not sufficiently advanced to allow for a precise evaluation of the overall costs. It may even not be possible to complete or verify the figures communicated by the personal representatives of the Heads of State and Governments since, in most cases, the technical studies related to the projects have not been completed.

¹

Definitions

For the purpose of this paper we have defined "public" and "private" finance and the "gap" as having the following meanings:

- a) Public finance
 - Direct Member State, regional or local government subsidies and contributions in form of equity or debt provided by State entities, and/or
 - Budgetary contributions from the EC including the structural and cohesion funds and "TEN" line.
- b) Private finance

All forms of "non recourse" finance provided by the private sector (equity/debt) the servicing of which is based exclusively on the revenues generated by the Project itself.
- c) The "gap"

Balance of financing required when "public" and "private" finance as defined are insufficient. Part of the gap may be filled by EIB lending to public and private sectors and by EIF support especially for private sector loans. The remaining gap could be covered by EC financing.

- c) Due to the fact that at present only few projects have been envisaged to be realised under a public-private partnership scheme, the distribution of the financial burden between the governmental/public/EC-sector on the one hand and the private sector on the other cannot be definitively determined until the projects are more advanced. .
 - d) Answers to 1(b) can only be found through analysing the projects on a case by case basis. In particular the financing structure of each project will be significantly affected by decisions of the governments to provide for private participation in all or part of the projects and the timing of such action.
3. A number of further points which emerged from discussions with the banks may be summarized as follows:
- a) In certain Member States "national priority" projects are sometimes different from those which have been presented in the framework of TENs (e.g. Italy, France, Germany). As a consequence, national subsidies are expected to be allocated primarily to the former, leaving higher requirements for EC intervention in favour of the TEN projects, in particular the cross-border sections linking national networks.
 - b) Banks assume that most of the TENs projects offer financial returns insufficient to attract investment from the private sector without a strong element of public subsidy. This is particularly the case for TEN projects which entail large "construction" or "policy" risks that the private sector is not able to bear.
 - c) Consequently timing will be an important element of the funding structure: It might be appropriate to fund the construction of a project under public ownership and plan, from the inception, subsequent total or partial privatizations when the project risk is reduced and therefore a lower return will be required by the market.
 - d) In this respect projects may be more attractive if the infrastructure, when completed, is separated from the operating services, as, for instance, separate ownership of rail track and rolling stock.
 - e) There is a general consensus in the banking community that the total available private and public finance (from Member States, EC-subsidies including contributions from the structural funds, the cohesion fund and the TEN-line, EIB, EIF), will leave a financial gap which could be bridged by the EC itself in order to realize the projects.

The banks are aware that an EC intervention would only be considered if other available finance is insufficient and if, as a consequence, the project would not be realized.

Banks recognise, in the light of the Eurotunnel experience, that the EC could play a considerable role as a catalyst in order to attract additional private funds.

- f) In addition to the "volume" gap a "long term maturity" gap would also benefit from EC intermediation in projects requiring long "pay back" periods. The availability of long term "fixed rate" funds is limited to prime borrowers having access to public markets providing investors with the necessary credit assurance and liquidity.
- g) Banks mentioned their limited manpower resources devoted to project analysis and their great selectivity in bidding for advisory roles. Some underscored the potential conflict of interest between the role of advisor and lender.
- h) There is a core of between 40 and 50 commercial banks which lend on a global basis to such projects. Any specific project would also attract additional lenders on a case by case basis broadening the market commensurately.
- i) Several banks have expressed the view that a useful option would be to encourage the Member States to appoint, at very early stage, a financial advisor, the cost of which could be assumed by the EC budget. It would considerably enhance the quality of the information available and facilitate, early on, the determination of the need for EC financial support. It has been confirmed by the banks that the role of a financial advisor could be separate from that of the banks providing the bulk of the funding.

**MOST MATURE PRIORITY TRANSPORT PROJECTS:
FINANCING SCENARIOS 1994-1999 AND THEIR ASSUMPTIONS**

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 figures in the table have been aggregated from available data for the individual ten projects. The base data are those supplied by the Member States to the Commission in the framework of the "Christophersen Group". All the data, including estimated costs are subject to significant margins of uncertainty. Historical experience suggests that these costs are likely to have been under- rather than over-estimated.

ASSUMPTIONS

Costs

Member States have provided information on estimated financing costs over the period of project construction and, in many cases, on the phasing of expenditure. In those cases where information on phasing has not been given, the Commission services have made estimates based on expected starting and completion dates and on the experience of expenditure curves for similar projects. The prices given by Member States are constant prices (i.e. they take no account of inflation over the life-time of the projects). The base date for these prices varies between 1992 and 1994. Total expenditure estimates include some preparatory work already undertaken in 1993.

Government Contributions

These figures are also taken from Member States' submissions. Where specific data were not available, the Commission services have applied pro rata to the expenditure for 1994-1999 the Government contribution currently envisaged by the Member States for total construction period, or where this was not possible, an estimate reflecting conservative budgetary programming.

Maximum Likely Community Contribution

This figure comprises estimated maximum expenditure by the Cohesion Fund, the ERDF and the TEN budget line for these projects. It does not imply that any decisions have yet been taken on the specific amounts that may be made available with respect to future expenditure. The figures include, however, some 380 Mecu of funding already committed (including expenditure in 1993). The total covers all the projects for which Member States have already made specific requests for support, together with an estimate of possible contributions to other eligible projects.

