

EUROPEAN PARLIAMENT

Directorate-General for Research

WORKING DOCUMENT

THE FINANCING OF TRANS-EUROPEAN TRANSPORT NETWORKS

Transport series

E - 4

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INTRODUCTION

1. The nature of this study

This working document, which forms part of the 1996 research programme of the European Parliament's Directorate-General for Research and has been drawn up by that DG, was commissioned by the Committee on Transport and Tourism. It is a revised version of an earlier working document of the same title, published in 1994.

In the two years since the first document was drawn up, the decision on the **Community guidelines for the development of the trans-European networks** has finally been adopted, not without difficulty¹, and the financial regulation for the trans-European networks has also been adopted². The basic legislative framework has therefore now been defined. However, the financial measures being taken by the Member States to comply with the convergence criteria for the third stage of monetary union have intensified the problem of the funding of the networks, which was already considerable by reason of the large sums called for. This means that particularly careful attention must now be paid to the transport networks, as being an especially delicate question.

The main subject of the present document is the financing of the networks; the attempt will nonetheless also be made to evaluate the overall situation as regards the priority projects.

2. The concept of 'trans-European network' and its development

Before examining the specific theme of the transport network funding, it will be useful to provide some information on the historical development of the networks.

The 1990s saw the start of the European Union's involvement in infrastructure policy, first of all as an objective pursued through other activities and then as a responsibility conferred directly upon it with the entry into force of the Maastricht Treaty. This innovation was far more radical than has generally been suggested by politicians, researchers or journalists. Historically, the role of public works in the Member States has far exceeded their specific function and the effects they have had on the economy and employment: they also function as a symbol of the tangible reality of power, which is of crucial importance even in the modern age. The fact that responsibility for this sector has been conferred on the Union means that the prospects for the political legitimization of the Union have been enhanced.

¹European Parliament and Council Decision No 1692/96/EC of 23 July 1996 - OJ L 228, 9.9.1996 (the entire OJ is dedicated to the decision)

²Regulation 2236/95 of 18 September 1995, **laying down general rules for the granting of Community financial aid in the field of trans-European networks** - OJ L 228, 23.9.1995, p.

It is true that the Union has always intervened in the field of infrastructure through the financing it has provided from Community funds, but its new responsibilities mean that it now plays a major role in the decision-making process at all levels of government in the Member States in respect of public works, and such responsibilities should therefore be considered as an important component of the Community's substantive powers.

Community infrastructure policy was conceived in such a way as to avoid a lack of overall coordination limiting the effectiveness of actions. This objective is to be pursued by means of the **trans-European networks**, which constitute an integrated approach to the communications systems of the EU Member States and, in a wider perspective, of the continent as a whole. The term **communications systems** is used advisedly, since trans-European networks involve all systems involving flows, energy transmission, telecommunications and transport, the latter being the specific subject of this document.

The market dimension and the process of political integration in Europe mean that an integrated approach is necessary. History shows us, in fact, that each politico-economic system uses a communications system which serves its requirements. In Europe, for example, the transport network has been designed to serve the internal needs of states, with highly dense transport links within national boundaries and traffic with other states tending to be channelled through border crossing-points, the number of which is relatively limited compared with national routes and which are more constrained than the latter by geographical factors.

The structure of national transport networks, then, means that European traffic passes through connected national subsystems rather than through a proper European system operating as a function of the single market, while the increase in international trade has led to an increase in bottlenecks at frontier crossing-points, thereby highlighting the limitations of this situation.

It is precisely in the transport sector, where the shortcomings of the communications system are most evident, that the concept of **trans-European networks** is being developed as an instrument for market integration and economic and social cohesion, since a more integrated transport system can help ensure that the peripheral, remote or less-developed regions can be fully integrated into European economic life. The aim of this policy is not to redesign the European transport system in such a way as to organize it into a uniform whole, but instead to achieve interconnecting national subsystems which, for obvious reasons related to economics and the internal operability of the system, remain the 'carrying axles' of traffic.

A more modern concept of transport links together the interconnection and interoperability of various modes of transport. While it is not intended here to go into the specific details of combined and intermodal transport, which have been dealt with in the Commission Green Paper and in many resolutions of the European Parliament, it is clear that both the geographical and modal integration of transport serve to enhance their mutual advantages.

Historically speaking, the concept of **trans-European network**, which was first set out by the UN Economic Commission for Europe, was endorsed at Community level in the 1989 Commission communication entitled '**Towards trans-European networks**', following which the European Council, meeting in Strasbourg in December 1989, instructed the Commission to draw up a programme of work for the four areas of trans-European networks which were under discussion at the time, namely, transport, telecommunications, energy and training.

The Commission's work was to culminate the following year, in December 1990, in a communication entitled '**Towards Trans-European Networks - for a Community Action Programme**', but financial problems and the complexity of the decision-making process meant that it was not followed up. However, the trans-European network concept was endorsed in the wording of the Maastricht Treaty, of which it forms an important policy, although the application of this policy to training was lost during the transition to the 'constitutional' level, probably because the concept of network is now associated primarily with infrastructure.

Another typical aspect of these networks is that they are **trans-European** and not merely trans-Community. This specific description is the result of European geography and the political events that have occurred on the continent in the last few years. From a geographical point of view, north-south Community links, in particular between Germany and Italy, have necessarily involved transit through non-Community countries (Switzerland and Austria), with problems arising both from the mountainous nature of the terrain and from the specific traffic policy of those countries. In the field of energy transmission and telecommunications, there is also a need to link up with third countries.

An additional factor is that relations with the EFTA countries, already well-established, have been stepped up since the inception of the European Economic Area, while the changes that have occurred in eastern Europe since 1989 are opening up new prospects for trade with the countries in that part of the continent, to whose development the European Community is deeply committed.

As an infrastructure policy, trans-European networks can also be used for economic purposes, for example as a means of boosting employment through job-creating projects. However, infrastructure policy requires massive investment, which, in a period of recession and limited public finances, means resorting to private funding, which can only be raised if the returns are suitably high. Achieving a return on private investment means increasing the cost of building or, alternatively, of operating infrastructures, which has the effect of increasing the cost of transport and creating obstacles to mobility.

3. The role of the Community in networks policy

One of the innovatory features of trans-European networks is the different relationship established between Community assistance and projects. In the case of assistance granted from the Structural Funds, projects are initiated by the Member States and the public or private bodies eligible for funding, and the Community assesses whether they are consistent with its objectives and whether they comply with other legal and economic requirements; in the case of the trans-European networks, however, the Community lays down the guidelines and approves the execution plans. The Community's position in each case is therefore substantially different: when it comes to the provision of aid from the Structural Funds, it is one of three parties involved in the decision-making process aimed at defining the project, and its task is limited to granting the Community aid and to carrying out the necessary checks before and after the provision of such aid; in the case of the trans-European networks, the project is the fruit of a decision-making process within the Community institutions. Accordingly, while respecting the principle of subsidiarity which, as we shall see later, is applied particularly strictly to networks policy, the Community has a larger role to play here than in other policies. Its role is that of planning and of establishing **guidelines** (the term used in the Treaty); this also includes identifying **projects of common interest** and puts the Community in a position which, if not exactly that of a state, which also oversees the construction of infrastructure, is nevertheless more than that of a mere financing body.

This particular position confers on the Community greater political responsibility for the final result of its action, which requires a more global approach. As far as implementation is concerned, the project of common interest must be such as to facilitate the drawing up of execution plans and must therefore have a high degree of feasibility; as far as financing is concerned, the mobilization of the necessary public and private funding is to take place at Community level.

4. The question of the trans-European network

The policy creating the trans-European networks¹ is one of the most significant of the reforms introduced by Maastricht, and one of the areas in which Community strategy has been aimed at growth and development². However, the networks have, since the first attempts actually to set them up, encountered serious obstacles. Some of these are clearly of a political nature and concern the equilibrium between the Council and Parliament in the decision-making process and the choice of specific projects. There is another crucial aspect, namely the allocation of financial resources for the work to be carried out - that is, the problem of financing, which is the subject with which this working document is concerned.

At the heart of this specific difficulty affecting networks policy is the fact that it coincides in time with the pursuit of the **convergence** of the economic and financial policies of the Member States in the run-up to monetary union.

This has meant the imposition of financial policies based on the containment of spending and the public debt, which can only with difficulty be reconciled with the funding of expensive projects. The Community itself is not in a position to take over the burden of creating the trans-European networks, firstly because its own accounts are tied to a stringent **budgetary discipline**, and secondly because expenditure of this nature would mark a visible divergence from the convergence criteria which the Member States are being asked to meet³. In addition, such expenditure would have financial repercussions on the Member States themselves, as they would have to increase their contributions to the Community.

¹Article 129b of the Treaty refers not only to transport networks but also to telecommunications and energy networks. Despite the good intentions of the Member States at the time of drawing up the treaty, Title XII has not led to a single network policy, but, rather, to the extension of existing policies to the field of infrastructures.

²This role was set out, for the first time and on a comprehensive basis, in the Commission white paper '**Growth, competitiveness, employment**' (EC Publications Office, Luxembourg, 1994), which was submitted to the Brussels European Council in December 1993.

³The present writer takes the view that the financial obstacles thus far described are only the tip of the iceberg: there is a lack of financial resources which is affecting, to a greater or lesser extent, all the industrialized countries and is severely conditioning their economic and financial policies, as well as having institutional effects which it is not within the remit of this study to examine.

In this context, **the networks will require funding from private sources if they are not to create a burden of debt for the Member States or the Community.** This is the first aspect of the problem. A number of questions have to be cleared up, of which the first is *the level of profitability at which the private sector is interested in investing in infrastructure.* This immediately raises a second and related question, namely *whether the infrastructures in question are likely to be profitable to the degree required by the private sector.*

The answer to the first question should be the same for all three forms of trans-European network. However, in the case of the second question the answer will vary according to the nature of the network and, probably, the value added included in the charges for use of the infrastructures of individual networks. The question of profitability leads to that of charging for use (a practice by no means universal in the transport sector).

This raises a number of problems of a different order. One has to ask *what implications the costs arising from transport infrastructure use will have on the cost of the transport itself;* and, in more global economic terms, *what impact transport costs have on the inflation rate and, therefore, on the economy in general.*

The trans-European transport networks thus raise problems of greater complexity than is the case with the other types of network. This is precisely because the existing situation is more favourable to the user (to a greater or lesser extent for the different transport modes), whereas the other networks concern sectors in which infrastructure costs have traditionally been more internalized, and the potential impact of private funding of the networks is therefore minimal or non-existent.

The most suitable solution for the problem of financing the transport networks is, then, to resort to a 'mix' of public and private funding. This would minimize the inflationary effects of public spending on infrastructure creation, as well as those arising from user charges for the infrastructures, due account being taken of the time required to amortize the public debt generated by the project, as well as the duration of the franchise for the project itself.

This would certainly be the best possible solution from the economic viewpoint. It may, however, not be practicable in financial terms, thanks to the constraints of convergence and national budgetary restrictions. This brings us back to our first two questions, concerning the involvement of private capital.

5. Initial hypotheses

If the terms of the problem of financing the trans-European networks are defined as suggested above, solutions may be sought on two fronts. On the one hand, public funds may be transferred (from sectors where private enterprise is more likely to invest) to the transport networks; on the other, private funds may be channelled into those same networks, creating the conditions for making them profitable.

One means of allocating public funds may be realized within the trans-European networks themselves: if the private sector is left with the entire responsibility for the telecommunications and energy networks, which are profitable in themselves, then public funding can be targeted exclusively on the transport networks. Alternatively, private funding could be mobilized to the full by permitting

the private sector to administer transport infrastructures free of all public controls, on the assumption that such a system would create the conditions for its own profitability.

These are, of course, two extreme theoretical solutions. The first would, in any case, not release enough resources from the public coffers to meet the enormous costs of creating transport infrastructures. The second would still call for public intervention to protect the private investors from the creation of other infrastructures in competition with those administered by them: an important element of the profitability required from an investment is **liquidity**, but infrastructural investment is by definition of low liquidity, and therefore calls for higher profit levels, and, therefore, high user charges, which would have the effect of driving potential users to utilize other infrastructures or modes.

In practice, the funding of the transport networks will have to be a joint effort of both public and private sectors; complementary to this, public policy will have to take due account of the profit requirements of investment. This means that the Community, and, in more general terms, any public administration involved in the creation and management of the transport networks, will have to deal with the associated problems from a perspective which is different from the traditional approach of public administrations to public works policy. New forms of financing will have to be devised so as to involve both public and private funds in one single infrastructure in the most effective way possible.

This means that the public authorities concerned will have to adopt a global concept of the financial function, going beyond the notion of the 'treasury' and capable of using all the state-of-the-art instruments of financial engineering. This means creating suitable organizational structures with the capacity to manage a form of financial know-how which has not traditionally been part of the apparatus of 'capability' required of an administrative body.

This point will be further developed later on in this document.

I - THE LEGAL FRAMEWORK

1. The trans-European networks within the framework of the Treaty

Title XII of the Treaty on European Union makes provision for trans-European networks.

Article 129b sets out in legal terms the considerations outlined in the introduction concerning the role and nature of the trans-European networks, which are defined as '**transport, telecommunications and energy infrastructures**' aimed at establishing the internal market and achieving economic and social cohesion. The European Community is to **contribute** to the establishment and development of such networks by promoting '**the interconnection and interoperability of national networks as well as access to such networks**'.

The words highlighted in bold are important concepts for the notion of trans-European networks: they set out the scope within which the networks shall operate, they enshrine the principle of subsidiarity (the word 'contribute' implies that action shall taken be mainly by the Member States) and, lastly, they define the objectives (interconnection, interoperability and access) which establish the functional relationship between an infrastructure and the national networks, thereby justifying Community intervention irrespective of the structural importance of the project.

These aspects of conception, scope and objectives are of primarily political importance; of more specifically legal import is the principle of subsidiarity, which is governed, in general terms, by Article 3b of the TEU and the four limits it sets on Community action, namely:

- **competence**: the Community, unlike the Member States, should not intervene in areas where it is not specifically empowered to do so by virtue of the Treaty; it does not, therefore, possess the general competence that characterizes a state;
- **complementarity**: Community intervention is additional to that of the Member States, rather than replacing it, and only applies where Member State action is insufficient;
- **the scale of intervention**: an intervention is considered justified where its size and effects have a Community dimension;
- **proportionality** between the action and the objectives of the Treaty.

These limits should be considered from the perspective of the functions attributed by the Treaty in the area of trans-European networks: the Community, under the first indent of Article 129c of the Treaty, is responsible for the functions of **orientation** and **harmonization**, and participates in the function of **financing**. The second indent of the same article reserves the **coordination** of national policies to the Member States.

It should be noted, in particular, that the task of orientation allotted to the Community implies the recognition that the development of large-scale infrastructures is an objective which can be more fully achieved if it is defined at Community level; the principle of subsidiarity is thus subject to the criterion of scale.

The limiting effects of the principle of subsidiarity are clearly visible, in relation to the orientation function, in the requirement that guidelines and projects of common interest must be approved by

the Member State whose territory is concerned¹. This amounts to a substantive right of veto, which means that Community decisions do not automatically prevail over the choices of the national authorities; in some national systems and in some cases, however, what is involved may be a transfer of the decision-making power from regional to central government. This may occur where certain projects which, under the national law of a Member State, are a matter for regional government are incorporated into a trans-European network: in such cases, the EU is to adopt its own guidelines, which must then be approved on a territorial basis by the Member State concerned - generally by the central government, unless national law provides for the participation of regional governments in deciding national positions on Community matters. This aspect, although not falling entirely within the brief of the present document, is mentioned here as evidence that the application of the principle of subsidiarity can have unexpected effects at the level of national law.

The principle of subsidiarity has two effects on the financing of the trans-European networks: one tends to extend the Community's role while the other acts as a brake on it. The first (extending) effect relates to the projects themselves, which may be of a dimension such that they can only be financed (here the criterion of **scale** comes into play with respect to subsidiarity) thanks to their effect in terms of interconnection, interoperability and access on the entire trans-European network viewed as such (using the criterion of **proportion**). An example here might be an urban bypass which becomes of Community significance by being connected to European-scale motorways and facilitating access to them. The second (limiting) effect concerns **complementarity** in respect of the Member State intervention permitted under Article 129c (third indent), as already discussed in detail. It will here be sufficient to point out that the principle of complementarity as applied to funding does not give the Member State concerned the power to veto the project: this power is already exercised by the Member States in relation to the definition of guidelines and operational projects, under Article 129d (second paragraph). It does, however, make Member States responsible for allocating national funding to projects forming part of the trans-European networks, and makes it clear that without such national funding no Community contribution will be forthcoming for such projects.

The Community has no part to play in the coordination aspect: its role is confined to that of a 'related' authority, which, in effect, simply has to be informed. It is clear that there was no desire to allow the Community any possibility of intervening in national policies where express provision is not made to that end in the Treaty; it may therefore be said that this exclusion is a result, not of the principle of subsidiarity, but of that of the **specific nature** of the Community's powers.

In conclusion, the policy for the trans-European networks should be viewed, in the overall context of Community policies, as a horizontal policy - i.e. a means of integrating diverse policies to achieve ends of a general character, namely cohesion and the internal market. By virtue of this policy, the Community has, for the first time, acquired competences affecting the sphere of territorial planning. In view of the intimate relationship of this area to the exercise of sovereignty, according to the traditional conception of the nation-state, the Community's powers in the matter are subject to the maximum degree of limitation, entailing, on the legislative level, strict application of the principle of subsidiarity.

2. Guidelines and harmonization

¹Article 129d of the Treaty

Article 129c of the Treaty gives the Community the function of orientation and harmonization in the area of the trans-European networks. The first task consists of the definition of the objectives, priorities and broad lines of the measures envisaged. These are all contained in one act, the establishment of **guidelines** which are also to identify **projects of common interest**. The task of laying down guidelines therefore consists of two separate stages in the process of deciding on public policies: the definition of strategy and the planning of operations.

The Treaty does not specify the substance of the guidelines, thereby giving the Union the broadest possible measure of freedom as regards its strategy for achieving the aims laid down in Article 129b of the Treaty. The Commission's decision on Community guidelines for the development of the trans-European networks¹ sets out the objectives, priorities and broad lines of action for the various modes of transport, including the choices already made in respect of some modes of transport in the **outline plans**².

Under the guidelines, **projects of common interest** constitute the real planning stage and consist of identifying the infrastructure or specific operation which, coordinated with others, will make up the network. The terms 'infrastructure' or 'operation' have been used as a specific project can also take the form of adapting existing infrastructure to enable it to be incorporated into the network.

One of the fundamental provisions relating to the projects is their 'potential economic viability', which the Community's activities must take into account (final subparagraph of Article 129c(1) of the Treaty). This provision enshrines the principle of granting contributions from the Structural Funds; it applies not only to the financing function but also to the Community's responsibilities for laying down guidelines, as can be seen from both the clear reference to **the Community's activities** and from the fact that the whole concept of networks policy implies that guidelines have a planning function, which in turn presupposes an appraisal of economic potential quite apart from financing

The second paragraph of Article 129d of the Treaty states: 'Guidelines and projects of common interest which relate to the territory of a Member State shall require the approval of the Member State concerned.'

¹European Parliament and Council Decision No 1626/96 of 23 July 1996, OJ L 228, 9.9.1996

²Council Decisions Nos 93/628, 93/629 and 93/630/EEC of 29 October 1993 on **the creation of a trans-European combined transport network, the creation of a trans-European network and the creation of a trans-European inland waterway network** (OJ L 305, 10.12.1993). Previously, on 17 December 1990, the Council had adopted a resolution on **the development of a European high-speed train network** (OJ C 33, 8.2.1991).

This provision, which lends itself to clear interpretation, is the most obvious example of the application of the principle of subsidiarity to trans-European networks policy, as mentioned in section 5 of this chapter, and represents the clearest possible limitation of the Community's responsibility in the matter of laying down guidelines.

The Community's responsibility for establishing guidelines is deliberately linked to its responsibility for **standardization** as provided for in the second indent of Article 129c, which gives the Union the power to adopt any measures which may prove necessary to ensure the interoperability of the networks, in particular in the field of technical standardization. This effectively amounts to a specification of the general power to harmonize legislation provided for in Article 100 of the Treaty. It is rendered necessary by the nature of the trans-European networks, which are instrumental in the establishment of the internal market, and in respect of which it would be difficult to apply Article 100 directly, in that this concerns the free movement of goods, services and persons in relation to the establishment of a common market and certainly does not concern the technical specifications of public works.

As far as the responsibility for establishing guidelines is concerned, provision is made for the codecision procedure, while responsibility for standardization is governed by the provisions of Article 189c.

The initial definition of the guidelines for the trans-European networks¹ was adopted only after considerable vicissitudes. This points up the existence of a high degree of competition, not only between Parliament and the Council, but also between the former and the Member States. The latter, following the Copenhagen European Council of June 1993 (in other words prior to the Treaty of Maastricht), asked the Commission to set up a **group of personal representatives of the heads of state and government**, generally known as the *Christophersen Group* from the name of the Commissioner chairing it.

This group indicated a number of **priority projects** in the field of infrastructure, which were adopted by the Corfu and Essen European Councils (both in 1994). The notion of a **priority project** is not based on any legislative text. Rather, it has been imposed on the political debate on policies and has heavily conditioned it: it has swiftly become clear that funding for the networks will be concentrated on - if not completely absorbed by - the priority projects within the *indicative* guidelines².

If the aim is to provide the priority projects, on an ex-post basis and with full awareness of the interpretative force involved, with a legal basis, the present writer's view is that this could be furnished by the second paragraph of Article 129d of the Treaty, which gives any Member State the power to approve guidelines and projects of common interest relating to its territory. From this perspective, priority projects would entail the exercise of that power, but in a form agreed with the other Member States and prior to the adoption of the actual guidelines.

¹1692/96, 23.7.1996

²See Article 19 of the decision on the **guidelines**, as cited above. This article ('**Specific projects**') carefully avoids the actual term '*specific projects*', confining itself to defining as such *those to which particular importance was attributed by the Essen European Council*. Annex III contains the **list of the fourteen projects pre-selected by the Essen European Council of 9 and 10 December 1994**.

3. The role of financing in general

The Community's responsibility for financing is governed in the Treaty by the third indent of Article 129c(1), which sets out certain requirements for eligibility for Community financing:

- projects must be of common interest and **identified in the framework of the guidelines provided for in the field of trans-European networks;**
- such projects must be **financed by the Member States;**
- the Community may **support** the financial efforts by the Member States.

The first requirement means that projects which are not provided for in the guideline instruments mentioned in the previous section are not eligible for financing. This represents an innovation in the Community financing system in that, unlike the practice followed hitherto in respect of the Structural Funds, involving the appraisal of projects drawn up independently by applicant bodies, the Union alone is responsible for the definition of the project in the field of trans-European networks and the national authority draws up the project and oversees its implementation. Eligibility is therefore determined by the choice of the project and not its implementing arrangements, and this has the effect of separating the evaluation of conformity with Community policies from the guideline function, which can therefore focus on the implementing arrangements and, above all, the project's compatibility with the environment.

The second and third requirements raise a question of interpretation: *can the European Community take measures to finance a project in the absence of any financing from the Member State?* The problem arises solely in the case of infrastructure funded by private investment, since it appears indisputable that when we speak of a **Member State** we mean not only the national state but also its components: regional and local authorities or even non-territorial bodies which construct or operate infrastructure.

As far as the financing of private projects is concerned, the question has not been fully examined in law, inter alia because it has not actually arisen to date. The expert who has dealt with this question¹ rules out the possibility of the European Community providing funding for projects, including those laid down in the guidelines, in respect of which a private individual has not first applied for state funding. If we consider the actual provisions of the Treaty it is hard to disagree with this view and, given that the third indent of Article 129c expressly refers to the Cohesion Fund for the trans-European transport networks, it should be pointed out that Article 3 of the Council Regulation establishing that Fund stipulates that state financing is a condition for assistance from it. However, the fact that this is provided for in the regulation and not in the Treaty introduces greater flexibility with regard to transport networks should the Community financing of private projects become a pressing issue in the future. It should be pointed out that it is not a pressing issue at the moment, as trans-European infrastructures generally meet the requirement of state financing; the only major private project, indeed, has been the Channel Tunnel, and this in any case has received funding from the EIB.

4. The use of funds expressly allocated to the trans-European networks

¹As far as the present author is concerned, this question has been dealt with by J.A. Vinois in a document entitled 'Les réseaux transeuropéens: une nouvelle dimension donnée au Marché unique', in 'Revue du Marché unique européen', No 1 (93) p. 106.

The funds in question are governed by a specific Regulation¹, which is inspired by the principle of subsidiarity and is aimed at *strengthening the participation of private capital in the financing of the trans-European networks and developing partnership between public and private sectors*². This concerns all the networks, in implementation of the relevant provisions of the Treaty of Maastricht, it lays down the specific forms and arrangements for Community intervention on the basis of the funds concerned.

In this connection, it seems desirable to explain the differences between the respective purposes of the Community funds with which we are concerned in this section and the (more important) structural Funds and Cohesion Fund, which are also sources of financing for the networks but are not subject to the regulation in question. It is precisely these differences of purpose which justify the 'stretching' of criteria which can be considered to exist in the financing of the trans-European networks: The *purpose* of the Structural Funds and the Cohesion Fund is regional, social or agricultural development, according to the cases concerned (our main interest here is in the first), and the financing of the networks is an instrument to that end; by contrast, the *purpose* of the funds referred to in the title of this section is the establishment of the networks, with development being conceived as an indirect effect.

The 1995 regulation is also intended to deal with a number of problems emerging both from a careful reading of the Treaty rules and from certain circumstances. What is involved here is, in particular, a broad interpretation of the concept of **state funding**, to which Community funding is seen as complementary: funding from bodies *comparable to public bodies* is considered to be equivalent to state funding. By this means, recourse to private capital to fund infrastructures - a strategy which, as seen in the previous section, is excluded in the Treaty text - represents a step forward, based on the pragmatic consideration that it is unlikely that an infrastructure would not receive some degree of funding from some body falling within the broadly-defined category of 'public funding' employed in the Regulation, which covers funding not only by central government and regional and local authorities but also by *bodies operating in an administrative or legal context rendering them comparable to public bodies, in particular public or private enterprises which administer public services or services of general interest*³.

¹Regulation 2236/95 of 18 September 1995, **laying down general rules for the granting of Community financial aid in the area of trans-European networks** - OJ L 228, 23.9.1995, p. 1. In the present section, all references to articles or recitals should, unless otherwise stated, be taken as being to the text of this regulation.

²Eighth recital

³Article 2(2)

The Community contribution may take the following forms¹

- a) cofinancing of feasibility and preparatory studies and of technical support measures up to a maximum of 50% of the total cost of a study (other than in exceptional cases);
- b) interest subsidies on loans for a maximum period not normally exceeding five years;
- c) contribution to loan guarantee premiums;
- d) direct subsidies.

The above forms of contribution (a to d) may be taken together to maximize their impact, but may be used only on a selective basis, taking account of the specific characteristics of the networks concerned: in other words, they may only be used for projects which are of particular importance for the pursuit of the objectives laid down in Article 129b of the Treaty and specified in the guidelines (what is involved here is the first selection criterion for projects considered eligible for Community aid).

Before examining the mechanisms by which Community support is granted, it should be made clear that support may be given, on a differentiated basis², to both **studies** and **projects**³; this is of particular importance for the financing of the studies for environmental impact assessment, as required in applications for project funding. The distinction between types of request means that it is possible to obtain initial funding for feasibility studies, including environmental impact assessment⁴, with this first request being followed by separate funding for the project itself.

The conditions for eligibility for funding are: the existence of **financial obstacles**⁵ to the project; and its being **in conformity with Community law and policies**⁶, with particular reference to environment policy, competition policy and policy on public contracts. The first condition is a

¹Article 4

²This distinction is implicitly made in Article 9 (on the documents to be submitted in support of the request for funding).

³The term *project* is to be taken as referring to projects of common interest identified in the guidelines, and also to parts of those projects which *constitute technically and financially independent units* (Article 2(1)). The broad nature of this definition is probably a response to the need to allow projects to be carried out on a piecemeal basis in a period when public funds are limited.

⁴Environmental impact assessment is regulated by Directive 85/337/EEC of 27 June 1985 on **the assessment of the effects of certain public and private projects on the environment** (OJ L 175, 5.7.1985), p. 40.

⁵Article 5, first section

⁶Article 7

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consequence of the principle of subsidiarity, while the second derives from the general principles of legality (for the legal aspect) and coherence (as regards policies).

The selection criteria¹, apart from the obvious general criterion of the pursuit of the Community's objectives in the field of the trans-European networks, concern the networks' *potential economic dynamism*, that is, their capacity to generate positive economic effects over a reasonable period of time², and their *insufficient profitability*, on the basis of the evaluation made at the time of the request for funding. The effect of these criteria is to give priority to projects which, despite their economic utility, are less likely to attract private funding³. This, of course, does not mean that private participation is in itself a proof of profitability ruling out the need for Community finance; the point is, rather, that the aim of Community funding is to reduce costs and therefore enhance profitability, with the precise objective of encouraging private participation in the project. Other criteria are:

- the *maturity of the project*, i.e. it should have reached a stage where its execution may be expected to take place within a reasonable time;
- the *stimulating effect of Community intervention on public and private financing*, i.e. the marginal utility of Community aid;
- the *solidity of the financial backing for the project*: this is the corollary of the preceding criterion, and relates to the synergies achieved by the various funding sources;
- the *direct and indirect socio-economic repercussions, particularly on employment*;
- the *environmental impact*⁴: the present writer considers that this criterion should entail not only the environmental impact assessment provided for in the Community directives concerning public works, which is already a prerequisite for eligibility, but also a global comparative assessment in relation to other competing projects;

The Community contribution may not exceed the minimal level considered to be necessary for the project to be launched, or 10% of total investment costs (account is not taken of the distinction, as referred to above, between studies and projects). The sole restriction is that there may be no duplication of funding from the Community budget⁵.

¹Article 6

²The notion of a *reasonable* period means a period proportionate to the extent of investment and the 'life' of the infrastructure concerned.

³The criterion of insufficient profitability may be considered in terms of financial obstacles and, therefore, the principle of subsidiarity, but it may also, and more specifically, refer not to an insufficiency of state funding but to the fact that the infrastructure concerned is not likely to attract private capital.

⁴This criterion derives from the practical application to the trans-European networks of Article 130r of the Treaty (second paragraph, last sentence): '*Environmental protection requirements must be integrated into the definition and implementation of other Community policies*'.

⁵Article 5(2), (3) and (4)

The regulation also governs: **coordination**¹ (carried out by the Commission) of the projects financed under it with other projects funded from the Community budget or by other EC financial instruments, EIB loans included; **monitoring and assessment**² (carried out by the Commission and the Member States) to verify the effective use of Community funds; and **financial control**³, aimed at ensuring that the funds have been properly used and preventing and punishing fraud.

5. Coordination

Article 129c(2) of the Treaty confers responsibility for coordination not on the Community but on the Member States, which are to coordinate the policies pursued at national level which may have a significant impact on trans-European networks. Such coordination is to be carried out in liaison with the Commission, which may take initiatives to promote such coordination.

The text of the provision presents problems of interpretation. It stipulates that 'the Member States shall coordinate **among themselves** ...'. As the aim is to coordinate national policies in accordance with Community networks policy, each state must coordinate its own policies (infrastructure, regional planning and financing policies above all) with Community policy, and as this effectively amounts to a form of 'vertical' coordination, it is hard to see why the phrase '**among themselves**' should have been included, as this would seem to imply 'horizontal' coordination among national policies.

6. Legal aspects of private sector involvement

The specific aims of this working document require an outline of the legal forms through which the private sector can become involved in trans-European network projects.

Traditionally, those public authorities which have not felt it necessary to carry out an infrastructure project directly have resorted to a **public works contract**, i.e. a contract under private law which, under the legal systems of some states, takes on a public dimension when used by a public authority and is partly governed by Community directives, inter alia with a view to ensuring that all Community undertakings have access to the lucrative public works market without discrimination on the basis of nationality.

The contract can be defined as one of 'do ut facias', on the basis of which a party to the contract, the **commissioning body**, entrusts a **contractor** with the task of carrying out a project or service for an agreed price (usually with safeguard clauses against cost increases for which the contractor is not responsible). The contract relieves the public authorities of the technical task of carrying out a project for which they are often unsuited in terms of their structures and professional skills, and protects them to a certain extent from cost increases. This presupposes, however, that the public authority must bear the full costs at the end of the project or, more often, at the end of various stages of the work.

¹Article 14

²Article 15

³Article 12

As the creation of trans-European networks coincides with a period of scarce public resources, the public works contract does not appear to be a suitable instrument, since it does not resolve the fundamental problem of financing. The most suitable instruments for involving private capital in a way that does not have repercussions, or has less repercussions, for public finances are those which entrust infrastructure management, at least on a temporary basis, to the private sector.

Financial engineering has, on a case-by-case basis, devised various formulas for the participation of private capital, of which all, or nearly all, may be considered variants of the arrangement known in the English-speaking world as **BOT** (Build, Operate, Transfer), i.e. a contractual relationship on the basis of which an undertaking carries out a project using its own capital or, at any rate, capital directly raised on the financial markets, manages it for a period of time agreed in advance as being sufficient for recouping the capital outlay and yielding a profit, and finally transfers it to the commissioning public authority.

This formula corresponds broadly to that of **concession**, an aspect of administrative law which is common in the legal systems of the countries of continental Europe. This gives the **concessionaire** the right to manage a public asset for a given period of time, generally very long, at the end of which the asset reverts fully to the public authority. The original idea of concession was not necessarily linked to the execution of a project or to works carried out on a public asset, but it has often been used in conjunction with a commission¹. In such cases the management period is aimed at allowing the concessionaire, who has sustained the costs of the project, to cover his costs and make a profit, which will depend on the extent to which the infrastructure is actually used.

In the English-speaking world there are several variations on the **BOT** theme, including: **BOOT** (Build, Own, Operate, Transfer), whereby the constructor owns the infrastructure during the management period and the final transfer to the state therefore includes ownership which, under the normal arrangement, reverts to the commissioning body upon the completion of the project; and **BOO** (Build, Own, Operate), which does not provide for transfer to the state, with the infrastructure hence remaining privately owned and managed. A further variant, substantially identical to **BOO**, is **DBFO** (Design, Build, Finance, Operate), a designation which appears to emphasize elements not specified in the BOT acronym, rather than concealing a real difference.

¹For example, nearly all the Italian motorway network was built under this formula, but the constructors and managers were almost all state-funded. This formula was not characterized by the advantages of a minor public investment, but did permit the construction of an infrastructure with the greater operational flexibility of a private-sector undertaking and allow the costs of the infrastructure to be internalized via a system of tolls fixed by the managing authority.

II. - THE OBJECTIVES AND SPECIFICATION OF PROJECTS

1. The Copenhagen European Council and the launch of the trans-European networks

The trans-European networks constitute an infrastructures policy involving various communications systems, aimed at facilitating trade in the single market in a pan-European context and promoting economic and social cohesion. This policy can be used for the purposes of job creation, both at the construction stage and subsequently, in the context of managing the networks, although this employment aspect of the policy does not influence the specification of the networks as such, which remains anchored to the primary objectives.

The policy for trans-European networks was launched by the Copenhagen European Council of June 1993, which focused on the problems of **growth, competitiveness and unemployment** and decided on short- and medium-term measures.

The proposed short-term measures included the promotion of both private and public investment. With respect to the latter, Member States were called upon to make provision in their budgets for financing infrastructures, while at Community level the European Council underlined *the importance of fully exploiting the new provisions in the Maastricht Treaty relating to the promotion of trans-European networks of the highest quality, in the context of promoting economic and industrial growth, cohesion and the effective functioning of the internal market and encouraging European industry to make full use of modern information technology*¹.

On the basis of the above premises and the Commission's medium-term plan for economic revival entitled '**Entering the 21st century**', the European Council called on the Commission to present a White Paper on 'Growth, Competitiveness and Employment' for consideration at the following European Council (Brussels, December 1993), as well as draft guidelines for sustainable, non-inflationary and environment-friendly growth. It also called for the plans relating to trans-European networks to be completed by early 1994. For the first time, therefore, this policy is linked with employment policy in a Community document.