Railway Companies

The lower figure in the table is aggregated from information supplied by the Member States. The higher end of the range includes an estimate by the Commission services of possible further contributions for specific TGV projects, for which no specific information on railway company contributions has been provided. These contributions may take the form of own funds and/or loans. The figures given do not take into account any recourse by the companies to EIB loans.

Hypothetical EIB Contributions

The three hypothetical scenarios for the EIB contributions are made purely for illustrative purposes and do not reflect any commitments by the Bank; these could only be made after further project evaluation and specific requests from public and private promoters.

The hypothetical EIB contributions are made only for those projects where, after taking into account other sources of finance, a potential shortfall remains. In some cases, this shortfall is smaller than the maximum EIB contribution possible under one or more of the scenarios; in those cases, the EIB contribution has been limited to coverage of the potential shortfall. The hypothetical EIB contribution therefore represents additional finance. In practice, of course, some of the contributions of public administrations, railway companies and private operators estimated elsewhere may in fact be funded by recourse to the EIB; actual EIB lending could therefore be higher than that given even under the ceilings envisaged. The first scenario (up to 15% of project cost where necessary to meet the shortfall) is based on an extrapolation of the historical practice of the Bank with respect to very large projects with similar technical, economic and financial characteristics. The second scenario (up to 25%) reflects the average level of contribution by the Bank to infrastructure and other projects as a whole; it also takes into account the possible impact of the additional efforts which the Bank may be willing to make for the priority TEN projects. The third scenario (up to 50%) reflects for completeness the formal ceiling on EIB exposure to individual projects under its normal loan operations.

Possible Private Contribution

This includes private equity, bond issues and loans from the private sector. The lower end of the range is based on the assumptions communicated by Member States with respect to individual projects. The upper end of the range includes an estimate by the Commission services of possible further private contributions to projects for which private finance may be sought. The actual volume of private finance will be affected in part by decisions of the Member States on the administrative and legal frameworks for individual projects, and by the availability and conditions of public finance as well as the inherent viability of the projects. The figures given in the table are high compared with experience in most Member States with respect to transport projects.

European Investment Fund

The table does not identify a specific "contribution" from the EIF since this will take the form of guarantees rather than loans or grants. These guarantees can be expected to be made available with respect to loans to, especially, private operators. The presence of the EIF will be one element in helping to facilitate the possible private contributions presented in column 6.

May 1994

EIB Financing for TENs projects

1. Introduction

Financing infrastructure projects in transport, energy and telecommunications is an essential part of the EIB's existing lending activity, and it has been reinforced by the introduction of the Edinburgh Facility.

In the 6 years to 1993, lending for projects of Community interest in transport, energy and telecommunications amounted to ECU 25.6 billion. Of this, ECU 23.2 billion was within the Community and a further ECU 2.4 billion in Eastern and Central Europe and other countries contiguous to the Community. It accounted for 30 per cent of all EIB lending, and 72 per cent of it was in regional development areas. The recent year-by-year figures are ECU 4.4 billion in 1991, ECU 5.6 billion in 1992 and ECU 7.6 billion in 1993. Further details are set out in the Appendix.

Projects of Community interest in the three sectors are a wider group than the Trans European Networks. Many of them, however, contribute directly or indirectly to the development of the main TENs networks. In any case, from this starting point, the EIB is committed to making a major additional effort in support of TENs, focusing in particular on the priority projects which have been identified.

2. General principles

The general principles which guide the EIB's consideration of TENs projects are as follows :

- (i) The EIB has no preference for public projects over private projects or vice versa. Each TENs project is evaluated on its merits, taking account of network benefits where identifiable, to establish that it is economically and financially viable.

Economic viability is necessary to ensure that, in supporting European integration, investment in TENs is not at the expense of economic growth. The criterion of economic viability however includes, as appropriate, cost-benefit components different from those which figure in conventional financial analysis. For example, the external benefits (or costs) arising from decongestion and environmental aspects are taken into account and subsidies are not taken as a deduction from the costs of the items subsidised.

Financial viability is necessary since prospective cash flows must be sufficient to provide a satisfactory financial rate of return to those who provide the

capital employed. In general the private sector has more stringent and shorter term requirements as to financial viability than the public sector.

- (ii) Each TENs project should meet an identified need for capacity in the network. Projects should be technically viable and must of course accord with Community policy, including Community requirements in respect of international tendering and the environment. The EIB is particularly concerned to ensure the inter-operability of the networks and, while fully supporting the priority currently being given to the development of high speed rail networks, an appropriate balance in the development of different modes of transport over time.
- (iii) The Member States may need to take specific action to accelerate works on the TENs projects in so far as these projects await the completion of feasibility studies, authorisations, and administrative and technical approvals. The complexity and, in some cases, slowness of the administrative procedure required to obtain all the necessary authorisations are major sources of concern. Development of the networks may even require changes to the existing administrative and legal arrangements in some cases, including an extension of the right to build, own or operate TENs projects, if the Member States wish to extend private sector participation. Moreover, changes in the public sector's approach to co-ventures with the private sector may be necessary as well as permissions if the private sector is to be induced to enter into financial partnerships with the public sector for the development of transport infrastructure. Making such arrangements can cause delay, and it is the various sources of delay that are the main obstacle to progress at the moment ; finance is not the immediate problem.
- (iv) The financial and economic benefits of certain TENs projects will be all the greater if these projects are executed in stages over a period within an agreed planning, economic and operational framework. Such a process of staged development with appropriate sequencing and timing can help to contain costs and prevent the creation of bottlenecks in supplying industries. There may however also be projects which yield their highest net benefits if they are completed quickly.

3. Public and Private Finance

3.1. Changing role of the Public and Private Sectors

Traditionally major infrastructure projects have been financed almost exclusively by the Public Sector. This is likely to remain the case for the majority of the TENs projects under consideration, particularly in the transport sector, unless, on closer examination, or by reason of the tariff policy or financial structure chosen, financial rates of return turn out to be substantially higher than seems to be the case at the moment. Nevertheless there will be a number of transport projects in which the

private sector will be able to play a significant role either (i) as a shareholder, (ii) as a provider of debt finance, (iii) as an operator of the project under a concession, or (iv) as a risk-sharing contractor.

The latter role is the principal one which the private sector has played to date in the transportation sector. By contrast the role of the private sector in the energy and telecommunications sectors has become much bigger following the comprehensive programmes for de-regulation, competition and privatisation that are in train in a number of Member States. The financial requirements of promoters in the energy and telecommunications sectors have been highly varied, and the role of the private sector in the development of these networks has varied accordingly. The EIB is a significant lender to both the private and the public participants in these sectors and it is prepared to continue in this way, guided by the economic and financial characteristics of individual projects rather than by any a priori preference for one sector or the other.

The public and private sectors both have essential roles to play in the development of TENs, particularly in transport. The specific responsibilities of each will however vary in each project in response to the priorities of the Member State or States concerned and the characteristics of the project itself.

In order to expand the current limited role of private investment in transport infrastructure it will be necessary to identify specific roles for the private sector as a partner to the public sector.

One role could be as a provider of equity finance whether independently or in partnership with the public sector. The scope for this may however be limited because equity from the private sector is normally too expensive to be used extensively for finance of transport infrastructure. Much would of course depend on the individual project. In general, the higher are the perceived risks, the higher are the returns that prospective new equity subscribers expect. In the present case expectations should be of returns on equity of the order of 20-30 per cent per annum in order to attract finance from the private sector from the outset. The high cost of equity derives partly from the uncertainty of profits, which means that there is a high risk premium, and partly from tax considerations since dividends are payable out of after-tax profits. In any case, equity is not always available for infrastructure projects as, even on optimistic assumptions, little or no profit is in prospect.

Another role for the private sector could be as a source of senior or subordinated debt, the repayment of which would be dependent on project performance. The private sector may be prepared to partner the public sector in such arrangements, provided that it can be satisfied that the project will be completed and that the net revenue stream is likely to be adequate to repay the debts incurred. The requirements of the public sector would also have to be met in these cases.

Financing of this kind will become more attractive as opportunities for it become more plentiful and it becomes possible to think in terms of a portfolio in which the risks of any single investment are balanced by the other projects in the portfolio. As yet however, with private involvement in transport infrastructure still at an early stage within the Community and the role of public sector bodies still largely predominant, the private sector has not had the opportunity to develop a portfolio of transport projects in the way that is now becoming more widespread in the energy and telecommunications sectors.

The quality of management whether by the public sector or by the private sector will be an essential factor in the successful development of the TENs. Management skills generally need to be of a higher order in the case of major projects where mistakes can have very expensive consequences. The EIB has had good results in the case of projects which were neither exclusively public nor wholly private, but which combined the public management of some stages or functions with the private management of others.

3.2. Economic and regulatory environment

The energy and telecommunication sectors are in general able to finance their activities from public and private sector markets on an ongoing basis as the prices of their products and services have been established in a competitive open market. The operations of these markets have become increasingly transparent, as a result of the efforts of Member States and the Community to ensure increased competition there.

In the transport sector matters are not so straightforward and the objectives of Member States to attract private finance into transport infrastructure may not be fully realised unless steps are taken to ensure that the private sector has a realistic prospect of earning a financial rate of return which is satisfactory in comparison with the alternative investment opportunities available. One element in this is to ensure that transport users make appropriate payments for the use of transport facilities, which is in any case desirable on economic grounds.

Though there is a move in the direction of increased private sector involvement in financing transport infrastructure, it is likely to be some considerable time before private involvement becomes a generalised feature of transport infrastructure financing. In the interim, the private sector may be restricted to playing a subordinate role or to limiting its involvement to the financing of particular phases of a project where the financial rates of return are sufficiently high.

4. Financing Issues on TENs

4.1. Current Status of the TENs projects

On the basis of the information available to the EIB at the present time, it seems that, in the case of a number of the TENs projects submitted by the Member

States, some key preparatory stages remain to be completed in the next two years or so. Significant progress must therefore be made by the Member States concerned to advance work rapidly on design, planning and administrative issues and where necessary, legal or parliamentary authorisations. The question of financing can only be decided when these steps have been taken.

4.2. Economic and financial viability

The projects identified in the TENs list have been selected on the basis that they are important projects which are already under consideration and capable of being implemented in the short/medium term. They have not been ranked on the basis of maximising economic benefits. Economic and financial viability is as yet uncertain in a number of cases on the basis of the preliminary information which is available.