2. Growth, Competitiveness and Employment: the macroeconomic framework

¹The European Council in Copenhagen, 21-22 June 1993, Conclusions of the Presidency in the Bulletin of European Parliament Activities No.1/S-93, p.5.

The White Paper¹ submitted by the Commission to the Brussels European Council in December 1993 includes the creation of the trans-European networks in the objectives set out in its title, and raises the question of the financing required by an ambitious infrastructures policy contributing in the medium-term to a healthy economy in which interest rates can be reduced, as a result of monetary stabilization, to a level that triggers the necessary investment for the modernization of the economy and the development of infrastructures. In order for this monetary stabilization to be achieved, public deficits will first need to be reduced, thereby leading to an increase in public saving. The White Paper therefore advocates that Member States make a concerted effort to curb operating expenditure in such a way as to restrict public spending without curtailing investment or jeopardizing employment policy.

The major effort required is in line with the approach to financial policy introduced by Article 104c and Protocol No 5 to the Treaty, but is incompatible with the short time-scales which the White Paper lays down, in the wake of successive resolutions by the Community institutions, for the creation of infrastructures, for which massive short-term investment is necessary. At the same time, the public resources available for transport infrastructure are by now extremely limited, as is highlighted in the Commission's fifteenth report on **spending on and use of rail, road and inland waterway transport infrastructures**².

The White Paper proposes recourse to private-sector funding as a solution. This could be done by the traditional method of issuing state bonds; however, the financial impact could be such as to jeopardize the containment of the public deficit in the context of the objectives of economic policy and, therefore, the imperatives of the Treaty itself.

It follows that new means of involving private capital must be explored.

3. The role of the trans-European networks

Despite the contradictory financial aspects described above, the Commission sees the trans-European networks as a trigger for the recovery of the European economy. The networks have a fourfold role, namely:

- ensuring more efficient, safer travel at lower cost;
- achieving effective planning in Europe;
- bridge-building towards Eastern Europe;
- contributing to technological development.

The first role involves the concept of **sustainable mobility**, i.e. a transport system which, by minimizing congestion, not only allows the means of transport to operate faster, hence reducing costs facilitating trade and thus contributing to a more integrated and competitive single market, but also reduces waste and is consequently more environment-friendly.

¹'**Growth, Competitiveness, etc**', as cited above

²COM(94)0047

The latter improvement, which is a fundamental aspect of planning in that it involves safeguarding natural resources, is linked in certain ways to the second role, i.e. achieving **economic and social cohesion**, which is one of the tasks conferred on the trans-European networks by Article 129b of the Treaty on European Union. A more efficient communications system will help overcome the isolation of the peripheral regions and contribute to the development of the less-favoured areas, with a spin-off for the Community's GDP.

The third role consists of encouraging growth through trade with the **countries of Eastern Europe**: this will not only benefit undertakings but will also boost the development of the Eastern European countries, which is one of the European Union's major goals in a perspective that is not purely economic.

The 'fourth role' of the trans-European networks - their contribution to the encouragement of **technological development** - refers primarily to the telecommunications and energy networks, whose infrastructures have a substantial technological content. However, the transport networks also have a contribution to make in this connection, as several of them are based on advanced technology, while for others major technical problems have to be resolved in relation either to civil engineering (as in the case of the Brenner tunnel) or to state-of-the-art technologies permitting interoperability among transport modes. The technological areas of interest to the trans-European networks are various, ranging from information technology (planning and reservation for combined transport) to environmental and transport engineering and new materials. In these sectors, it is important for Europe to close the existing gap between it and its direct competitors, the US and Japan.

At the beginning of this chapter reference was made to the potential job-creating role of the infrastructures, both in the construction phase and at a more advanced stage by reason of their contribution to economic growth.

Job creation through public works happens directly through the actual employment of workers on the sites. It also occurs indirectly, thanks to the knock-on effects on other sectors of the economy (which furnish machines and construction materials) and to the more general economic effects arising from increased private consumption made possible by higher wage and investment levels. Once the infrastructure is actually being used, job creation is both direct (i.e. related to the management of the project) and indirect (i.e. arising from the project's favourable impact on the circulation of goods and persons, and, therefore, on overall economic growth).

The final report of the Christophersen Group¹ takes the position that the substantial investment required for the 34 projects proposed (ECU 100 bn over fifteen years) will have only a small direct impact on economic factors (equivalent to 0.1% of total growth), creating between 100 000 and 200 000 jobs, and a somewhat larger indirect effect (0.3% of GDP and 400 000 jobs). More significant, if not in quantitative terms, will be the effects of the transport infrastructures at the utilization stage, especially on regional development; the report argues that *improved access to the*

¹Group of the personal representatives of the heads of state of government: 'Trans-European networks' (final report, Luxembourg: EC Publications Office, 1995), p. 39. Further information on this group (generally called the Christophersen Group after its chairman) may be found in the fifth section of this chapter.

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central poles of activity of the Union will help boost competitiveness of the regions concerned and the undertakings located there¹.

¹Ibid.; the Christophersen report frankly admits the existence of a circumstance which has in some circles been seen as a breach of Article 129b of the Treaty, namely the priority given to infrastructure creation in the Union's central regions rather than in the peripheral and island regions.

The Commission's most recent estimates¹, based on the examination of the fourteen priority projects², paint a different picture: the construction of the networks should create 700 000 jobs per year over the ten-year period 1998-2007; and in the long term, thanks to an accumulated increase in GDP of ECU 560 bn by 2030, corresponding to a rise in socio-economic profitability of 11%, the number of jobs created in the EU economy should be between 130 000 and 230 000. The corresponding data for the entire network are estimated at 3 200 000 jobs per year (for its construction as a whole over the period 1998-2007) and between 594 000 and 1 030 000 jobs in the long term.

The Commission's forecasts go even further: it predicts that, on the basis of an agreement with the workers concerned to convert the productivity gains into jobs rather than wage increases, a long-term increase in employment could be brought about (570 000 units for the fourteen priority projects and 4 700 000 units for the entire network).

4. Principles of policy and architecture for the trans-European networks

Reference has already been made to the principle of **sustainable mobility**, which underlies the common transport policy, and to that of **interoperability**, which is a corollary of the former and refers, in particular, to the integration of transport modes, that is, the possibility of persons or goods using more than one means of transport over a single journey, with the least possible difficulty in transferring and the minimum of waiting time at the interface site.

The trans-European network described in the preceding section will have a key role in turning these principles into reality; this aspect is that most closely connected to the function of the network as such.

Interoperability benefits the user, the transporter and the community. Users benefit from a higher quality of transport, with less stress (for both persons and animals), improved safety³ and reduced journey times. These benefits operate on the economic and psychological levels and that of physical integrity. The transporter gains in terms of reduced journey times and more efficient use of the

¹Commission communication: '**Trans-European networks: annual report 1996**', COM(96)0645, p. 25

²Cf. this chapter: sections 5 and 6 and annex.

³Interoperability contributes to safety in a number of ways. Greater ease of transfer reduces the possibility of damage to persons and goods during transfer; and improved coordination of journeys and timetables should result in more even operation of transport means and help prevent the bottlenecks which are often the cause of accidents.

transport means themselves, thus benefiting in economic terms; in addition, higher safety standards, while primarily an immaterial factor, also have a positive effect on companies' balance-sheets by reducing insurance premiums. Finally, the community gains on the economic level from having more efficient transport systems, with less waste of energy and, therefore, improved levels of environmental protection and greater well-being resulting from improved safety.

It should be stressed that any mode of transport can be the ideal solution for a particular route or distance, and that the secret of an efficient transport system lies in using the right mixture of modes, with each mode applied to the routes that best bring out its potential at the lowest cost¹.

The instruments for achieving interoperability include **combined transport**, **intermodal transport** and **interconnections**. The first notion, which is sometimes conceived separately, refers to the set of links permitting physical interoperability, that is, the transfer of goods from one vehicle to another, including vehicles belonging to different modes: the commonest example here is the container. **Intermodal transport** is a *system* of infrastructures, services and procedures permitting the integrated management of the persons and goods transported and of the vehicles used: an elementary example is the synchronization of the arrival of a train with the departure of a ferry, but today intermodal transport also uses computer and telematic resources to offer high levels of integration. **Interconnection** is the most specifically infrastructural aspect of interoperability, and consists of the linking up of public works with services corresponding to the various modes: for instance, the connection of a port with the rail network. A more modern concept of integration would also include the intermodal systems referred to above.

The trans-European network is the sum total of the infrastructures which permit interoperability between modes and which must, therefore, conform to common specifications or **guidelines** defining the architecture of the network².

5. The history of the guidelines: the Christophersen Group

The philosophy of the trans-European networks may be dated back to the Copenhagen European Council, but the guidelines began to take shape in October 1993, with the adoption of three orientation plans³ for the following trans-European networks: **combined transport**, **roads** and

¹It should be recalled that interoperability does not in itself remove the distortions of competition between modes which may arise from different methods of charging for infrastructure costs. This is not the place to go into this delicate question: suffice it to say that these distortions may adversely affect the possibility of achieving an ideal mix of transport means for both the user and the community.

²In the political debate on the **guidelines**, attention has, understandably, been concentrated on the construction projects, but the philosophy of the network is based essentially on its architecture.

³OJ L 305, 10.12.1993

navigable waterways. The three operational plans took up guidelines already drawn up by the UN Economic Commission for Europe, thus involving a concept of integration embracing not only the Community but Europe as a whole; this perspective is, moreover a necessary consequence of traffic realities and is permitted under Title XII of the Treaty¹.

The White Paper on **growth, competitiveness and employment**, taking account of these guidelines, indicated 26 priority transport infrastructure projects to be launched over the following five years, at a cost of ECU 81.9 bn.

¹For a more detailed account of the operational schemes, cf. the first version of this document (Transport Series W-7, 1994).

The Brussels European Council, in the context of adoption of the White Paper, called on the Commission to undertake preliminary studies for the creation of the trans-European networks. The Community accordingly asked its Vice-President Mr Henning Christophersen to chair a working group¹, to consist of Member State representatives with EIB participation. This group adopted a 34-page **interim report**² containing proposals to be submitted to the Corfu European Council, relating to 34 projects, eleven of them being marked as 'priority', together with a study of the problems involved in establishing the networks. The Corfu European Council of June 1994 adopted the interim report and extended the mandate of the group, to enable it to submit the final report to the Essen European Council.

The group was confronted with problems as regards the ranking of the different proposals, in the absence of full information - a circumstance pointing, moreover, to the inchoate state of some of the projects. It therefore took a **bottom-up** approach, modelled on similar processes in company decision-making. This method is centred on 'workshops' on individual programmes, and has made it possible to obtain greater understanding of specific obstacles. The Commission will also apply this approach to the next stage, that of financing³, at which it will be necessary to identify the problems and devise practical solutions. The workshops include all the interested partners and the EIB, whose main concern is the detailed examination of the financial aspects. The results of this approach have been utilized in a decision-making process aimed at achieving as broad a consensus as possible, in line with the consolidated practice of the Community bodies constituted on a national basis.

Following the group's work⁴ and taking account of the accession in the meantime of Austria, Sweden and Finland, the number of projects referred to in the report is now 35. They fall into two categories: **priority projects**, i.e. those already begun or scheduled to begin by 1996 (14); and **other important projects** (21). The latter are further subdivided into: projects to be accelerated to allow them to begin within two years (9); and projects to be examined at a later date (12). In addition to the projects, the report includes five high-technology systems⁵, for which the Commission is to

¹This group is officially known as the **group of personal representatives of heads of state and government**.

²This text, which contains no supplementary material from the Commission, was adopted at the meeting of the group on 3 June 1994.

³Cf. the discussion below (in the next chapter) of the **high-level working group on public-private partnership**, commonly known as the *Kinnock group* after the name of its chairman.

⁴See the report of the group of personal representatives of the heads of state and government, 'Trans-European Networks ...', as cited above, Annex I.

⁵These concern: 1) road traffic control; 2) air traffic control; 3) navigation control; 4) multimodal positioning via satellite, as proposed in the White Paper; 5) pilot schemes for a rail traffic control system.

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submit operational proposals further to those provided for in the context of the networks, and seven projects for extending the network to third countries¹.

¹These projects are: 1) road/rail link: Berlin-Warsaw-Minsk (the most advanced); 2) motorway: Nuremberg-Prague; 3) fixed link (road and rail) over the Danube between Bulgaria and Romania; 4) multimodal corridor: Helsinki-St Petersburg-Moscow; 5) road/rail link: Trieste-Ljubljana-Budapest-Lviv-Kiev; 6) telematic platform (logistic management): Baltic Sea.

With respect to the value of the priority projects, the Christophersen Group has stated in its report, as adopted by the European Council, that *in the context of the selection criteria adopted by the Group, especially with regard to state of advancement and value-added prospects, it is not necessary to expect all the priority projects now at an advanced stage and accepted to correspond exactly to the general objectives or to the decisions set out in the guidelines*. The Group goes on to stress that *the lists contain all the important projects which could be launched in the near future if a targeted action is adopted*¹.

This affirmation is indicative of the main criterion underlying the work of the Group: the aim is to promote infrastructures on which work can be commenced rapidly, with a view to stimulating growth via the activity of construction. This is to the detriment of the objectives of the system set out in Article 129b of the Treaty, and also entails dissociating the priority projects from those for satellite and telematic monitoring of the system, which have smaller economic implications at the construction stage.

The priority projects were finally adopted at the Essen European Council of December 1994².

6. The history of the guidelines: the codecision procedure

The decision of the Essen European Council, like the work of the Christophersen Group preparatory to it, does not fall within the scope of the codecision procedure under the Treaty, and has been criticized in Parliament as being a stratagem aimed at forcing the elected institution to accept a fait accompli presented by the governments. The fait accompli also has legal implications: the funds from the Community budget expressly allocated to the trans-European networks may only go to projects included in the guidelines, and, therefore, should Parliament reject the Commission proposal comprising those projects they would no longer be eligible for Community financing via the funds in question.

The decisions of the European Council have thus had a major effect on the debate on the guidelines, and have distracted attention from the important innovation implied by the creation of an architecture for the integration of the various infrastructures in such a way as to permit interoperability between modes. This is the background to the Commission proposal on **Community guidelines for the development of the trans-European network**³, submitted on 7 April 1994. According to this proposal, the network may be defined as a *set of infrastructures, services and*

¹Report of the Christophersen Group, p. 10

²The priority projects are listed in the annex to this chapter, which sets out the projects as described in Annex III to the European Parliament and Council decision on the **guidelines**. (cf. the next paragraph). The 'other important projects' are listed in Chapter III, Table 2.

³COM(94)0106; OJ C 220, 8.8.1994

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management systems, whose smooth operation should permit the achievement of the following objectives:

- sustainable and safe mobility of persons and goods in line with the Community's environmental and social objectives;
- guaranteed interoperability and optimal use of existing capacities;
- coverage of the entire territory of the Union, including, in particular, the necessary links for the island, peripheral and remote regions, as well as the potential opening-up of the network towards other European countries and the Mediterranean basin countries;
- provision of users with infrastructures and services on the basis of acceptable economic conditions¹.

The trans-European network, which is to be created by 2010, will be divided into sub-networks for each mode or group of modal or intermodal infrastructures: *roads, railways, inland waterways, airports, combined transport, naval traffic information and control, and air traffic control*. Seaports are, where not forming part of one of the specific networks, considered to be interconnection infrastructures.

The Community is to carry out actions aimed at achieving the objectives, on the basis of priorities² defined in the guidelines. The definition of '**projects of common interest**' is interesting: such a project is one that is aimed at achieving the objectives of the guidelines, forms part of the trans-European network (in particular, within the Community's priority action areas), and has economic potential.

Two annexes set out the plan of the networks and the links and specifications. Also included is the list of infrastructures, setting out the priority projects indicated by the Christophersen Group (which were only at the discussion stage when the proposal was drawn up). One may here refer to the criticisms made by Parliament's rapporteur, Mr W. Piecyk, who considered the approach followed (insertion into the guidelines) to be *far from coherent*³, given that the projects are in some cases clearly specified but in others merely indicated on maps annexed to the Commission proposal. This lack of coherence is but one aspect of what is criticized as being a general characteristic of the proposals for projects of common interest (Annex II to the guidelines): as the rapporteur stresses, *do not correspond to the spirit or the objectives of the guidelines for the development of a trans-European network. The Union should draw up the guidelines for the definition of the major transport corridors and routes; this implies fixing priorities for certain projects, especially so as to eliminate bottlenecks and construct the missing links. At all events, no links of national interest should be indicated; this has nonetheless been done systematically in Annex II, section 2*⁴.

¹For the definition and objectives of the network, see Articles 2 and 3 of the Commission proposal; the list of objectives given here is a summary version of that set out in Article 2.

²The priorities, listed in Article 5, consist mainly of specifications of the objectives.

³EP session document A4-0096/95, p. 65

⁴*ibid.*, pp. 64-65. Annex II, section 2 concerns roads, the infrastructure type concerning

Parliament adopted the Commission proposal at first reading, amending it in various respects. Of most interest for present purposes is Parliament's introduction of a new Annex III specifying the priority projects to be realized by 2001. This annex was one of the most controversial points throughout the codecision procedure.

which the most criticisms have been made.

Annex III, which had been included by the Commission in its amended proposal¹, was removed by the Council in its common position, on the grounds that under Article 129c of the Treaty the codecision procedure should be applied only to projects of common interest defined in Annexes I and II, while priority for their realization would be defined, on the administrative level, on the basis of the criteria established by the financial Regulation for the trans-European networks². For its part, Parliament stressed - repeating its earlier position at the second reading - the political importance of the priority status of the projects of common interest already indicated in the other annexes being already made clear in the guidelines.

This divergence concerning the status of the priority projects in relation to the legislative procedure (codecision) or the subsequent execution phase of the guidelines is, in the present writer's opinion, symptomatic of a deeper institutional conflict over the roles of Parliament and the Council concerning the trans-European networks policy, as foreshadowed by the Essen decisions.