4.3. General financial considerations

It will be essential to limit the construction and financing costs for each TENs project to the extent possible, given that any substantial increase in cost could materially undermine the already modest economic and financial viability of many of the TENs projects.

4.3.1. Control of construction costs

Construction costs are going to be the major cost element for TENs projects. It is therefore particularly important, if overall costs are to be controlled, that maximum efforts be made to manage and control these costs. Some elements -for example general inflation -are out of the project manager's hands. Such elements apart however, adequate time to prepare and define projects before construction begins is a key element for success.

Construction costs can be materially influenced not only by the technical characteristics of the project but also the contract and procurement strategy adopted and the specific contractual arrangements entered into. Ensuring that there is international competitive bidding is part of this ; but it is also important to plan an appropriate structure of contractual relationships at an earlier stage. A proper contractual structure will be insufficient by itself however, unless adequate allowances have been made for costs and contingencies from the outset.

Every project necessarily has impacts, positive and negative, on the environment, just as it necessarily has impacts, positive and negative on particular geographical areas. Environmental features are therefore an inherent part of the costs to be controlled and financed in each case.

Environmental concerns now take up a major part of the time required for planning authorisations in Member States and they can be a considerable factor in the overall construction cost. Promoters of TENs need to be told from the outset what

their responsibilities are in respect of the environment so that they can build this item into their plans in an appropriate way. Though base cost estimates may be higher as a result of taking such factors into account, these estimates will be better founded and promoters will be in a better position to decide whether to proceed and if so how to manage their projects.

Containing total costs is not the same as containing the costs which fall on national budgets. Some governments have already taken action to protect the public budget from increases in project costs by a partial transfer of risks to the private sector. This solution may be pursued further in the case of particular TENs projects where the private sector can be given a more significant role. There is obviously a risk that cost overruns on TENs projects could ultimately fall on the public sector, unless specific measures are taken to prevent this from happening.

4.3.2. Minimising financing costs

In general, minimising financing costs would mean choosing the appropriate capital structure, given the risks of the project, negotiating the lowest possible interest rate in respect of debt and accepting as little equity as is possible, since the cost of equity is so high. Outright subsidies are particularly appropriate in the case of projects which yield significant environmental or other external benefits which cannot be captured by the promoter. Loans provided by public authorities or under public guarantee are normally the least expensive forms of debt, and subordinated public sector loans and guarantees are particularly valuable as a means of helping difficult projects. Though other forms of debt may also be needed (syndicated bank debt, bond market debt, mezzanine debt with equity features, financial leases, etc), the proportion of these instruments in the overall financing should be kept as low as possible as they will in general be of significantly higher cost. EIB loans have an important part to play as they are normally the cheapest source of non-sovereign lending.

In general the cost of finance for projects supported by a public sector guarantee will be substantially less than that for projects where repayments/security is based on a single project without public support. Based on experience to date and on standard credit considerations, it is likely to prove difficult, if not impossible, for projects without a public sector guarantee to obtain an investment grade rating i.e. BBB or better. The maturity of such financings would in the absence of public support normally be limited to 10-15 years. The general inability of single asset companies to achieve credit rating of investment grade, emphasises the importance that partnership between the public and private sectors and a private sector portfolio investment approach could bring to reducing financing costs. If the promoter were a diversified existing company with extensive project experience the terms and conditions on which it could obtain finance would be considerably better.

4.4. Aggregate demand for EIB loans for TENs projects

Though the estimates to date have been calculated in terms of constant cost rather than outturn cost, adequate funding is expected to be available to finance the TENs projects, provided that they promise to be viable. One of the key sources of finance should be the cash flow available from the promoters themselves. In addition, national, Community, industry and other private sector sources of funds can all be called upon.

EIB loans have already been approved or are under consideration for some of the projects on the TENs list, and lending for other TENs projects has already been envisaged in the EIB's medium term business plan. On this basis, and taking into account the analysis emerging from the work of the Christophersen Committee, the EIB's present expectation is that the additional funding for TENs projects which it is likely to be asked to provide during the next few years, will be of the order of ECU 2-5 billion a year (ECU 16-40 billion over the 8 year planning horizon). This would not be seriously out of line with the rates of lending experienced by the EIB in the recent past ; and it would remain within the headroom which the EIB expects to have available during the next few years under its capital ceiling.

The question of headroom will, however, need to be kept under continued review as updated financing requirements for the TENs programme become available and as specific decisions are made in respect of the financing of each project. Should the Bank need to increase its borrowing powers to enable it to continue to support economic and social cohesion to an appropriate extent, the Member States have already indicated in the Protocol on Economic Cohesion which forms part of the Maastricht Treaty that they are prepared to increase the capital of the Bank to enable it to do so.

4.5. EIB Financial Instruments for TENs projects

The EIB has maintained from the outset that the appropriate approach for the financing of TENs projects is to review the requirements of each project individually.

Although the technical and economic criteria applied by the EIB for appraising a project are the same whether the project is in the private sector or the public sector, the EIB will of necessity distinguish between the credit characteristics of the two sectors in order to respect its banking criteria. Therefore, although the EIB is capable of providing considerable flexibility in the case of TENs projects where these are financed by the public sector, the EIB's approach to financing the private sector will of necessity be structured, as the private sector will itself expect, to ensure that the EIB's creditworthiness requirements are met. Creditworthiness is of course very much enhanced when projects have a sound financial structure and cash flow.