The dispute was resolved through the conciliation procedure: an Annex III was introduced which, in accordance with Article 19 of the guidelines, *sets out, on an indicative basis, the projects defined by Annexes I and II and the other provisions of the decision which the Essen European Council considered to be of particular importance.*³ This text is a compromise between the positions of the three institutions concerned by the conciliation. Parliament wanted a list of the projects of common interest considered suitable for Community funding; the Council and Commission did not want to eliminate the possibility of funding for the other projects set out in Annexes I and II. The Council, in particular, proposed listing the fourteen priority projects in a separate declaration. The text adopted includes a list of priority projects within the guidelines, in line with Parliament's demands;

¹COM(95)0298

²Regulation 2236/95

³At the conciliation, the Commission made a statement concerning this article, the following article (on intermodal transport) and Annex III, to the effect that *it confirmed that this decision would in no sense jeopardize the financial commitments of a Member State or the Community.*

nonetheless, the qualification to the effect that the list is *on an indicative basis* (Article 19) rules out exclusivity of funding¹.

¹The main dates and document references for the codecision procedure (COD94098) on the guidelines are as follows: Commission proposal - COM(94)0106, 7.4.1994 (OJ C 220, 8.8.1994); first reading of Parliament, 18 May 1995 (A4-0096/95); amended Commission proposal - COM(95)0298; common position - OJ C 331, 8.12.1995; second reading of Parliament, 13 December 1995 (A4-0292/95); common draft, 19 June 1996 (C4-0364/96); final vote in Parliament, 17 July 1996; final vote in Council, 23 July 1996. Decision 96/1692 was published in OJ L 228, 9.9.1996.

ANNEX

**LIST OF THE FOURTEEN PROJECTS PRE-SELECTED
BY THE ESSEN EUROPEAN COUNCIL (9-10 DECEMBER 1997)**

1. North-south high-speed rail link/combined transport: Nuremberg-Erfurt-Halle/Leipzig-Berlin-Brenner/Verona axis-Munich
2. High-speed rail link (Paris)-Brussels-Cologne-Amsterdam-London, subdivided as follows:
Belgium: from Brussels to the frontiers with France, Germany and the Netherlands (via Liège in the section to the Belgian-German frontier)
UK: London - access to the Channel Tunnel
Netherlands: Belgian-Netherlands frontier-Rotterdam-Amsterdam
Germany: (Aquisgrana) G 27 Cologne-Rhine/Main
3. South high-speed rail link: Madrid-Montpellier (via Barcelona and Perpignan) and -Dax (via Vitoria)
4. East high-speed rail link: Paris-Metz-Strasbourg-Appenweiler (Karlsruhe), with connections: Metz-Saarbrücken-Mannheim and Metz-Luxembourg
5. Conventional rail link/combined transport. Betuwe line from Rotterdam to the Netherlands-German frontier, towards the Rhine/Ruhr
6. High-speed rail link/combined transport: Lyon-Turin-Milan-Venice-Trieste
7. Greek motorways: Rio-Antirio, Patras-Athens-Thessaloniki-Promahon (Greek-Bulgarian frontier) and Via Egnatia; Igoumenitsa-Thessaloniki-Alexandropoulis-Ormenio (Greek-Bulgarian frontier)-Kipi (Greek-Turkish frontier)
8. Motorway: Lisbon-Valladolid
9. Conventional rail link: Cork-Dublin-Belfast-Larne-Stranraer
10. Malpensa airport (Milan)
11. Fixed rail/road link between Denmark and Sweden (fixed Øresund link), including road, rail and air access
12. Nordic triangle (road/rail)¹

¹This includes infrastructures relating to various modes linking up the three Nordic capitals (Copenhagen, Stockholm, Helsinki)

13. Road link: Ireland/UK/Benelux

14. West Coast main rail line¹

¹UK

III. THE PROJECTS: COSTS AND BENEFITS

1. The necessary investments

The total cost of the fourteen priority projects, including the ERMS¹, is estimated to be ECU 99 918 m (ECU 38 057 m for 1995-1999)². To these figures may be added the investments - forecast to be ECU 10 000 m by 1999³ - for the traffic management projects for the various modes, which, despite not being included in the guidelines and priority projects, are of fundamental importance for the general objectives of the trans-European networks. The other major projects call for investment to the tune of ECU 49 000 to 52 000 m⁴. The total investment required is between ECU 159 000 and 162 000 m up to 2010. Finally, the total cost of extending the network to third countries, insofar as reliable figures exist, will be ECU 12 296 m⁵.

For projects within the Union, investment will be supplied by the Member States, the private sector and the Community (via the ERDF and the Cohesion Fund, the relevant budget headings and the EIB and EIF credit instruments). For extensions to third countries, funding will come from the interested countries (including the relevant EU Member States), the Community development funds for the countries of central and eastern Europe (especially PHARE) and the EIB; other international financial institutions, in particular the EBRD, will also contribute. Private capital is also expected to be involved.

It should be stressed, however, that each individual project must be approached as a separate financial challenge. There are projects of a profitable nature which attract private capital (e.g. Betuwe), others which pose no difficulties (e.g. Malpensa), and still others for which major or minor obstacles exist.

One may, therefore, identify two types of problems: those specific to individual projects, and those of a general nature, consisting essentially in the determination of the instruments needed to obtain private-sector funding for the trans-European networks. These aspects, especially the general ones, had already been examined by the Christophersen Group; however, at the project implementation

¹European Rail Traffic Management System: for the integration of the priority high-speed projects,

²*Draft indicative multiannual programme of allocations for the trans-European networks* - communication by Mr Kinnock, 19 March 1996 (SEC(96)0483/6), table 2.

³*ibid.*, p. 10

⁴The amounts have been rounded to the nearest thousand, for the sum of the investments indicated for each project in table 2 of this chapter.

⁵This sum is specified in the text 'Trans-European networks ...' by the Christophersen Group, as referred to above. The projects for which calculations have been made include: the following road/rail links: Berlin-Moscow (ECU 2032.5 m); Dresden-Prague (ECU 1347.5 m); and (most ambitiously) Trieste-Kiev (ECU 7991 m); and the Nuremberg- Prague motorway.

stage it was felt necessary to follow them up in close relationship with the Member States and the private sector. September 1996 accordingly saw the creation of the **High-Level Public-Private Partnership Group**, with the aim of drawing up a report for the European Council to be held in Amsterdam in June 1997.

This group includes, apart from its chairman, Commissioner Kinnock, after whom it is generally known¹, the personal representatives of the transport ministers and twelve figures from the private sector - from the EIB and EIF, private banks, construction firms, management enterprises and the equipment industry. Mr Henning Christophersen is a member, ensuring continuity with the group chaired by himself. The work of the Kinnock Group is organized on the basis of a number of subgroups, at the moment five: of these, two are concerned with monitoring the financial aspects of the eastern and southern high-speed rail projects respectively - as priority projects posing specific problems - and three with horizontal aspects (*public-private partnership in the rail sector; legal and administrative questions; and economic and financial questions*), the aim being to overcome the obstacles to private-sector participation. A bottom-up approach is, then, taken, as in the case of the Christophersen Group². This working method has been necessary since the implementation phase of the projects already under way.

Table 1 of the present chapter offers a detailed picture of Community intervention for the various priority projects. A number of general considerations should be stressed in this context. Firstly, Community funding - i.e. financing from the Community budget - is dependent on the Treaty and on the limits assigned by the financial perspectives. While political imperatives imply the need to act on all the projects, there are some for which Community intervention is of greater marginal utility, by reason of the insufficiency of the other funding sources or as a means to stimulating private investment.

This entails the need for a greater Community input, which in turn calls for the modification of the financial perspectives. This would provide a stimulus for a number of high-speed rail projects, including - in the context of encouragement of private participation - the 'PBKAL' project (No 2), concerning which a specific subgroup has been set up within the Kinnock Group, and the Greek motorways project (No 7)³.

There remains the problem of funding for the other non-priority projects, both those adopted by the Essen European Council and those set out in the **Guidelines**, which also concern the Member States. Some of these are at an advanced stage of preparation, while for others it would be useful to promote public-private partnership via Community funding⁴.

2. Benefits and financial situation: high-speed rail projects⁵

¹This group will be referred to in future as the **Kinnock Group**.

²Cf. Chapter II, paragraph 5

³Draft programme (op. cit.), p. 8

⁴ibid., p. 10

⁵For the general benefits of the trans-European network, see the previous chapter. The

High-speed trains are a rail technology to which the EU attaches particular importance. The long-term plan is to create a Union-wide high-speed rail network. Accordingly, in addition to the five priority projects referred to in this section (those consisting exclusively of high-speed rail links) and in section 4 below (combined transport), a number of technical harmonization measures have been adopted, as well as a specific measure for traffic management, which forms an integral part of the priority projects.

The **PBKAL high-speed rail link** (Programme 2) concerns the route Paris-Brussels-Cologne-Amsterdam-London, and, therefore, involves a substantial number of Member States. By 2010 there is expected to be a heavy concentration of traffic on the lines linking Brussels to Paris and London, a large part of which will have its origin or final destination in Germany or the Netherlands. This will entail a figure of 20 m passengers per annum for each of the two lines converging on Brussels, and another 10 m for each of the lines between Brussels and Amsterdam and Aquisgrana. The effect of the project would be to reduce the journey time.

This project raises problems of financing, which could be resolved by a supplementary Community contribution in the order of ECU 430 m for the Belgium-Netherlands-UK sections.

The **southern high-speed rail link** (Programme 3) consists of two lines, linking Madrid to Perpignan (via Barcelona) and Dax (via Vitoria and Bilbao), whose purpose is to bring the entire Iberian peninsula closer to the central regions of the Union. This is a passenger transport project, with goods transport also included on certain sections, aimed at linking Iberia to the French high-speed rail network via the Basque country, passing near the Portuguese frontier. This project too will have the effect of speeding up international connections to the benefit of the peninsula, as well as shifting some areas of goods traffic from road to rail.

This project will be financed from the Cohesion Fund. Particular attention should be paid to the funding aspects of its Atlantic section.

The **eastern high-speed rail link** (Programme 4) will link Paris to Germany via Metz and Strasbourg, continuing to Karlsruhe, thus speeding up traffic between France, southern Germany and the countries of central and eastern Europe. This project has a specific crossborder role, and should, when fully operational, transport 15 m passengers, including 2m between the two countries directly concerned and another 1m between those countries, Luxembourg and Switzerland (which will be linked to the high-speed line using existing rail lines).

Financial problems arise largely in respect of the French section; a supplementary aid of ECU 230 m could speed up completion of the German part.

present section and those that follow set out various specific aspects of the benefits of each project and the related funding problems. These aspects are dealt with in the draft programme, as cited above, especially in Annex Iv and table 2.

3. Benefits and financial situation: conventional rail projects

The **conventional rail link in Ireland** (Programme 9) is of (mainly economic) interest to the two countries directly involved, namely Ireland and the UK (specifically, Northern Ireland). The project will have a particularly positive impact on rail transport in the province, improving capacity and quality. It is financed by the Cohesion Fund and the ERDF.

The **West coast main line** (Programme 14) is the British rail line constituting the northern continuation of the Channel tunnel. It will have a significant environment-friendly impact on goods traffic between Ireland, the UK, the Benelux countries and France.

Funding this project will require aid of at least ECU 100 m.

4. Benefits and financial situation: combined transport projects

The **high-speed rail/combined transport Berlin-Verona link** (Programme 1) is of great importance for trade between the Nordic countries, the Benelux countries, Germany and Italy, especially since half of Germany's shipments of exports by rail go to Italy. The completion of the Brenner line, which is supported by Austria, will permit the absorption of 80% of the expected level of goods transport between Germany and Italy in both directions, thus leading to a drastic reduction in road traffic with beneficial effects on the environment, a subject of great sensitivity to Austrians living near the existing road links. This project will have a positive impact on transport in Europe, even outside the Germany-Italy link, and will contribute to the competitiveness of European industry as a whole.

The studies for the construction of the main tunnel will require additional aid. More financial support should also speed up the Berlin-Nuremberg section.

BETUWE (Programme 5) is a combined transport/conventional rail link for goods traffic, which will connect the port of Rotterdam with the Rhine/Ruhr industrial region. Its traffic basin will include not only the countries directly concerned (Germany and the Netherlands), but also Austria and Italy, which are interested in links with what is Europe's biggest port. This project is particularly important, since it will give a stimulus to combined transport, impacting on the goods traffic between Germany and the Netherlands, which as things stand goes mainly by road (52.7 m tonnes in 1995). 16 m people will benefit from the consequent environmental improvement. Private-sector participation will apply.

The **high-speed rail/combined transport link between France and Italy** (Programme 6), linking Lyon to Trieste via Turin and Milan, concerns both passenger traffic (the high-speed train) and goods traffic (combined transport). It will connect the French network to the Balkan countries, passing through the most prosperous regions of Italy. This project should be considered in the context of an overall vision encompassing the PBKAL and high-speed rail (south) projects: the aim is to link up the Iberian peninsula, the UK, the Benelux countries and the countries directly concerned, and Eastern Europe. The combined-transport aspects of the policy should permit it to have a beneficial environmental impact. Traffic is predicted to rise by 75% for passengers and 50% for goods.

The Lyon-Turin section will require supplementary funding for the studies and certain operations relating to the main tunnel, which will constitute the project's crossborder element.

5. Benefits and financial situation: road projects

The **Greek motorway project** (Programme 7), which comprises a number of sections serving an area from the Mediterranean ports to the frontiers with Bulgaria and Turkey, will facilitate maritime and land transport links with the countries of south-east Europe its main interest is economic.

The private sector will be involved in the project. Additional aid will be needed to subsidize the interest payments on a loan of ECU 600 m.

The **Lisbon-Valladolid motorway** (Programme 8) is also of essentially economic importance, given Spain's role as Portugal's biggest trading partner. The project is also of significance for France and Germany, whose high-value exports to Portugal are at present transported mainly by road. Additional financial support would encourage private-sector input.

The Dublin European Council of December 1996 welcomed the proposal by the two Member States concerned for modifying the project in a multimodal direction, to incorporate a rail link and port and airport structures. This would permit a decisive improvement in the links between the Iberian peninsula and the central areas of the Union¹.

The **road link between Ireland, the UK and the Benelux countries** (Programme 13), while situated mainly in the UK, will also make an important contribution to Ireland's links with the rest of the Community. It will also have a beneficial impact on trade between the UK and the Benelux countries.

The Irish section will be supported by the Cohesion Fund.

6. Benefits and financial situation: other projects and mixed projects

The **Malpensa airport project** (Programme 10) will have positive repercussions, not only for northern Italy but also for movement of goods and persons in general between the Community and rest of the world: the project will allow the Milan airport system to handle over 20 m passengers. No financial problems are involved.

The **Øresund project** (Programme 11) consists of a road/rail link between Denmark and Sweden which will remove the need for ferry transfers and will reduce journey times. It is of basically economic interest, and concerns not only the countries directly interested but also traffic between Sweden and the central regions of the Community.

¹The Commission will submit a proposal for amendment of the **guidelines** to take account of this European Council decision.

The consortium responsible has asked for a contribution of approximately ECU 250 m.

The **Nordic triangle project** (Programme 12) consists of road/rail links between the three Nordic capitals, plus port and airport infrastructures. The links will, obviously, relate to the Øresund. This project will be important not only for the three countries directly interested but also for all those mentioned above in relation to the Øresund and, in view of the port proposals, for relations with the entire Baltic area and with Russia.

A higher Community contribution could stimulate private-sector participation in Finland and Sweden, thus accelerating the project (the maritime infrastructures included).

TABLE III/1 INVESTMENT AND COMMUNITY FUNDING - PRIORITY PROJECTS millions ECU

PRIORITY PROJECTS	Total cost	Investment		Aid for TENs(T) Decision 95	Funding regime								Present financial perspectives 1995-99	Requirements for meeting deficit 1997-99
		Estimate 95-99	Indicated Member State contributions		Requests 96	96	97	Extra requirements	98	Extra requirements	99	Extra requirements		
HST/combined transport Berlin-Verona	21925	3200	450	34.43	69	27	29	30	40	50	47	80	177	160
HST PBKAL	15754	7450	500	43.00	71	45	74	150	74	140	84	140	320	430
HST South	12870	1700	150	5.95	8	6	7		11	10	15	15	45	25
HST East	5100	3630	110	22.00	95	27	33	30	45	70	48	130	175	230
Betuwe	4117	1800	50	7.00	23	10	10		14	20	17	70	58	90
HST/combined transport Lyon-Turin	13230	4896	41	16.18	60	27	30	30	40	50	50	80	163	160
Greek motorways	6360	4510	290	6.00	29	8	8	30	11	15	12	15	45	60
Motorway Lisbon-Valladolid	970	866	93	0.00	4	4	3	10	4	10	4	10	15	30
Rail link/combined transport - Ireland	230	145	62	0.00	0	0	0		0		0		0	
Malpensa airport	1047	750	1880	1.80	4	1	2	3	2	6	5	6	12	15
Öresund	3647	3070	473	15.00	80	15	27	30	28	40	20	30	105	100
Nordic triangle	8780	3150	600	12.05	77	20	20		26	20	33	30	111	50
Road corridor Ireland-UK-Benelux	3340	1620	0	2.00	0	2	3		4		4		15	
Main West Coast line	2160	890	0	8.60	23	7	7	10	10	20	12	30	45	60
Controls/supervision HST network	380	380	10	7.50	23	11	15		15		15		64	
TOTAL	99918	38057	3017	181.51	566	210	268	323	324	451	366	636	1350	1410

**TABLE III/2
OTHER IMPORTANT PROJECTS¹**

1. Combined transport (various projects in Belgium, Germany, Spain, France and Italy)	3000
2. Spata airport (Athens).....	2000
3. Berlin airport.....	4100
4. Maurienne motorway (F).....	1000
5. Marateca-Elvas motorway (P)	396
6. High-speed rail links in Denmark.....	1800
7. Trans-Appennine motorway (Bologna-Florence)	3158
8. High-speed rail/combined transport link. 'Danube Axis' - Munich/Nuremberg-Vienna.....	4700
9. Nice-Cuneo motorway (F, I)	1900
10. Fixed link - Fehrman (DK).....	4500
11. Bari-Brindisi-Otranto motorway (I)	290
12. Rhine-Rhone canal (FR).....	2500
13. Seine-Escaut canal (FR)	1350
14. Elbe-Oder canal (D).....	650
15. Systematization of the Danube between Straubing and Vilshofen (D)	700

¹The 'other important projects' are those listed in section II of the Christophersen Group's report ('Trans-European networks ...', as cited above - Annex I). Projects 1 to 9 are considered to be *suitable for acceleration with a view to work beginning within two years* [i.e. from 1994]; the others are *to be examined in greater detail*. The sums are in m ECU.