The EIB seeks adequate security for its loans to comply with its Statute and maintain its triple A rating for the benefit of the public and private project promoters to whom it lends. Its loans are spread almost equally between the public and private sectors and the security arrangements are in each case determined by the characteristics of the project itself, the strength of the promoter and, in general, the repayment prospects. The security arrangements accepted include public sector guarantees, bank guarantees, corporate guarantees and, in appropriate cases, charges on project revenues and assets. As part of its general policy, the EIB requires a guarantee that the promoter will complete the project. Security for the EIB's loans after completion can comprise a mix of public and private guarantees and charges on project assets.

The EIBs existing lending capabilities are well suited to the requirements of most long term infrastructure projects. Moreover, the EIB is prepared to tailor the financing which it provides to the specific requirements of individual TENs projects, where the characteristics of these projects show a need for such arrangements and an ability to bear their costs and the corresponding resources are available from the financial markets.

Lending by the Bank does not normally exceed 50 per cent of project costs (exceptionally up to 75 per cent under the Edinburgh Facility). In practice however, although its contribution could be very substantial in absolute terms, the Bank would be unlikely to approach these limits in the case of very big projects both on grounds of prudence and because neither the public nor the private sector would want any single source of funds to have such a dominant role in the financing.

Six areas where additional financial effort may be useful for TENs projects are identified below. If projects are viable in economic and financial terms, they will only very rarely require flexibility on all of these points. Indeed a conventional mix of medium and long-term finance will probably be sufficient for many TENs projects..

4.5.1 Financing of interest during construction

The EIB finances interest during construction as part of project costs. Moreover, in the case of TENs, the EIB is prepared, in principle, to arrange matters, using the range of modern financial instruments available, so that interest costs are particularly low during the construction period, the shortfall below the normal interest rate being recouped over the life of the loan.

4.5.2 Provision of an extended capital grace period

TENs projects need to have an extended capital grace period so as to fit in with the slow build-up of positive cash flow after operations begin.

In appropriate cases, the EIB is already providing extended grace periods which cover the interval until the project is cash flow positive ; and it has provided

bullet loans for very substantial amounts. The EIB will consider extending its application of this formula for TENs projects, in order to match the cash flow profile of the project and the promoters' resources.

4.5.3 Provision of long maturities

Some TENs projects may require very long maturities in order to match the slow build-up of cash flow from operations. The principal purpose of a lengthy repayment schedule is to minimise the amount of project cash flow which has to be dedicated to debt repayment in the early years. The EIB has already provided maturities in excess of 20 years on occasion, and it is prepared to extend this facility in suitable cases. One of the most useful instruments available to the Bank in the case of long maturity loans is revisable rate contracts ; and the Bank will be able to apply such contracts in the case of most currencies.

4.5.4 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.

4.5.5 Cofinancing of the project debt

Many banks, particularly in North America, 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 which take them out of the project when it is complete. The EIB is willing to consider such arrangements, provided that they are embodied in a framework agreement which has been put in place from the outset as an integral part of the financing arrangements for the project.

4.5.6. 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 commitment 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).

5. Role of the EIB in TENs

The substantial commitment which the EIB is prepared to make to the development and financing of TENs which are financially and economically viable could extend beyond the provision of long term finance. For example, the EIB's support for a project is frequently sought, particularly by the international banking community, as a demonstration that the project is of Community interest.

More concretely, the EIB can act as a catalyst, drawing in other financial institutions to co-finance the project, based on their perception of the soundness of the EIB's project appraisal system and reputation for financial prudence. The EIB's role in co-financing can vary with the requirements of the individual project. In general, the EIB has financed the longer maturity debt required, while the other parties have provided short to medium term debt, subordinate debt and leases. In co-financing arrangements the promoter can achieve particular contractual or financial arrangements which are necessary in the interests of the project if the EIB makes these arrangements a condition of its financing commitment.

In some cases, it may well be useful for the EIB to play a role in structuring the contractual and financing arrangements. This would be with the aims of minimising the overall risks of the project and ensuring that the financing is structured in such a way as to maximise the chances for the project's success..

This would mean that the EIB would be prepared to work closely with the promoter and its advisers, the Member State, the Commission and other parties, as relevant, from an early stage in the project to structure the financing and contractual arrangements so as to meet the different objectives of the various parties in a satisfactory way. The EIB's role would be to help to limit the construction and financing costs and risks of the project and ensure that the financing arrangements were adequate to meet its likely requirements. The EIB is prepared to make this commitment to TENs in view of their overall importance ; it is not at the moment able to extend this to the rest of its activities on a general basis.

6. Role of European Investment Fund

The EIF has been established by the EIB, the Commission and public and private sector finance institutions to provide additional financial capacity for the development of TENs networks as well as the development of small and medium sized industry. The role of the EIF will be to provide guarantees to lenders and investors in TENs and SME.

The EIF will work with the private sector as well as with public and private sector partnerships and their financiers in the development of TENs, as its prime role is to carry risks that the private sector by itself is unable to bear. For this service the EIF will require a fully commercial rate of return. In order to ensure its success as a

financial institution, the EIF will need to ensure that the projects it guarantees are structured, managed and financed in ways which will minimise the risk of loss.

Though it is not for the EIB but for all the shareholders of the EIF to determine what the precise role of the EIF will be, it can safely be said that the EIF will operate to improve the allocation of lending risks. In the case of TENs, where monetary exposures are large and have long maturities, the intervention of the EIF, like that of the EIB itself, will bring about some relaxation of the capital-adequacy constraints that lenders face and thereby make room for additional lending. In addition, by making lenders more familiar with high-quality debt backed by projects' cash-flows, it could draw institutional investors into the financing of TENs.

The EIF will be a key co-financing partner with the EIB and others in the financing of TENs. The EIF will nevertheless have to develop its portfolio of projects gradually over time so as to ensure a proper control of risks. The EIF will, at least in an initial development period, spread its commitments over a range of projects while it develops its own activities and makes its guarantee well known and widely accepted in the market.

Annex : 1

List of projects financed in the Member States from 1991 to 1993
furthering networks of Community interest plus associated links
(ECU million)

I. TRANSPORT		7 419.4
<u>RAIL</u>		<u>2 935.4</u>
Construction of French border - Brussels section of new TGV line	Belgium	248.2
Channel Tunnel	France/UK	716.5
Electrification and modernisation of Nyborg-Odense rail line	Denmark	262.5
Modernisation of rail infrastructure on Athens-Thessaloniki-Idomeni (northern border) line	Greece	59.6
Modernisation of inter-city rail links and improvements to metropolitan rail networks in Madrid, Barcelona and Valencia	Spain	310.8
Construction of high-speed rail link between Madrid and Seville	Spain	777.5
TGV-Nord line between Paris and Belgian border, with branch to Channel Tunnel	France	424.2
Improvement and modernisation of rail system, especially on Lisbon-Oporto lines and on lines to Spain	Portugal	135.8
<u>ROADS AND MOTORWAYS</u>		<u>3 418.6</u>
Motorway sections: Århus - Ålborg, Vejle - Horsens (Northern Jutland) and Ringsted - Skovse (Sjælland) on motorway linking Copenhagen and the Great Belt	Denmark	74.4
Motorway suspension bridge on eastern section of Great Belt fixed link	Denmark	543.5
Upgrading to motorway specification of Varibobi-Yliki section of Athens-Thessaloniki highway	Greece	59.8
Corinth-Tripoli motorway and Megalopoli bypass	Greece	93.6
Upgrading to motorway specification of Elefsina-Corinth section of Athens-Corinth highway	Greece	60.0
Peresteri-Panaghia section of main East-West highway in northern Greece (via Egnatia)	Greece	30.5
Construction of several sections of major trunk roads	Spain	1 132.9
Motorway section between Castelldefels and Sitges, south of Barcelona, and access roads	Spain	96.8

Construction of several sections of expressway on France-Portugal and Madrid-Lisbon trunk roads	Spain	266.9
A16 motorway, l'Isle-Adam - Amiens section	France	134.1
A39 motorway, Dijon - Dôle section	France	88.1
A26 motorway, linking Channel Tunnel with South of France: Châlons-sur-Marne - Troyes Nord section	France	126.5
A29 motorway, Le Havre - Yvetot Est	France	70.8
A40 motorway, dualling of Chamoise tunnel and Nantua and Neyrolles viaducts	France	10.5
A43 motorway, Montmélian-Albertville section	France	32.4
A49 motorway, Voreppe-Bourg de Péage section	France	68.3
"Tunnels" motorway: sections towards Domodossola (Swiss border)	Italy	32.4
Automation of toll system on part of motorway network	Italy	64.5
Improvements to various sections of national road network	Portugal	118.7
Extension of motorway between Palmela and Marateca and construction of Lisbon outer ring road	Portugal	139.8
Motorway bridge over Severn estuary	United Kingdom	152.3
Road improvement works in Hampshire	United Kingdom	21.8
<u>PORTS</u>		<u>227.9</u>
Modernisation and rationalisation of ferry service between Helsingør (Denmark) and Hälsingborg (Sweden)	Denmark	45.2
Construction of new terminals and redevelopment of old harbour area in Barcelona	Spain	21.6
Extension of port of Bilbao	Spain	36.1
Extension of port of Valencia	Spain	23.2
Construction of second ferry dock in port of Caen-Ouistreham	France	8.7
Construction of new container terminal at Belview	Ireland	13.0
Development of "Toscana" dock in port of Livorno for container vessels	Italy	7.1
New terminal at port of Setúbal	Portugal	7.9
Terminal for container vessels in Rotterdam	Netherlands	65.0