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16. High-speed rail link: Randstad-German frontier (NL)	1560
17. Road corridor: Valencia-Zaragoza-Somport (ES)	1229
18. High-speed rail link Milan-Rome-Naples (I)	8300
19. Transrapid MLT ¹ Berlin-Hamburg.....	4700
20. High-speed rail link Luxembourg-Brussels ²	a) 85 b) 500
21. Road corridor Naples-Reggio Calabria ³	a) 1450 b) 3050

¹Magnetic levitation train

²Two options: a) remodelling of the existing line; b) construction of a new line. For b), the cost indicated is the minimum figure (ECU 500 m); the maximum figure is ECU 850 m.

³Two options: a) construction of a fast lane of approximately 230 km; b) construction of a third lane of the same length.

IV - NATIONAL FUNDING

1. Sources of public funding

In the first paragraph of the preceding chapter the necessary level of investment was shown to be some ECU 160 000 m by 2010, of which ECU 100 000 m should be targeted on the priority projects (these will require expenditure of ECU 38 000 m up to 1999).

Given these high estimates, an effort of financial creativity will be required at a time of economic belt-tightening in all the Member States, in the context of their endeavours to balance their budgets in the run-up to monetary Union. The Community budget has also been subject to the constraints of financial discipline for some years now. The means of dealing with the financial problem posed by the networks have been set out since the beginning, in the Delors White Paper on **growth, competitiveness and employment**¹, which furnished the general principles for the administration of the projects in the context of the aim of achieving the best financial conditions available on the market, namely: *financial equilibrium, compatibility with public finances and subsidiarity*. The White Paper, which advocated a bottom-up, project-oriented approach, was, in fact, aimed quite clearly at achieving greater private-sector participation. Subsequently, the Christophersen Group drew attention to the obstacles in the path of private-sector involvement in many of the projects, above all in the case of the transport networks². It follows that a large proportion of the costs of the transport infrastructures will continue to be met from the public coffers; analysis should, therefore, concentrate in the first place on the public dimension.

The primary, basic source of public investment continues to be constituted by the budgets of the Member States and their public sectors; rail is of overriding importance here, in view of the major weight of this sector in the priority projects. With respect to these investments, Community intervention is of a subsidiary character, in accordance with both Article 3b of the Treaty and the principle of **additionality** which has always governed structural policy. The Community intervenes via the budget allocations of the ERDF and the Cohesion Fund, in those cases where the infrastructures concerned meet the territorial criteria of those financial instruments, and via the funds earmarked for the budget headings specifically created for the trans-European networks.

¹pp. 30-32

²At the time of writing of this chapter (20 November 1996), the Kinnock Group had just begun its work. However, according to a statement by a Commission official to the European Parliament's Committee on Transport (29 October 1996), this group is devoting its main attention to identifying investment *niches* which offer a sufficient degree of profitability to attract private-sector participation.

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Another form of Community intervention, which could be considered comparable to private-sector participation, is constituted by EIB and EIF loans.

2. Member State funding

As the Commission points out in the introduction to its document¹, the collection of data on investment in transport infrastructures is still faced with considerable problems and a high degree of fragmentation. Because of this, the present paragraph and those that follow have been based on the investment data supplied by the national accounts departments, rather than on those relating to public finance, which would not have guaranteed sufficient comparability. This does not appear to create problems, since in most of the Member States it is the public sector that makes the main contribution to infrastructural investment, with private investment generally operating in an accompanying role.

Table 1 in this chapter² shows that there was a progressive increase in investment in transport infrastructures from 1985 to 1992, with a particularly significant rise between 1990 and 1991; since 1993, however, the tendency has been downward. The relevant figures are. 1985: ECU 46 336 m; 1990: ECU 60 878 m; 1991: ECU 68 432 m; 1992: ECU 69 624 m (the highest figure recorded); and 1993: ECU 67 878 m. Transport infrastructure investment in 1993 may be estimated to correspond to 1.2% of the GDP of the fifteen Member States.

The reasons for this downward trend are various: revised theoretical views concerning the role of infrastructures in economic growth; more cautious allocation of resources in the industrialized Member States; and the convergence of national budgetary policies provided for in the Treaty of Maastricht, which was probably the immediate cause of the sudden reversal of the investment trend in 1993.

The revised view of the development role of transport infrastructures is linked to the environment-oriented conceptions of the economy which have given birth to the notion of *sustainable development*, and, consequently and with particular reference to transport, to that of *durable or sustainable mobility*, according to which the rise in traffic arising from new infrastructures should be assessed taking due account of the environmental costs (which were previously not included in the equation); the motor role of such projects is accordingly diminished.

The tendency to more prudent allocation of public funds is the result of a reduction in resources, leading to an improved definition of spending priorities on the basis of cost-benefit ratios, with the application to public policies of instruments of analysis formerly used typically by the private sector. In this context, the increase in the production costs of public works in the transport sector has led to them being subordinated to other forms of direct intervention, with the involvement of private

¹Fifteenth report on expenditure on and utilization of rail, road and inland waterway infrastructure, COM(94)0047

²Taken from ECIS, 'The State of European Infrastructure 1996', Rotterdam, 1996, p. 231. Investment levels are expressed in ECU at 1994 values (based on the national currencies at 1994 prices). Greece is not included.

capital being sought for infrastructure projects in all cases where they are of sufficient financial viability to permit the replacement (even if partial) of public funding.

These considerations, however, are, in the present writer's opinion, background phenomena in relation to the immediate cause, namely the convergence of national budget policies introduced by the Treaty on European Union. The effect of this on the investments we are concerned with is compounded by the prospect of an extension in time of the financial stability requirements of the Stability Pact. It follows that the Member State governments are obliged to examine large-scale projects cautiously, since their realization represents a financial commitment on their part over several years; at the same time, they cannot afford to let the projects drop, whether for reasons of image or on grounds of sound resource management.

In this context, the option of involving the private sector in the construction and management of infrastructures may appear as both obligatory and desirable for public finance. It is, however, not always practicable, since the level of profitability involved is not always such as to be competitive with alternative forms of investments, and may therefore not be advisable. The tolls and tariffs which are required if private capital is to be remunerated, while representing a means of internalizing infrastructure costs in line with a widely-advocated economic model of transport, nonetheless imply higher transport costs, with knock-on effects on inflation and final prices. This would be in contradiction with the objective of stability as defined by the Union's economic policy, and would also reduce the competitive capacity of the EU economy on the international markets.

Rail transport, which is, with a few exceptions, part of the public sector, similarly does not have high self-financing capacity: the railway systems are in a markedly vulnerable financial situation, as the Commission has recently pointed out¹. At the end of 1994 the rail companies in the Community had a total deficit of ECU 108 878 m, equivalent to 54% of their total capital or 1.7% of Community GDP². In these circumstances, the financing of rail infrastructures by the companies must be linked either to their recapitalization or to the assumption by the Member States of responsibility for the railways' existing deficit, as proposed by the Commission³. In either case, the costs would ultimately be borne by the public purse.

Table 2 in this chapter offers a breakdown (in ECU) of investment in Member State transport infrastructure by mode, for 1993 at current prices. At Community level road investment is obviously dominant, accounting for 65.07% of the total - an emphasis which contradicts the general orientations of Community transport policy and which raises doubts as to the revitalization of the railways, a measure part of whose *raison d'être* is related to achieving a more environment-friendly transport system. Rail accounts for 24.4% of total investment.

3. Note concerning the following paragraphs

In the following paragraphs an attempt is made to provide an overall view of the investment situation in the various Member States, on the basis of the ECIS report⁴, an invaluable text which has been

¹'A strategy for revitalizing the Community's railways' (White Paper), COM(96)0421

²*ibid.*, Table A, pp. 49-50

³*ibid.*, p. 13

⁴'The State of European Infrastructure ...' (cited above).

utilized here alongside other Community documents, especially that on the financing of the priority projects.

The approach used in this study has been to consider the various national situations in relation to the priority projects which are of interest to each Member State. Since the projects in most cases concern more than one country, the Member States have been grouped into areas, determined *purely on the basis of the 'user constituencies' of the various priority projects*. The delineation of these areas has helped to point up (even though this was not the main intention) the way in which the system of priority projects revolves around a central area, as well as how certain projects relating to other areas are more particularly oriented to the area of their location.

The names given here to the different areas have been chosen solely in order to identify their user constituencies. This applies, in particular, to what we have called the *Alpine* area (comprising Austria and Italy): the projects located in this area are specifically intended to facilitate Alpine transit, and do not concern the rest of Italy other than indirectly.

The amounts given in national currencies are at 1994 prices.

4. The central area: Germany, France, the Benelux countries

This is the core area around which the system of priority projects revolves. A good seven of them fall wholly or partly within this area: all of these concern the rail sector, a fact which also points up the mature state of the road network in this central area.

Germany is located at the geographical and transport centre of Europe. Unification has had a substantial impact on infrastructural investment, with priority being shifted from the north-south to the east-west axis. Public expenditure had declined drastically over the 1980s¹, from DM 34 906 m at the beginning of the decade to DM 26 599 m in 1990; 1991, however, saw a substantial increase, to DM 39 260 m. The level of funding effectively stabilized in the following years around DM 40 000 m². The proportion of GDP represented by investment had also exhibited a steady decline from 1980 (1.55%) to 1990 (0.97%), but, again, rose in 1991 to 1.36%, since expenditure rose more sharply than did GDP in the wake of unification. The proportion of 1994 GDP was back at the peak level of 1980.

However, investment in Germany's western Länder did not follow the overall trend in the 1990s: the level for 1993 stood at DM 25 000 m, or 0.9% of the total GDP of the Länder concerned. This should serve to indicate the impact of unification on the overall level of investment.

Concerning the breakdown of investment between modes, no major variations occurred between 1985 and 1994. This may be interpreted as signifying either a high degree of maturity or a marked conservative propensity with respect to sectoral policy. Investment in road transport remained around 66-69%, the corresponding variation for rail being 21-23%. Figures for the other modes oscillated rather more, owing to the lower levels of investment: the share of airports was halved

¹Here and throughout, where reference is made to the period before unification in 1991, 'Germany' should be taken as meaning West Germany alone, unless otherwise stated.

²The highest level was recorded in 1992 (DM 40 778 m).

(although investment tripled between 1985 and 1994), that of internal waterways fell from 5% to 3%, and that of ports remained unchanged at 2%.

Germany, by reason of its central position, is concerned by four of the priority projects. These include the following high-speed rail links: Munich-Verona; PBKAL; and the eastern link. The German parts of these links will be paid for entirely by the German state via its financial instruments (either from the national budget or by means of loans, with a participation by the rail company for the eastern high-speed link). In addition, with regard to the Betuwe project (which does not in itself involve German territory), Germany is interested in developing the lines corresponding to its prolongation, and will develop, again on the basis of national resources, the Emmerich-Oberhausen rail link (involving expenditure of approximately ECU 1 bn).

Despite Germany's high degree of financial self-sufficiency, a Community contribution may be paid with a view to advancing work on the German section of the eastern high-speed rail link. The same applies to the northward continuation of the high-speed rail/combined transport Munich-Verona link, with respect to the Nuremberg-Berlin stretch.

In **France**, after reaching a nadir in 1984, investment rose from 1985 FF 62 630 m in 1985 to FF 89 942 in 1992, the latter figure constituting an all-time high. Since then, the tendency has been downward, the 1994 level standing at FF 84 300 m. In France too, one may anticipate a further reduction in the next few years thanks to the financial convergence policies. The overall share of such investment remained stable (1-1.1% GDP) over the second half of the 80s, rising in the 90s (1.22% from 1991 to 1993), to fall back in 1994 to the level of 1990 (1.14%).

An important element of French transport infrastructure investment is the involvement of the private sector with a view to creating modal or multimodal synergies via credit instruments, generally with state guarantees. This form of private intervention has applied to 55-60% of the projects included in the tenth five-year plan (1989-1993).

France is concerned by three of the priority projects, all of them high-speed rail links: the eastern link, the Lyon-Turin line and the southern link. In addition, there is the French stretch of the PBKAL project, constructed independently of the trans-European networks policy¹.

The eastern high-speed rail link will link up the French and German high-speed train networks via the Metz-Saarbrücken and Strasbourg-Appenweiler lines. There will also be a Metz-Luxembourg link. Owing to certain reservations on the part of the French railway authorities concerning this line, its profitability has been redefined at 2.8%. The French state will contribute ECU 1000 m (out of a total cost of ECU 4100 m for the French part); the rest of the cost will be shared by the French regions concerned, Luxembourg (which will contribute only to the link to Metz) and, obviously, SNCF.

The Lyon-Turin high-speed rail link will consist of three parts: the French section will be from Lyon to Montmélian. A 'European economic interest group' has been created, bringing together SNCF and FS (the Italian railway company). The financial arrangements will include a public contribution of

¹The French section of the PBKAL project consists of the Paris-Lille stretch, which began operating in 1993, and the Channel Tunnel, inaugurated in 1994.

30%, the aim being to achieve a 9.1% profitability rate (without public intervention, this would be 5.4%).

The southern high-speed rail link will be a Mediterranean line connecting Marseille to Barcelona via Montpellier. The French section (up to the Spanish border) will be financed by SNCF, with a guarantee from the French state to the sum of ECU 2400 m; this is to compensate for the decrease in the line's expected profitability from 12% to 6.8% in the wake of the higher costs arising from the environment protection measures introduced to placate local public opinion.

In **Belgium**, public funding of the infrastructures concerned is provided by the federal government and the regions. The regions' contribution is expected to increase over the next few years following their achievement of full financial autonomy. Between 1980 and 1994 (the last year for which figures are available), investment fell from BF 150 396 m to BF 78 134 m (in GDP terms, from 2.5% to 1.03%); 1990 saw the lowest point, with a total investment of BF 67 124 m, or 0.7% of GDP. In the present writer's opinion, the strict convergence policy being followed by Belgium is likely to send investment levels down once more, with the investment/GDP ratio falling under the 1% threshold.

The evolution of investment in individual modes has followed similar trends to the overall pattern, although in some cases it has been temporarily out of step. As far as the ratio between different modes is concerned, however, the share of road transport rose between 1985 and 1994 from 35% to 54.3%; the share of port investment fell from 22% to 7.5% over the same period, while the share of the rail sector scarcely changed (if one includes urban rail transport, the respective figures are 26% and 28.4%), that of inland waterways declined from 15% to 9%, and that of airports showed a very slight fall.

Belgium, is concerned by only one (though one of the most important) of the priority projects, namely the PBKAL high-speed rail link. There are financing problems in relation to the Belgian sections, which are crucial to the project as Brussels is the connection point for the France-Germany and France-Netherlands lines. The cost of the Belgian parts is estimated at ECU 3734 m¹, to be met by the Belgian railways, which will receive national and Community funds for the purpose².

In **Luxembourg**, infrastructural investment has risen steadily, from LF 3504 m in 1985 to LF 4830 m in 1989; in 1991, after a slight drop the previous year, it increased from LF 4463 m to LF 6376 m, then peaked to LF 7218 m in 1992 to fall back to LF 6277 in 1994. The share of this type of investment in total GDP has followed a similar pattern, rising from 1.25% in 1985 to a peak of 1.99% in 1992, then decreasing to 1.75% in 1994.

The small size of the Grand Duchy accounts for the clear prevalence of road transport investment; road infrastructures absorbed 76% of the total in 1985 and as much as 88% in 1994. The share of

¹Group of personal representatives, 'Trans-European networks ...' (cited above), p. 122

²'National funding' here also implies funding from the Flemish and French-speaking communities, which are organs of government of the Belgian federal state.

rail fell correspondingly from 18% to 11,4%, while the completion of the airport has put a virtual end to infrastructural investment in that sector, with a fall from 6% to 0.6%.

Luxembourg is concerned by the eastern high-speed rail line, which will link the capital to Metz; the Luxembourg government will contribute to its construction. Its main interest, however, lies in a major project, namely the Luxembourg-Brussels high-speed rail line, concerning which a political decision has still to be taken. This project is expected to be financed from public sources; the Grand Duchy has agreed to participate in the funding of the Belgian side.

In the **Netherlands**, investment in transport infrastructure fell significantly between 1985 and 1986 (from Fl 4036 m to Fl 3645 m), to rise again gradually, with a major increase in 1990 (Fl 4629 m) and further increases in the following years, peaking at Fl 4970 m in 1993. The proportion of GDP has evolved similarly; the figure for 1993 (0.85%) was identical to that for 1985.

The distribution of resources between modes confirms the dominance of road transport, as in all the Member States; there was, however, a substantial reorientation between 1985 and 1993, over which period the share of road transport fell from 75% to 58%, while that of rail rose from 16% to 25% (the corresponding figures for other modes were: inland waterways - 3% to 6%; airports - 1% to 5%; ports - 5% to 6%).

Two of the priority projects concern the Netherlands, namely the PBKAL high-speed rail link and the Betuwe project (combined transport).

The Netherlands section of the first-named project may not receive its due share of attention, owing to the lack of interest shown by the Belgian authorities in the stretch between Antwerp and the Netherlands border, due to the disagreements between the federal and the Flemish regional authorities over the route. A decision by the two Member States was expected in 1996. The Netherlands section, whose cost is estimated at ECU 2740 m, is to be funded by the state to the tune of 75%, the remainder being provided by private-sector sources or the Community.

The Betuwe line, despite being entirely within the Netherlands, is of Community significance since it will link the port of Rotterdam to the Ruhr part of the German rail network. It will be funded along similar lines to the Netherlands part of the PBKAL.

5. The Baltic area: Denmark, Sweden and Finland

This area is likely to see an increase in the number of Member States within it, following the expected future accessions. It already includes an EEE member state, Norway. The two projects in this area are of essentially regional interest, but will also facilitate links with the central area.

In **Denmark**, transport infrastructure investment rose between 1985 and 1993 from Dkr 4595 to Dkr 6959, with a parallel increase in GDP share, from 0.6% to 0.79%. Investment increased at a regular rhythm from 1987 on, peaking in 1992 at ECU 8205 m (0.94% of GDP). Regarding distribution of investment between the various modes, there was a substantial rise in rail investment (from 21% to 43%), and a corresponding fall in road investment (from 63% to 46%, the result being an effective balance between the two main modes. Port investment scarcely changed, remaining at 8-9%.

Denmark is concerned by two of the priority projects: the Øresund and the Nordic Triangle. The first may be subdivided into the access operations, whose cost on the Danish side is expected to be ECU

825 m, and the fixed link (tunnel, artificial island and bridge) over the sea, which is estimated to cost ECU 2240 m. The project will be carried out and administered by a Danish-Swedish consortium; it is expected that the investment costs will be paid off via tolls over a 22-year period¹. The project also includes the extension of Copenhagen airport, which is costed at ECU 1 bn. The Danish part of the Nordic Triangle project coincides with the Øresund operations.

As far as the priority projects are concerned, no particular financial problems should arise in Denmark; the country's infrastructure policy as a whole is characterized by a substantial degree of self-sufficiency on the part of the public sector, with a marginal level of private-sector participation which it is not policy to encourage.

In **Sweden**, transport infrastructure investment rose between 1985 and 1994 from Skr 8620 m to Skr 19 458 m; with the sole exception of 1986, the trend has been consistently upward, and has, indeed, accelerated in the past few years. A fall is, however, expected in the immediate future. GDP share has risen from 0.61% in 1985 to 1.28% in 1994.

Sweden is one of the few EU Member States to have operated a significant transfer of resources from road to rail over the decade concerned, road transport's share of total resources having fallen from 59% to 48%, while that of rail rose from 27% to 49%. Significantly, in 1994 the share of resources allocated to rail actually just represented a majority; however, a fallback may be expected in the coming years as a number of rail projects are now nearing completion. The share of both ports and airports fell between 1985 and 1994, from 8% to 1% and 6% to 2% respectively.

Sweden is concerned by two of the priority projects, namely the Øresund and the Nordic Triangle. The former will entail an investment of ECU 300 m on Sweden's part.

The second project, some of whose components overlap with the first, will involve, excluding the operations common to both, an investment of ECU 200m, to be met from Swedish public and private sources. The Stockholm-Oslo motorway will be subject to tolls.

In **Finland**, transport infrastructure investment was constantly on the rise from 1985 (FM 5002 m) to 1991 (FM 6480 m). Since then, in the wake of the considerable economic crisis arising from the collapse of trade with Russia and the rest of the former Soviet Union, with its repercussions on public finances and, therefore, on investment, there has been a fall to FM 5505 m. The outlook for the coming years suggests a further drop, given the need to rebalance the budget and achieve the convergence objectives laid down in the Treaty. Investment, which accounted for 1.06% of GDP in 1985, peaked at 1.25% in 1991 and 1992 before falling back to 1.98% in 1994.

The distribution of resources between modes has remained fairly stable: the share of road transport fell from 78% in 1985 to 75% in 1994, while that of rail rose from 13% to 15%, that of inland waterways decreased from 4% to 3%, that of airports increased from 1% to 3% and that of ports remained unchanged at 4%.

¹This period refers to the sea link, use of which will be subject to tolls; the access project will also be amortized via tolls.

Finland is concerned by the Nordic Triangle priority project, which includes, on Finnish territory, the road and rail link Turku-Helsinki-Russian frontier, as well as port infrastructures and a new terminal at Vantaa airport. The total cost of these operations is estimated at ECU 2400 m, broken down as follows: ECU 900 m for road, ECU 1200 m for rail and ECU 300 m for the remaining projects. The airport project (ECU 40 m) is expected to be financially self-supporting; for the other projects, the Finnish budget situation means that private-sector involvement will be required.

6 . The Atlantic area: the UK and Ireland

This area has no land links with the central area, unless one includes the Channel Tunnel, which represents the Community's greatest infrastructural achievement. The Tunnel's existence is a direct determinant of one of the four priority projects located in the area, namely the British branch of the PBKAL high-speed rail link. The other projects are intended to improve rail and road infrastructures, in a regional context but nonetheless also bearing in mind the improvement of links with the central area.

Transport infrastructure investment in the **UK** is characterized by a high degree of private-sector involvement. The overall level exhibited a steady rise from 1985 (£ 3685 m) to 1994 (£ 5824 m). The second half of the 1990s was, however, expected to show a downturn, as public investment in the sector was scheduled to fall. In GDP terms, investment rose from 0.67% on 1985 to over 1% from 1990 to 1992; the 1994 figure was 0.87%. Of the large Member States, the UK is the one that has invested least in transport.

The distribution of resources between modes shows a clear predominance for road transport, both in 1985 (72%) and in 1994 (69%). Airports have received substantial attention (the respective figures being 9% and 11%), while investment in ports has declined from 5% to 2%. The rail sector's share has risen from 14% to 18%. The high level of investment in airports is a result of the substantial concentration of private investment in the sector.

The UK is directly concerned by all four of the priority projects in this area: the rail/combined transport link in Ireland (for the Northern Ireland section); the Ireland-UK-Benelux road corridor; the West Coast rail line; and the PBKAL high-speed rail link.

The first-named project is to be funded from public sources; for the others, however, private-sector participation will be crucial. In particular, for the West Coast project £ 2160 m is to be provided by Railtrack and the private sector. For the British section of the PBKAL link, which is of key importance if the Channel Tunnel is to be used to its full potential, the state is to provide approximately 50%, with a public/private consortium supplying the rest. EIB and Community loans will also enter into the equation.

In **Ireland**, transport infrastructure investment rose between 1985 and 1993 from IRL 195 m to IRL 369 m, with GDP share also increasing from 0.88% to 1.1%. A substantial contribution to this increase has been made by the ERDF, which, over the five-year period 1989-1993, granted Ireland funds for transport infrastructure to a total of IRL 640 m (ECU 800 m). In 1993, the Cohesion Fund granted an additional IRL 80 m (ECU 100 m). Community participation in Ireland's investment in the sector has thus accounted for half the total at current prices. For the five-year period 1994-1999, the Community financial instruments are expected to contribute ECU 1600 m to transport infrastructure in Ireland.

The distribution of resources between modes is characterized by the predominance of road transport, whose share rose from 79% in 1985 to 84% in 1993. Over the same period, airport investment rose from 2% to 8%, while investment in both ports (10% to 4%) and rail (9% to 4%) declined sharply.

Ireland is concerned by two of the priority projects: the Cork-Stranraer rail link and the Ireland-UK-Benelux road corridor. Both projects were to be carried out entirely on the basis of national and Community funding, however, private-sector participation is now being considered for the second.

7. The Iberian area: Spain and Portugal

This area, which is covered in its entirety by the Cohesion Fund, is in need of better connections with the central area. To this end, two priority projects are proposed, for road and rail respectively.

In **Spain**, transport infrastructure investment has increased substantially over the last decade. The figure for 1985 was Ptas 192 416 m; following a substantial increase, the level for 1990 and 1991¹ was over Ptas 860 00 m, and a peak of Ptas 888 024 m was reached in 1994. For the following years, however, and especially 1996, for Spain as for all the countries endeavouring to meet the convergence targets, a fallback was to be expected. In terms of GDP share, transport investment (0.68% in 1985) stood at 1.37% in 1994, having peaked at 1.57% in 1991. The history of investment in Spain is closely bound up with the economic growth of the second half of the 1980s and the less favourable situation in the following period; however, an additional factor is the input from the Structural Funds, which in 1994 contributed one-quarter of all investment, while EIB loans accounted for some 28%.

As far as distribution between modes is concerned, the share of road transport rose from 47% in 1985 to 71% in 1994, while that of rail fell from 31% to 14%. This tendency, even without making allowance for the large amounts invested in the Madrid-Seville high-speed rail link between 1988 and 1991, is out of step with the 'road-to-rail' approach to resource distribution. Investment in ports (14% to 9%) and airports (8% to 6%) also declined over the same period.

Spain is concerned by two of the priority projects: the southern high-speed rail link and the Lisbon-Valladolid motorway.

¹Investment displayed a remarkable leap between 1988 and 1991, at the time of the construction of the Madrid-Seville high-speed rail link. The figures are (in m Ptas): 266 595 (1987), 414 356 (1988), 539 425 (1989), 762 483 (1990) and 861 554 (1991).

The first project consists of two lines, both starting from Madrid and linking the Spanish capital to two French lines, respectively Paris-Lyon-Marseille (the Mediterranean branch) and Paris-Bordeaux (the Atlantic branch); the Spanish gauge will be brought into line with the European norm. A 'European economic interest group' has been set up, bringing together the Spanish and French railways, to consider the Barcelona-Narbonne stretch of the Mediterranean branch. The Spanish state will fund the section from Barcelona to the French frontier, while for the remaining part of the Spanish portion (Madrid-Barcelona) the private sector will be involved, on the basis of a profitability rate of 3.5% to 5%¹.

For the Atlantic section, work on which will begin in 1998, the financial framework has not yet been fully defined, partly because of the environmental objections advanced by the Basque regional authorities.

In the case of the other priority project, the Lisbon-Valladolid motorway, the expected volume of traffic is not high enough to attract private-sector participation. The project will accordingly be funded entirely from the national and Community budgets.

Transport infrastructure investment in **Portugal** is a clear example of the impact which Community membership has had on the country, in the context both of Community financial intervention and the progressive integration of the national economy into the wider European economy. Between 1985 and 1994 investment rose from Esc 59 759 m to Esc 236 895 m; the great quantitative leap came in 1988, the year after accession, with an investment figure of Esc 105 870 m, which was itself to be bettered in the 1990s. Similarly, GDP share climbed from 0.94% to 1.83% over the same period.

As far as distribution between modes is concerned, the share of road transport rose from 65% in 1985 to 71% in 1994. The share of rail also rose, though less spectacularly, from 18% to 22%, while that of ports decreased from 11% to 5% and that of airports from 6% to 2%.

Portugal is concerned by the priority project for the Lisbon-Valladolid motorway, which is to be funded from the national budget and the Cohesion Fund.

8. The Alpine area: Italy and Austria

This area is marked by particular characteristics setting it apart from the others, as the user basins of the three priority projects falling within it do not cover the entire territory of the countries concerned. In the case of Austria, the Brenner axis is of direct interest to Tyrol, and more because of transit between Germany and Italy than in terms of traffic originating or ending in Austria. In addition, in present conditions transit gives rise to environmental problems, and a partial road-to-rail shift will therefore contribute to improved conditions in Tyrol, once the initial environmental

¹The present writer is surprised that the private-sector option has been chosen only for the Madrid-Barcelona stretch; one may contrast its profitability with that of the stretch from Barcelona to the border, which has been estimated to be 9%. The data on the profitability of the Mediterranean stretch have been taken from: GROUP OF REPRESENTATIVES ..., 'Trans-European networks ...' (cited above), p. 130.

problems arising from the new system have been resolved. In the Italian case, it is northern Italy which is directly interested, but the entire Italian rail network will benefit indirectly.

In **Italy**, transport infrastructure investment rose steadily from 1985 (Lit 13 799 bn) to 1992 (Lit 19 584 bn); 1992, however, was the peak year, and the following year saw a steep drop, to Lit 17 107 bn. In terms of GDP share, the pattern has been different: the figure (1% in 1985) rose sharply in 1987, to 1.2%, peaking in 1988 at 1.25% and then diminishing steadily up to 1992, and, beyond that, to a low of 1.06% in 1993. The present trends, both in absolute terms and in share of GDP, are likely to continue over the next few years, owing to the budget restrictions arising from the financial convergence policy.

The distribution of investment between modes, in Italy as elsewhere, is marked by the predominance of road transport (65.1% in 1985, 71.35 in 1993). Rail's share fell over the same period from 23.7% to 21.7%, as did that of ports (8.1% to 3.6%). Airports showed a slight increase (2.8% to 3.2%), while the share of waterways remained negligible.

Italy is concerned by three of the priority projects: the high-speed rail/combined transport Berlin-Verona link, the Lyon-Turin high-speed rail link and Malpensa airport.

The first of these is, of all the projects approved at the Essen European Council, the most expensive and the one which raises the most technical problems. It will form the basic of axis rail transport between Germany and Italy via Austria. The Italian part - from the Brenner tunnel to Verona - will ensure southern access; its estimated cost is ECU 5200 m. The most ambitious element of the project, the Brenner tunnel, straddles Austrian and Italian territory, and has been costed at ECU 4400 m. Despite the initial enthusiasm, this project no longer features among the priorities of the Member States concerned. A tripartite committee set up by Germany, Italy and Austria is to report to the respective governments on the economic viability of the project by the end of the first quarter of 1997, on the basis of a traffic flow study now being finalized. The financing of the project will have to include private-sector participation and substantial bank loans.

The priority project for Italy is the Lyon-Turin high-speed rail line, which will link northern Italy to France. A 'European economic interest group' has been formed by SNCF and FS (the Italian rail company): Funding for the project is expected to include a 30% input from public sources: this should ensure a profitability rate of 9.1%, as opposed to 5.4% in the absence of public funding.

The Malpensa project is probably the most advanced of all the priority projects: the state of work suggests that the new infrastructures should be in operation in 1998. The total cost is ECU 1047 m, of which ECU 490 m are being met by the Italian state, ECU 315 m by a private operator¹, ECU 210 m by the EIB and ECU 31.5 m by the Community.

The trend in transport infrastructure investment in **Austria** has been generally downwards, from ÖS 26 358 m in 1985 to ÖS 21 594 m in 1994, with the exception of 1990, when investment peaked at ÖS 26 840 m. GDP share has exhibited a similar pattern, declining over the same period from 1.46% to 0.94%.

¹This is SEA, a private company which is responsible for administering the Milan airports. Its shareholders include Milan city council and a number of other public bodies (mainly regional and local).

Austria is one of the few Member States to have taken a clear decision to shift resources from road to rail. Infrastructural spending on roads, which swallowed up 70.2% of the total in 1985, accounted for only 49% in 1994; this downward trend is all the more significant if seen in conjunction with the drop in overall investment. Over the same period, the share of rail rose from 26.5% to 43%, that of airports from 2.1% to 6% and that of inland waterways from 1.2% to 2%.

Austria is concerned by only one priority project, the Berlin-Vienna link; however, despite strong continued interest in the stretch between the German frontier and Innsbruck, Austria wishes to defer a final decision on the Brenner tunnel, for both environmental and budget reasons.

9. Greece

This area consists of only one Member State, which has no territorial continuity with the rest of the Union and has become more isolated in terms of land transport links as a result of the conflicts in the adjoining Balkan region. The particular modal traditions of transport in Greece have meant that priority is given to road transport.

In the absence of reliable statistics, it is not possible to separate current expenditure from investment expenditure with regard to road transport or, for the rail sector, rolling stock. Subject to this caveat, one may evaluate infrastructural investment in Greece at Dr 146 210 m for 1985 and Dr 170 342 m for 1992. This suggests a largely stable ratio of investment to GDP, in the region of 0.9%. The Community Structural Funds have played a fundamental role in transport infrastructure, to the tune of 40-50% between 1989 and 1993¹, with further contributions since 1993 from the Cohesion Fund.

The distribution of investment among the transport modes reflects Greece's geographical and economic situation. Road transport absorbed 73% of investment in 1985 and 65% in 1992, while the share of rail rose from 19% to 25%, that of ports remained unchanged at 4% (this is an essential element given the size of the Greek merchant fleet) and that of airports rose.

Greece is concerned by the priority project for its own motorways and by two of the major links (PATHE - north-south - and Via Egnatia - east-west). of which the first is expected to be more profitable than the second². Private-sector participation being possible,⁵³ the financing plan provides, for the two links taken together, for a government contribution of ECU 1760 m, or 27.67% of the total investment. The Community will provide ECU 1792 m (from the Structural Funds, the Cohesion Fund and the budget headings for the networks), covering 28.18% of the expected cost;

¹In absolute terms, the Structural Funds contributed ECU 1100 m over the period concerned.

²Group of Representatives ..., 'Trans-European networks', p. 145

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the rest (44.15%) will come from the private sector¹. A further Community contribution will take the form of an interest subsidy, allowing a loan of ECU 600 m to be obtained².

¹ibid., p. 146

²Commission, Draft multiannual programme, note to table 2

The financing of trans-European transport networks

TABLE 1/IV - TOTAL TRANSPORT INFRASTRUCTURE IN EUROPE

in m ECU at 1994 prices

Year	A	B	CH	D	DK	E	F	I	IRL	L	N	NL	P	S	SF	UK	EU
1980		3 792	3 225	18 135		2 625	11 105	4 783			813		396	1 201	871		
1981		3 798	3 274	16 136		2 668	11 069	5 341		112	706		486	1 068	867		
1982		3 615	3 184	14 231		3 039	10	5 964		131	665		424	1 038	868		
1983		2 937	3 293	13		3 792	648	6 622		116	700		312	1 076	850		
1984		2 551	3 144	408	609	2 808	10	7 402		107	714		239	1 128	820		
1985	1 941	2 195	2 821	13 220	571	2 141	040	7 210	246	88	742	1 876	304	941	806	4 727	46
1986	1 926	2 085	2 656	13 772	534	2 091	8 962	7 475	240	87	866	1 693	373	889	851	4 704	336
1987	1 588	1 718	2 877	14	538	2 532	9 519	9 115	200	108	943	1 849	437	961	923	5 308	47
1988	1 638	1 807	2 811	293	657	3 709	9 835	9 873	201	114	1 040	1 796	538	1 068	879	6 175	076
1989	1 673	1 427	2 922	14	790	4 517	9 956	9 752	249	122	1 101	1 932	629	1 257	951	7 339	49 313
1990	1 977	1 369	3 146	079	768	5 938	10	10	308	113	930	2 150	871	1 389	1 030	8 544	53 113
1991	1 795	1 559	3 382	13 755	823	6 271	903	087	343	161	1 065	2 179	1 005	1 160	1 044	8 186	55
1992	1 675	1 826	3 127	13 819	1 088	5 631	10 972	9 931	368	182	1 239	2 194	854	1 416	1 007	8 372	429
1993	1 766	2 063	3 318	14	923	5 651	12 321	10 232	465	177	1 162	2 309	975	1 787	880	8 027	60
1994	1 591	1 970	3 199	014		5 552	13	8 938		158	1 106		1 203	2 125	887	7 511	878
1995				20			490										68
				397			13 591										342
				21 186			13 428										69
				20			12 812										624
				489													67 878
				20													
				958													

Note: This table is taken from ECIS, *The State of European Infrastructure 1996*, Rotterdam 1996.