<u>AIRPORTS AND AIR TRAFFIC CONTROL</u>		<u>790.6</u>
Upgrading and harmonisation of European air traffic control systems	Belgium	123.9
Flight simulator at Copenhagen airport	Denmark	6.9
New terminal at Frankfurt am Main International Airport	Germany	180.9
New international airport at Erding, north-east of Munich	Germany	171.2
New terminal at Hamburg International airport: maintenance facilities for wide-bodied aircraft	Germany	107.4
Improvements to air traffic control system	Greece	9.0
Construction or extension of passenger terminals at Palma de Mallorca (Balearic Islands), Barcelona and Malaga airports	Spain	97.3
Modernisation of air traffic control system and airport facilities in Lisbon, Oporto, Ponta Delgado and Horta	Portugal	51.1
Extension and modernisation of Bologna airport	Italy	10.4
Extension and modernisation of Caselle-Turin airport	Italy	9.7
New passenger terminal at Birmingham International Airport	United Kingdom	22.7
<u>INTERMODAL FREIGHT TERMINALS</u>		<u>46.9</u>
- Barcelona	Spain	32.5
- Orbassano (Turin)	Italy	3.3
- Bentivoglio (Bologna)	Italy	11.1
II. TELECOMMUNICATIONS		5 675.5
Development of digital switching and fibre-optic transmission system	Denmark	283.9
Setting up of DFS Kopernikus satellite transmission system and telemetry exchanges	Germany	146.8
Extension of network in Rostock, Leipzig, Magdeburg, Halle, Dresden and Gera	Germany	491.6
Modernisation and extension of network	Spain	1 176.2
Extension and modernisation of radio and television broadcasting network, including launch and operation of two telecommunications and television satellites	Spain	354.9
Commissioning of mobile telephone networks	Greece	50.9
Extension and modernisation of network	Ireland	109.2
Extension and modernisation of network in Mezzogiorno	Italy	1 411.8

Modernisation and development of trunk network in central and northern Italy	Italy	654.1
Installation of terminals and antennae for transmission of data by satellite; national control centre in Fucino plain	Italy	16.3
Acquisition and launch of broadcasting satellite	Luxembourg	59.5
Extension of network	Portugal	598.5
Development of mobile telephone network throughout the country	Portugal	28.5
Undersea fibre-optic telecommunications cable between Portugal, Madeira, France and Morocco	Portugal	14.3
Extension of network in Northern Ireland	United Kingdom	127.1
Extension of national network and provision of undersea cable links with continental Europe	United Kingdom	151.8
III. ENERGY SUPPLY AND DISTRIBUTION		3 245.7
<u>ELECTRICITY</u>		<u>1 334.6</u>
Power cable connecting Denmark and Norway	Denmark	46.5
Extension and upgrading of transmission and distribution networks, in particular linking islands to mainland power grid	Greece	62.7
Installation of new control system for interconnected electricity generation and transmission grid	Greece	10.0
Extension and modernisation of network	Spain	822.1
Extension and upgrading of network	Ireland	149.1
Upgrading and extension of facilities in Sardinia	Italy	52.1
Extension of network	Portugal	152.5
Extension and upgrading of network	United Kingdom	38.5
<u>OIL AND NATURAL GAS</u>		<u>1 911.1</u>
Terminal at Zeebrugge for handling Norwegian natural gas and gasline to Blaregnies (French border)	Belgium	88.6
Oil pipeline linking fields in Danish sector of North Sea with terminal at Fredericia; gasline from Torslunde and gas storage facility at Stenlille	Denmark	88.4
Natural gas transmission and distribution network	Denmark	186.9
Conversion of distribution grid from town to natural gas in Eastern Germany	Germany	113.6

Gaslines linking present gas system in Thuringia and Saxony to European natural gas network	Germany	97.2
Construction of transmission and distribution network	Greece	7.3
Extension of natural gas transmission network	Italy	559.1
Laying second gasline between Algeria, Tunisia and Italy: Mazara del Vallo - Messina (Sicily), Palmi (Calabria) - Oricola (Abruzzi) sections and across Strait of Messina	Italy	463.6
Extension of three underground natural gas storage reservoirs	Italy	103.8
Distribution networks in Dublin, Cork, Waterford, Limerick and Clonmel	Ireland	57.5
Construction of natural gas interconnector between Scotland (Moffat) and Ireland (Ballough, north of Dublin)	Ireland	131.7
Gasline linking Markham field (on Dutch continental shelf) with coast	Netherlands	13.0
	Total	16 340.5

**Individual loans provided by the EIB, from own resources, from 1988 to 1993
in support of networks of Community interest plus associated links**

(ECU million)

	1988	1989	1990	1991	1992	1993	1988-1993
Total in the Member States	1 719.6	2 453.7	2 685.0	4 163.0	5 307.0	6 870.5	23 198.8
<i>Transport</i>	958.2	1 247.9	995.1	1 605.8	2 406.3	3 407.2	10 620.5
Rail	223.8	514.3	557.6	1 060.7	936.2	938.5	4 231.0
Roads and motorways	404.5	434.5	292.6	280.9	1 097.2	2 040.5	4 550.2
Ports	32.1	129.2	36.4	65.0	81.3	81.6	425.7
Airports and air traffic control	292.6	163.2	98.6	184.9	284.4	321.3	1 345.0
Intermodal freight centres	5.2	6.7	9.9	14.4	7.2	25.3	68.6
<i>Telecommunications</i>	318.8	651.5	1 200.1	1 679.8	1 901.4	2 094.3	7 845.9
<i>Energy supply and distribution</i>	442.7	554.4	489.8	877.4	999.3	1 369.0	4 732.5
Electricity		218.2	227.7	384.2	358.5	591.9	1 780.5
Oil and natural gas	442.7	336.2	262.1	493.2	640.8	777.1	2 952.0
<i>of which in assisted areas</i>	687.9	1 504.5	2 181.4	3 373.3	3 877.9	5 933.7	17 558.7