TAB.2/IV - DISTRIBUTION OF TRANSPORT INFRASTRUCTURE INVESTMENT IN THE MEMBER STATES IN 1993

MEMBER STATE	ROADS	RAIL	AIRPORTS	PORTS	WATER-WAYS	TOTAL
BELGIUM	952,315	616,279	62,509	216,382	120,638	1968,123
DENMARK	418,922	384,022	26,108	72,947	-	902
GERMANY	13397,87	4308,313	1330,432	488,518	701,595	20226,72
SPAIN	3904,083	938,17	185,274	498,669	-	5526,196
FRANCE	8305	3835,4	604	271,8	105,7	13121,9
IRELAND	378,708	16,302	35,112	18,81	-	448,932
ITALY	6244,99	1896,34	275,6	319,59	16,43	8752,95
LUXEMBOURG	148,633	18,302	0,886	-	-	167,821
NETHERLANDS	1321,501	560,935	119,042	129,696	126,454	2257,628
AUSTRIA	743,951	829,454	120,014	14,928	13,154	1721,501
PORTUGAL	659,134	206,626	16,973	44,87	-	927,603
FINLAND	614,782	102,87	38,252	23,927	27,737	807,568
SWEDEN	960,876	663,789	28,249	28,672	-	1681,586
UK	5468,008	1749,657	665,028	162,299	-	8044,992
TOTAL	43518,769	16126,459	3507,479	2291,108	1111,708	66555,524
GLOBAL PERCENTAGE	65,387	24,23	5,27	3,443	1,67	100

¹ In m ECU. This table does not include Greece, for which full figures are not available for 1993.

V - COMMUNITY FUNDING

1. Overview of Community resources

The European Community is empowered to finance the trans-European networks via the **general budget**, via the **European Investment Bank (EIB)** and via the **European Investment Fund (EIF)**. Loans are granted by the EIB and bank guarantees are provided by the EIF.

The Community budget provides for a number of financial instruments, of which those relevant to the present subject are: the headings under Chapter B5-7 specifically relating to the transport networks; the European Regional Development Fund; and the Cohesion Fund. The intervention of the two last-named instruments is confined to specific geographical areas.

Following the introduction of the criterion of **budgetary discipline** into the Community's financial management, it has become necessary to plan expenditure on multiannual bases, using the instrument of the **financial perspective**, a multiannual planning instruments which forms the framework of reference for budgetary discipline.

2. Direct resources from the Community budget

On the basis of the financial perspective for 1993-1999, under Chapter B5-7 of the budget ('**Financial support for transport infrastructure projects within the Community**'), as governed by the appropriate financial regulation¹, the sum of ECU 1798 m should be released over the period 1995-1999. Of this total, ECU 1350 m have been earmarked for the priority projects (this corresponds to the share of 75% reserved for those projects at the Cannes European Council). In view of the limited nature of the resources available, the Commission considers that they will be most effectively employed on the cofinancing of feasibility studies, and that the financing of the actual construction should be a matter for the developers themselves, with possible aid from interest subsidies or contributions to loan guarantee premiums. This approach is in line with the philosophy of Community intervention which stresses the need to release 'non-traditional' funding sources, especially in the context of cooperation between public and private sectors². With respect to resource distribution, the Commission has given priority to traffic management by telematic means, which may be viewed as both the most 'high-tech' and the most authentically European-scale approach. As far as the various modes are concerned, the biggest share has gone to rail, in line with the options chosen regarding the priority projects and the general desire to favour less-polluting forms of transport. The breakdown of funding for 1995-1996 is as follows:

¹Regulation 2236/95 of 18 September 1995, **laying down general rules for the granting of Community financial aid in the field of trans-European networks** - OJ L 228, 23.9.1995, p. 1 (cf. Chapter I, section 4).

²Commission, 'Trans-European networks - annual report 1996', p. 11

m ECU

Rail	Road	Waterways	Seaports	Airports	Telematics	Total
338.78	54.18	1.5	4.18	6.36	115	520
65.15%	10.42%	0.29%	0.8%	1.2%	22.12%	99.98%

The Commission's multiannual indicative programme parcels out the annual financial assistance between the individual projects¹, and allocates the rest to the telematic projects for traffic management and to the other important projects (the sums concerned being ECU 340 m and ECU 108 m respectively).

In 1996, the Commission received requests for financial assistance totalling ECU 566 m in respect of commitment appropriations to the sum of ECU 210 m. Its estimated additional requirements for the period 1997-1999 for the priority projects amount to ECU 1410 m; on the basis of extrapolation from the report of the Cannes European Council, a total additional sum of ECU 1740 m will probably be needed. This will entail a further ECU 80 m for financial assistance for the telematic projects and ECU 250 m for the other projects.

Of the priority projects, those for which further Community financial assistance appears essential are: the PBKAL high-speed rail link, for which the Commission has identified a financial shortfall of ECU 430 m for the Belgian, Netherlands and UK sections; the eastern high-speed rail link, for which an additional ECU 230 m will be required in view of the financial deficit of the French section and the need to speed up work on the German part; the West Coast line, which has a deficit of ECU 100 m (of which the EC is expected to supply ECU 60 m); and the southern high-speed rail link. For the two last-named projects, individual subgroups have been set up under the umbrella of the Kinnock Group.

Additional support for the other priority projects, involving sums between ECU 15 m and ECU 160 m, would certainly either speed up work or encourage private-sector participation.

3. The rejected supplement

The call for an increase in the financial perspective is related to the Commission's desire to ensure that the trans-European network policy has sufficient funding to ensure its realization. The Delors White Paper had already suggested that the Union could issue bonds to finance these infrastructures; however, in 1995 the ECOFIN Council rejected this idea as running counter to the Member States' financial convergence policies.

¹cf. Chapter III, Table 1

This possibility having been ruled out, the Commission then argued for an increase in the financial perspectives. On 22 January 1996, submitting the Commission's programme of work in the economic and financial field¹, the Commission President, Mr Santer, stressed the need for such an increase, in the context explained above, citing the view expressed by the EIB President to the effect that certain projects would not be inherently profitable to the degree required for funding via market instruments, long-term loan included; in such cases, private-public partnership was unlikely to materialize, and Mr Santer felt that the Member States and the Commission should intervene and take on the risks that the market would not assume.

On these political grounds, in June 1996 the Commission called on the Florence European Council to make all efforts to ensure expenditure on internal policies (Title 3 of the budget) to a total of ECU 1 bn for the period 1997-1999, to be allocated mainly to the priority transport infrastructure networks, while keeping payments within the existing limits (payment appropriations). It was proposed to redistribute the available appropriations between the policies, with a view to increasing the sum available for the transport networks by ECU 1200 m.

The European Council effectively rejected this proposal, referring it to the ECOFIN Council with instructions to examine it in the context of the need for financial rigour and the relevant procedures².

On 14 October 1996, the European Council in its turn rejected the proposal, the opposition of five Member States constituting a blocking minority³.

This attitude of the Member States was justified in terms of the political need not to act at Community level in contradiction to the convergence requirements incumbent on the Member States under the Treaty; however, the view was expressed that 'they were hostile to the extension of the Community's activities in this field: they had opposed its involvement for 35 years, and some Member State continued to take the view that the Commission should not involve itself too deeply in investment policies which they saw as being excessively "political" in national and regional terms'⁴.

Nonetheless, in the 1997 budget the allocation for Article B5-700 was increased to ECU 352 m, while the sums proposed for 1998 and 1999 are ECU 431 m and ECU 495 m respectively: this would mean a total sum of ECU 1278 m for the last three years of the present financial perspective. Parliament managed to obtain the allocation of a further ECU 100 m for actions outside the Union, to finance the extension of the network to the countries of central and eastern Europe⁵.

¹Speech 96/21

²For the Commission proposal and the European Council decision, see the conclusions of the Presidency following the Florence European Council, 21-22 June 1996.

³Germany, France, Italy, the Netherlands and the UK (see Agence Europe, No 6832, p. 4).

⁴J.A. Vinois, 'Le Réseau Transeuropéen de transport: après les décisions juridiques, reste le financement', in 'Revue du Marché Commun et de l'Union Européenne', No 401 (1996), p. 576

⁵In 1996, in the context of the 'structured dialogue' with the ten applicant countries, a group of representatives of the countries concerned launched a study of the transport infrastructure

4. The European Regional Development Fund (ERDF)

requirements of an enlarged Union.

This is the second of the financial instruments made available by the Community budget, on a non-exclusive basis, for the funding of the trans-European networks. It is one of the **Structural Funds**, which since 1988 have been subject to coordination¹ between themselves and the other Community financial instruments. ERDF interventions, as is the case with all the Structural Funds, are governed by the principle of **additionality** - in other words, they are additional to Member State financial interventions and do not replace them. This principle may be seen as a forerunner to the more general principle of subsidiarity; it is of particular importance for the funding of the trans-European networks, given their particularly high construction costs and the fillip for public spending which they imply.

The related principle of **partnership**, - i.e. cooperation on the basis of suitable financial instruments linking all the public and private entities involved in a programme - should have the effect of stimulating attempts to find the best operational formulas, so as to enable the different participants

¹The 'coordination' of 1988 represented, in reality, a reform of the Structural Funds, in the sense of a genuine policy for internal development and economic and social cohesion, as first formally set out in the Treaty with the 1987 Single Act. The 1988 legislation was amended in 1993, in accordance with the provisions for periodic review. The details of the three regulations of 1988 which apply to the ERDF, and the amending regulations of 1993, are as follows:

- Council Regulation (EEC) No 2052/88 of 24 June 1988 **on the tasks of the Structural Funds and their effectiveness and on coordination of their activities between themselves and with the operations of the European Investment Bank and the other existing financial instruments** (OJ L 185, 15.7.1988, p. 9), as amended by Council Regulation (EEC) No 2081/93 of 20 July 1993 (OJ L 193, 31.7.1993, p 5);
- Council Regulation (EEC) No 4253/88 of 19 December 1988 **laying down provisions for implementing Regulation (EEC) No 2052/88** (...) (OJ L 374, 31.12.1988, p. 1), as amended by Council Regulation (EEC) No 2082/93 of 20 July 1993 (OJ L 193, 31.7.1993, p. 20);
- Council Regulation No 4254/88 of 19 December 1988 **laying down provisions for implementing Regulation (EEC) No 2052/88 as regards the European Regional Development Fund** (OJ L 374, 31.12.1988, p. 15), as amended by Council Regulation (EEC) No 2083/93 of 20 July 1993 (OJ L 193, 31.7.1993, p. 34).

to become aware of each other's requirements. Particularly important is the need for understanding by the public authorities of the specific profitability requirements that typify the private sector. These two principles underpin the financial rules governing the networks; the result is a fair degree of consistency as between the various philosophies behind the main financial institutions applying to the networks.

The ERDF is concerned with the trans-European networks primarily in relation to Objectives 1, 2 and 6¹; its contribution is considerable, the result being the alleviation of the infrastructural deficiencies of the regions concerned.

ERDF intervention is of particular significance since, not being legally restricted to *trans-European* phenomena, it also covers the channels of access to the networks, which are of far from negligible importance for the integration of the regions concerned.

The ERDF is to finance the networks to a sum between ECU 4800 m and ECU 7700 m, corresponding to a percentage of the EC contribution to the Community support frameworks varying from 5% to 8%. In particular, the transport networks received approximately ECU 996 m between 1993 and 1996. Over the period 1994-1999 ERDF intervention for the transport networks is scheduled to total ECU 2638.75 m. This includes over ECU 1075 m earmarked for the priority projects, broken down as follows: ECU 116.59 m for the Lisbon-Valladolid motorway; ECU 352 m for the Patras-Thessaloniki motorway; ECU 495 m for the Via Egnatia²; and ECU 11.7 m for the Ireland-UK-Benelux road link (Project No 13, Irish section).

5. The Cohesion Fund

The Cohesion Fund, for which provision is made in Article 130d of the Treaty on European Union, is intended to cofinance projects in the field of the environment and the trans-European transport networks in those Member States whose per capita GDP is lower than 90% of the Community average (Greece, Ireland, Portugal and Spain). Each of these Member States is to receive a proportion of the appropriations earmarked for the Fund, on the following basis: Spain - 52-58%; Greece and Portugal - 16-20%; Ireland - 7-10%.

The rules governing the Cohesion Fund are not in all cases identical to those governing the ERDF. The principle of additionality does not apply, as the beneficiary Member States have undertaken not to reduce national public expenditure on the environment and transport infrastructure. Cofinancing by the Fund may not exceed 80-85% of total investment, and the total Community contribution may

¹Objective 1 is concerned with the **promotion of the development and structural adjustment of the regions which are lagging behind** (the regions eligible under this objective are listed in the Regulation governing the Structural Funds); Objective 2 is concerned with the **conversion of frontier regions or parts of regions (including employment basins and urban communities) severely affected by industrial decline**; Objective 6, introduced with the most recent enlargement, is concerned with the **development of sparsely populated regions**.

²These are the two flagship projects of Priority Project No 7 (Greek motorways).

not be in excess of 90%. In addition, cofinancing by the Cohesion Fund may not be combined with aid from the Structural Funds, whose Objective 1 includes all of Greece, Ireland and Portugal and a substantial part of Spain. Table 1 at the end of the present chapter sets out the commitments under the Cohesion Fund for the priority projects for the period 1993-1996.

6. The general role of the European Investment Bank (EIB)

The EIB is a EU instrument, set up under the Treaty, whose capital includes diverse level of participation by the Member States. It grants medium- and long-term loans in support of integration, balanced development and economic and social cohesion in the Member State, with particular reference to the areas of the Community policies. It also intervenes outside the Union for the implementation of the financial protocols to agreements concluded in the context of Community development cooperation and aid policy. The extent of the EIB's activity may be indicated by the following figures, for 1995: total budget - ECU 108.8 bn; financing contracts - ECU 21.4 bn (ECU 18.6 bn within the Union)¹.

The forms of financing used are as follows:

- (a) **financing of interest during construction:** an alternative arrangement that would allow the Bank to offer lower rates would be capitalization of interest throughout the duration of a loan;
- (b) **extended grace periods for capital repayment:** this is designed to offset the absence of profits during the early years of the project; in some cases the Bank has repaid the capital in one lump sum at the end of the life of the loan;
- (c) **provision of very long maturities:** this involves maturities in some cases in excess of 20 years, the aim being to reduce the repayment burden during the early years;
- (d) **fixing loan rates in advance of drawdown:** this makes it possible to fix the rate applicable to the loan at the time when the facility is established, so that the costs can be known with greater certainty;
- (e) **cofinancing of project debt:** this practice, which is hardly ever followed by other banks, transfers part of the long-term revenue risk to the EIB, though as part of a framework agreement concluded at the same time as the principal loan;
- (f) **framework credit agreements:** this involves the Bank providing a substantial part of the finance required, subject to certain commitments on the part of the promoter; rates vary in accordance with market conditions.

The Bank takes a neutral stance on the question of whether the projects should be public or private, a matter which should be decided on the basis of their economic and financial feasibility. Economic viability is essential to ensure that, in supporting European integration, the investments do not act to the detriment of growth, while giving due weight to the various cost-benefit elements taken account of in traditional financial analysis. For example, account will be taken of external benefits

¹EIB Annual Report 1996, Luxembourg 1996, p. 7

such as traffic decongestion and environmental aspects, while, as far as external costs are concerned, the assistance will not be deducted from project costs.

Financial viability is equally vital since cash flow must be sufficient to ensure a satisfactory rate of return for investors, bearing in mind that the private sector has more stringent requirements in this domain than the public sector with regard to volume and time.

EIB interventions are coordinated with interventions under the Structural Funds under Regulations 2052/88 and 2081/93. This ensures their trustworthiness with respect to the realization of Community policies, while the fact of being a financial institution permits its full integration into the capital market.

7. The EIB and the trans-European networks

The EIB has, in its activities, always paid particular attention to transport infrastructures, which, between 1991 and 1995, received EIB funding to a total of ECU 17 bn, broken down as follows¹:

m ECU

Road	Rail	Maritime transport	Air transport	Major projects	Total
5000	7000	1000	2000 ²	2000 ³	17 000

With respect to the trans-European networks, the EIB is providing funds for nine of the fourteen priority projects, to a total of ECU 4800 m⁴. The projects being financed are: the Øresund; the Nordic Triangle; the French and Belgian sections of the PBKAL project; the Italian section of the Brenner rail link; the Cork-Dublin-Belfast rail link; the maritime links for the Ireland-UK-Benelux corridor; the Lisbon-Valladolid motorway; the Greek motorways; and Malpensa airport.

The criteria for the granting of funds, as set out in the previous section, take on a particular form for the trans-European network projects. Each project must be technically feasible and must be consistent with Community policies, including those on public contracts and the environment, respect for which is expressly required by the **Guidelines**. In this connection, the EIB stresses network interoperability and the suitable development of the various transport modes, while giving priority to the high-speed rail links.

¹Figures taken from EIB Report (see above), p. 27

²Airport infrastructures and fleet renewal

³Channel Tunnel, Storaebel and Øresund

⁴EIB Report, p. 12 (figures as at April 1996)

In the debate on the financing of the trans-European networks, one of the points raised was the exceeding of the 50% limit on EIB funding in the case of individual investments as a whole, given that this is the ceiling for EIB guarantees. This limit was felt to be unrealistic, given the huge levels of investment required for the priority projects: a high degree of exposure would jeopardize the projects' chances on the financial markets or lead to increased costs. It was pointed out that, for example, funding for the Channel Tunnel amounted to less than 15% of total investment. Sharing the burden with other investors would permit a fairer risk apportionment.

In response to the requests made at the Essen European Council, the EIB has set up a **special section for the trans-European networks**, bringing together a series of measures aimed at adapting funding conditions to the specific requirements of each project. These requirements concern the size of the project, the time needed for construction and the time-lag for profitability. All these aspects will be examined in detail in the next chapter, but mention of them here already suggests that public intervention in the form of credits necessarily implies the kind of economic viability assessment which is usual in the case of private funding.