II. Total outside the Member States (neighbouring and Central and Eastern European countries)	495.0	223.5	432.4	272.5	278.6	710.0	2 412.0
<i>Transport</i>	210.0	58.0	202.0		120.0	541.5	1 131.5
-Rail		58.0	22.0			247.0	327.0
-Roads and motorways	210.0		180.0		50.0	240.5	680.5
-Airports and air traffic control					70.0	54.0	124.0
<i>Telecommunications</i>	285.0	165.5	215.4	272.5	158.6	110.0	1 207.0
<i>Energy supply and distribution</i>			15.0			58.5	73.5
-Electricity			15.0			58.5	73.5

TOTAL I + II							
Loans in support of networks of Community interest	2 214.6	2 677.2	3 117.4	4 435.5	5 585.6	7 580.5	25 610.8

OPTIONS FOR TENs FINANCING THROUGH COMMUNITY LOAN AND GUARANTEE MECHANISM

Introduction

All financial options described hereafter bear a credit risk which - in case of default of the beneficiary - could have considerable consequences for the EC budget and the financial perspectives.

These options are based on the assumption that they would be sufficiently security backed to qualify for a "pm" entry in the Community budget. Otherwise they would necessitate an appropriate budgetary protection.

1. Interventions through loans

Using its existing experience to raise money on the capital markets, upon request from the Member States sponsoring the projects and after appropriate consultation with the Council, the EC could contribute to the funding of the financial gap. The proceeds would be onlent but only to projects cofinanced with the EIB; the loans themselves would be managed by the EIB under a cooperation agreement to be negotiated.

As far as the financing of those interventions which are not funded by the budget, the EC with its AAA rating is unlikely to meet difficulties in raising sufficient volumes on the capital markets.

The EC like other providers (including the EIB and other development banks), will require adequate, but not privileged "security" to ensure that the ultimate repayment of the debt incurred does not fall on the Community budget.

There is an already existing precedent with the NCI loans and borrowings which were aimed to finance within the Community mostly private projects guaranteed by adequate securities and which appear as "p.m." in the budget.

In order to accomplish the same result and taking into account the specific nature of the TEN projects, the intervention of the EC for projects located within the limits of the European Union could be envisaged under the following options:

- a) One option is where Member States wish primarily to benefit from the intermediation of the EC to lower the cost of their funding (similar to BOP lending). In this case the EC will simply require a Government guarantee and treat, from a budgetary standpoint, the risk of default as a "pm". This option has no real advantage for Governments able to borrow on equal terms with the EC.

- b) The second option, of more general interest to public and private entities promoting some of the projects, covers cases where, through structuring the loan covenants appropriately, the EC may consider the undertakings of the promoter as the economic equivalent of a Member State guarantee, qualifying thereby for a similar "pm" budgetary treatment. The promoter can consider its obligation as a "contingent liability", not counting for instance, in Government Debt" figure in the case of public entities.

The exact structure would have to be carefully put together, but the general idea is that the promoter would make undertakings to enable the project to meet its obligations, even if the results of the exploitation are not those expected. For instance:

- the promoter may guarantee the use of the new installations at the level required to generate the appropriate resources, or complement the revenues if necessary.
- the promoter may undertake to maintain the net worth of the operating company to enable it to pay its debt.
- the promoter may pledge resources coming from other assets (or tax revenues in the case of a public project) in cases where projected revenues are insufficient to meet the debt service.
- the promoter may if the exploitation of the project is conceded pledge ancillary concession revenues for the debt service of the project.

- c) A third option would apply to situations where adequate first class guarantees are provided to protect the Community's interests, for instance, as experienced in the NCI mechanism where most of the loans were backed by first class commercial bank guarantees.

2. Interventions through loan guarantees

Title 12 of the Treaty refers to the possibility of Community action taking the form of a guarantee to TEN projects.

These options would consist of a guarantee to the finance institutions making a loan which is given to the project itself, thus allowing the beneficiary to achieve better lending conditions. The granting of such guarantees would enhance the possibility of promoting projects of common interest within the European Union which may not otherwise find adequate risk coverage in the market through normal sources.

EC guarantee would be granted only to projects in which the EIB is participating and in consultation with the EIB and the EIF. The guarantee could in principle be granted to the EIB itself, but the main objectives

should be to encourage private finance. The following conditions would apply:

- Access to other potential providers of guarantees is insufficient.
- A minimum required economic rate of return is to be achieved by the project.
- Loan guarantees are subject to a ceiling of, for instance, 20% of the private risk coverage or differentiated according to circumstances.

A loan guarantee from the EC would have the following advantages:

- Credit enhancement: the EC takes over (a certain share of) the risk and thereby allows the debtor to raise larger amounts on the market and at better financial conditions based on the EC's triple A rating. The risk for other lenders and, as a result, the cost for the debtor would be reduced.
- Flexibility: regarding the time taken to complete a transaction, a loan guarantee offers real advantages of flexibility, given the smaller number of parties involved. Furthermore, a guarantee scheme allows the EC to cover, for instance, a greater share of the risk during the more critical construction period and start-up phase and, in a later stage, to gradually hand back the risk to the private operators of the project.

The final risk of a loan guarantee does not differ from that of a direct funding operation and could be treated as a "pm" in the budget according to the same conditions as described in § 1 above.