The measures introduced under the EIB's 'special section', which are applicable not only to projects within the Union but also to external projects, in the context of the networks' *trans-European* dimension, comprise:

- extension of the duration of funding and the pre-amortization period (reimbursement of capital and interest) so as to bring the reimbursement period into line with investment requirements and the relevant profit criteria;
- a financial mechanism to reduce risks for creditor banks and constructors, especially those in the private sector, by means of: *refinancing*, i.e. offering banks the possibility of financing their commitments on the basis of the time-periods permitted by the market; *pre-financing*, or the freezing of interest rates between the approval of funding and its actual granting; and *framework agreements*, under which the utilization of funding is subject to conditions relating to the state of progress of the projects;
- extension of partial funding of networks corresponding to the objectives already set, wherever they are located in the Union;
- intervention, beginning from the initial phases of projects, with a view to the early determination, jointly with the EIF¹ and other European banks, of the contractual and financial formulas most suited to the characteristics of each project².

These measures will not, however, achieve their full potential unless all the public institutions responsible for creating the networks make the necessary efforts to remove all the administrative obstacles. In particular, the Member States must speed up the feasibility studies, authorizations and other technical and administrative measures which are needed for the projects to get under way. The complexity and, to some extent, the slowness of the administrative processes represent a serious

¹Cf. the next section

²EIB Annual Report, Luxembourg 1995, p. 12

problem. To deal with this, it may be necessary to amend the existing legislation and extend construction rights; a solution which is essential for the development of the trans-European networks, especially if the aim is to involve the private sector. If this involvement is to take the form of joint ventures between the public and private sector, the public sector will have to alter its approach in the management of joint undertakings. Economic and operational planning will also help ensure the completion of the networks at reasonable cost while benefitting the activities of the supply industries.

Table 2 at the end of this chapter shows the EIB loans granted to projects under the trans-European networks up to the end of 1996.

8. The European Investment Fund

The aim of this instrument, which was an initiative of the Edinburgh European Council, is to finance major infrastructure projects and projects involving small and medium-sized undertakings, in an effort to consolidate the internal market and strengthen economic and social cohesion. An intergovernmental conference of 25 March 1993 approved an addition to the protocol on the statute of the EIB, establishing the EIF.

The total capital authorized is ECU 2000 m, of which, by the end of 1995, ECU 1784 m had been subscribed (ECU 800 m from the EIB, ECU 600 m from the Community and ECU 384 m from other public or private financial institutions).

The EIF is an autonomous body, whose capital is subscribed by the Community, the EIB and other financial institutions. Of particular interest is the nature of the Fund's activities as provided for in Article 3 of its statute. These include financial guarantees and, with effect from the third year following the entry into force of the statute, **shareholdings in companies of all kinds**. This is the first time that this kind of activity has been provided for by a Community instrument, and it is particularly innovative in that it directly involves the Community system in the management of a project.

The meeting of the Fund held in June 1996 decided to take up this opportunity, on the following basis: shareholding will not be direct, i.e. the EIF will not take out shares in an undertaking, but will subscribe quotas with other institutional investors making such investments. The investment funds concerned will be of a closed nature.

This formula would seem to have been dictated by the need for caution, and will enable the EIF to avoid taking on the full risk of an economic initiative which could be difficult to liquidate should it not be successful. The Fund will, instead, be able to acquire negotiable holdings in a financial institution in such a way that the risks of individual holders are spread out among all.

This approach has the advantage of ensuring the EIF a 'portfolio flexibility' which it would not have on the basis of direct shareholding in potentially risky enterprises (a formula which would jeopardize its standing on the financial markets). In addition, institutional investors may be encouraged to sink their money into enterprises which are relatively uncompetitive in profitability terms, in return for having a financial institution as important as the EIF among their subscribers.

The financing of trans-European transport networks

The formula adopted not only reduces potential risk for the Fund, but also makes it possible to enlarge the private capital funding base for the infrastructures, thus making up in part for the lack of resources available to the Community investment system.

On the basis of the capital authorized, the EIF will be able to employ a maximum of ECU 6 bn at the launch stage and ECU 16 bn at the operational stage; these sums, however, also include investment commitments for SMUs, for which area the EIB is also responsible.

On these financial bases, the Fund will not be able to commit more than ECU 12 bn to the networks (i.e. as a whole, not only the transport networks).

As at 31 December 1995, EIF operations totalled ECU 1441 milion, of which ECU 1300 milion were allocated to the trans-European networks and ECU 273 milion to the transport networks.

The financing of trans-European transport networks

Table 1/V - Cohesion Fund financing for priority projects

Commitments and amounts requested

PROJECT	Commitments 1993-1996				Total 93-96	Amount requested ¹
	1993	1994	1995	1996		
	ECU m	ECU m	ECU m	ECU m	ECU m	ECU m
No 3. HST South						
Madrid-Barcelona-Perpignan	8.02	0.00	0.00	0.00	8.02	337.04
Madrid-Vitoria-Dax	0.00	0.00	0.00	0.00	0.00	0.00
Total - Project No 3	8.02	0.00	0.00	0.00	8.02	337.04
No 7. Greek motorways						
Patras-Athens-Thessaloniki	45.35	13.06	0.00	0.00	58.41	354.07
Via Egnatia	26.42	9.21	40.74	0.00	76.36	506.46
Total - Project No 7	71.77	22.27	40.74	0.00	134.7	860.53
No 8. Motorway Lisbon-Valladolid						
Portuguese section	23.82	28.80	0.00	0.00	52.62	0.00
Spanish section	0.00	0.00	0.00	0.00	0.00	0.00
Total - Project No 8	23.82	28.80	0.00	0.00	52.62	0.00
No 9. Rail link Cork-Dublin-Belfast-Larne						
Improvement of line	11.87	20.60	21.47	0.00	53.94	0.00
No 13. Ireland/UK/Benelux						
N1/N7 Irish road corridor	8.50	40.19	30.83	27.07	106.5	40.00
TOTAL - SPECIFIC PROJECTS	123.9	111.8	93.04	27.07	355.9	1237.56

¹Contribution requested by the authorities of the Member State concerned via the forms received up to September 1996 (including total aid from the Cohesion Fund up to 1999)

The financing of trans-European transport networks

Table 2/V - EIB funding

PROJECTS	Loans approved	Funding contracts signed					Total
		<93 95	93 96	94			
1. PRIORITY PROJECTS (Essen European Council)	8 079	642	1180	1137	1603	924	5485
HIGH-SPEED RAIL LINK/COMBINED TRANSPORT NORTH-SOUTH (DE/O/IT - HIGH-SPEED RAIL LINK: (FR/BE/DE/NL/UK)	384				350		350
HIGH-SPEED RAIL LINK/COMBINED TRANSPORT FRANCE-ITALY (FR/IT)	1 786	477	370	286	230	119	1481
GREEK MOTORWAYS (EL)	1 389	61	109	143	34	10	357
PORTUGAL - SPAIN MOTORWAY (PT/ES - Larger-scale project)	2 060	104	701	534	598	66	2003
MALPENSA AIRPORT (IT)	44				44		44
FIXED RAIL AND ROAD LINK DENMARK-SWEDEN (DK/SV)	295			104	20		124
ROAD LINK IRELAND - UK - BENELUX (UK/IRL)	688				128	312	440
WEST COAST MAIN LINE (UK)	1 332			60	149	417	626
	131			11	50		61
2. OTHER IMPORTANT PROJECTS (Essen European Council)	3 458			314	274	250	1263
2.1 Projects within the EU	2 958		425	176	234	250	838
2.2 Projects involving neighbouring countries	500			138	40		425
3. OTHER TEN PROJECTS	7 783		176	247	626	1434	1055
3.1 Trans-European road network	3 168						
3.2 Trans-European rail network	3 096		347	260	413	633	1406
3.3 Trans-European port network	460			182	583	417	1182
3.4 Trans-European airport network	1 059		100	32	299	5	359
			23	152	139		515
4. PROJECTS IN CENTRAL AND EASTERN EUROPE	1 292		224	259	230	261	972
4.1 Road corridors	812						
4.2 Rail corridors	216		222	153	176	245	742
4.3 Ports	69		168	15	54	16	16
4.4 Airports and ATC	195			91			69
			54				145
TOTAL	20 612	642	2174	2336	3541	2490	11182

VI - PRIVATE PARTICIPATION

1. The historical background to private participation

The previous chapter showed that the financial requirements for implementing the trans-European networks make the involvement of private interests extremely useful, if not essential. Although there are national examples of infrastructure works carried out, wholly or partly, with private capital (in European countries this has been the rule for major infrastructure projects, particularly railways, undertaken during the last century and up to the time of the First World War), in this century the public works sector has been a monopoly of the state and its bodies, more out of political choice than in response to any legal requirements, although such requirements do in some cases exist or, at least, are claimed to exist.

The reasons for this situation vary. In particular, as part of increasing public intervention in the economy in Europe and in the United States, the treatment of some forms of transport, particularly railways, as a public service has been pronounced and it was thought that the direct administration of this service would permit a more moderate pricing policy of benefit to the user; from this it followed that the construction of infrastructure facilities must also be a public undertaking so as to prevent the cost from affecting the price of the service, something which would have been inevitable if private interests were made responsible for construction. Moreover, after both World Wars public works, under the influence of Keynesian economic theories, played an important role in reducing unemployment and so the consideration of their practical value and profitability became less important, with the result that the involvement of private capital in the sector was minor, at least in relation to the expansion of other economic sectors.

The public sector was able to bear the whole expense of public works (which was quite considerable) without the need for an excessively large call on the public debt, owing to factors which have now disappeared:

- the facilities built were relatively simple owing to lower user expectations and environmental protection standards;
- as a result, the construction techniques used were not particularly sophisticated;
- labour costs were low, owing both to low average wages and the fact that the work was not highly skilled.

The gradual disappearance of these favourable conditions led to a rise in both nominal and real infrastructure costs, with no corresponding decrease in demand; on the contrary, as a result of technological advances, existing infrastructure needed to be replaced or modernized more frequently than before.

At the same time, the traditional sources of new public funds appeared to be drying up: the general public did not appear willing to accept higher taxes and, in many countries, public debt could no longer be increased without undermining the balance of public finances; furthermore, owing not least to the fact that governments and the international organizations had discarded Keynesian economic theories and adopted a neo-monetarist approach, it was generally felt in many industrialized countries that public-sector demand for resources had reached a level beyond which growth would be threatened.

It was therefore necessary to look for new ways of financing public works, mainly by seeking to attract private capital and, in particular, to involve private companies in the construction and management of the necessary infrastructure.

This process of *privatizing* what were traditionally considered to be public tasks was supported by the general public which, during the eighties, started to take the view that, as a result of its specific environment, the private sector was able to guarantee lower costs, improved management and greater overall efficiency.

Private participation in transport infrastructure projects, including facilities already in existence prior to the shift in policy referred to above, can take different forms which may be classified under the following categories:

- **financing**, which involves the state simply seeking funds on the capital market: this increases the resources at its disposal, but at the same time increases the public debt;
- **the contracting out of technical operations**, i.e. construction and, generally speaking, planning; contracts are normally awarded following a call for tenders; by contracting out such operations, the authorities are able to make use of the technical and organizational skills of private companies, gain a more accurate picture of the expenditure required (payment may be deferred until the work is completed or made in instalments based on the progress achieved with the work), and transfer to the contractor part of the third-party risk and liability for cost increases;
- **the granting of concessions**, under which the concessionaire is entrusted with carrying out and managing a project for a number of years considered sufficient for recouping the capital outlay and making a profit¹; under this arrangement, the entire infrastructure costs are borne by the private undertaking and the infrastructure itself reverts to the public sector only at the end of the period of private management; in such cases the investment costs are transferred to the users, who are charged for use of the infrastructure.

Another form of private participation, which, although rarely used, was that chosen for the Channel Tunnel, is transfer of the asset to the private sector, which thus *owns* it outright, albeit with some form of public control designed to protect the general interest.

As part of the process of privatization and liberalization which has been under way in the industrialized nations over the past few years, private operators have in some cases been given responsibility for the management of existing infrastructure - particularly airports and ports. Here, however, we shall concentrate exclusively on the means used by some of the Member States to attract private participation in new infrastructure projects, taking the roads as an example, since it is generally felt that roads, more than any other type of infrastructure, should be public and free of

¹As we have already seen in Chapter I, section 6, concessions are very similar to the arrangement known in the English-speaking world as BOT.

charge so as to enable people freely to exercise their right to mobility. (In some countries this view is backed up by constitutional provisions).

2. Private participation in some of the Member States¹

In **Germany** responsibility for road policy is divided among various levels of government. Relations between these levels and the financial contribution each is expected to make represent the institutional side of this policy which, in Germany, has a strong public bias for the constitutional and other reasons set out above.

However, recourse to private capital has now become a political option, owing to ongoing financial problems. Two methods have been used to date: the first is the traditional concessionary system, which was incorporated into German law by means of the *Fernstrassenbaufinanzierungsgesetz* in 1994, which covers individual projects such as tunnels and bridges; and the second is a system under which the private sector bears the construction costs, following which the state manages the infrastructure and reimburses the private contractor by means of annual instalments, of which there are normally between 15 and 20.

The latter system, which has come under criticism from the German Court of Auditors owing to the higher costs involved, is to all intents and purposes a form of government debt. The sticking point in the current debate at both political and legal levels is the issue of road tolls, which Germany will probably introduce within the context of Community harmonization in this area, once suitable telematic equipment enabling drivers to avoid having to stop at *toll booths* becomes available.

In **France** there is also a preference for keeping infrastructure within the public sector; private participation is mainly seen as a means of creating synergies rather than bowing to the free-market approach and increasing the private sector's role. This is the basic philosophy underlying economic relations between the state and the private sector in France. As a result, the concessionary system is the prevalent form of private participation in France as well. However, the formation of private-capital companies was not authorized until 1970 and they have not proved very successful, given that of the four set up, only one still remains. One of the others was taken over by the Caisse des Dépôts et des Consignations, which had already set up five SEMs² in 1956, and the remaining two were wound up.

Given that the whole system was heavily in debt, in 1994 the six motorway operating companies then in existence were restructured into three entities, with a view to offsetting the losses made on

¹This section is based on ECSI *The State of European Infrastructure ...* (op. cit.) and DUC M., BAYE E., DROUET D. *Dossier: services publics de réseaux et l'Europe. Les exemples de l'Allemagne, de l'Espagne, de l'Italie et du Royaume Uni (fer, route, air, eau-assainissement)*, II, in 'Notes et Études documentaires', Paris 5016 (1995), pp. 77-129.

²Semi-public companies

some motorways with the profits made on others. The operating companies' activities are based on a contract signed between them and the state, which makes provision for index-linked tolls.

The French system is therefore based on concessions, substantial state subsidies and a cost equalization system in the motorway sector.

In **Spain** the concessionary system was used for motorway construction between 1967 and 1975. Under this system, private companies were set up and various company decisions (mergers and acquisitions) were subject to government approval. Three such companies which managed motorways with insufficiently high traffic levels were taken over by the state and incorporated into a public holding company (*Enausa*). The others are still in operation, and four of them are quoted on the stock market. Since 1975, road infrastructure has been financed almost exclusively by the public sector and the Community, but Spanish law makes provision for private sector financing and for the charging of private entities which derive particular benefits from such infrastructure. The imposition of vehicle and fuel taxes has not been ruled out.

In **Italy** as well the public sector bears almost the entire cost of the construction and management of road infrastructure either through a public agency, the *Azienda Nazionale Autonoma delle Strade (ANAS)* or through a series of concessionaires which, although coming under private law, are wholly owned by the public sector, with the particularities and exceptions set out below.

The toll-free motorways (only to be found in southern Italy) are managed by ANAS. The other motorways were built and are managed on the basis of concessions (the first of which was granted in 1923), which have always been renewed. There are 27 concessionaires, only one of which is truly private (the operator of the Turin-Milan motorway). That company and the largest of all the concessionaires, *Autostrade*, are quoted on the stock market. The principal shareholders of the 26 companies in which the state has a majority share holding are the public holding company, *IRI*, which controls 7 companies, and the regional and local authorities.

Relations between the state and the concessionaires are governed by agreements concluded with the intermediation of the concessionaires' association, but the agreements are worded or applied in such a manner as to ensure that the tolls have no impact on inflation, and *Autostrade* is required to pay any profits over and above 8% to the state, although this clause is not in fact adhered to.

The Italian system remains under close public control, and the private status of the concessionaires is mainly a means of freeing them from the constraints of public accounting requirements.

The **United Kingdom** opened the road infrastructure sector to private participation following the adoption of the *New Road and Street Works Act* of 1991 which provides for the granting of concessions following a call for tenders. The main feature of the system is that concessions may be granted for the modernization as well as the construction of infrastructure.

The above examples illustrate a general tendency on the part of governments to maintain close control of road infrastructure, which is confirmed by the large amounts of public capital tied up in the concession-holding companies. In some countries, the concessionary system appears to have been used more with a view to ensuring more efficient use of public resources by taking advantage of the legal instruments available under civil law, than to promote private participation as such.

Given that the first effect of recourse to the private sector is an increase in costs as a result of the need to reward private capital and so as to include in the cost of the works a profit margin that will

affect the price to users, the state tends to exert fairly strict control over toll levels, with a view to keeping down inflation.

The general attitude of governments towards private participation in the road infrastructure sector is rather well illustrated by the fact that even the most market-oriented country, the United Kingdom, adopts a more cautious approach in this sector, one of the probable reasons for which is that it is more difficult to establish a competitive environment therein than in the service sector. Nonetheless, the largest entirely private infrastructure project, the Channel Tunnel, was sponsored by the United Kingdom and France, but the problems into which Eurotunnel has run are perhaps discouraging the private sector from investing in infrastructure projects.

The situation in the road infrastructure sector in the five countries considered above and the problems which have beset Eurotunnel would perhaps suggest that, in this particular sector, private participation is unlikely to develop much further. However, the size of the investments required in the road network and recent developments in the above countries point to the likelihood of a steady increase in private involvement over the coming years. One essential prerequisite is that public operators must ascertain under exactly what conditions private undertakings are prepared to invest in infrastructure projects, since the success of any joint venture in this sector is dependent on all the partners sharing the same business ethic, so as to ensure that misunderstandings over basic issues do not prevent the company from being properly managed from the outset, which is essential.

3. The economic aspects of private participation

Private investors will first consider whether the expected return on the capital invested in a given project is commensurate with the length of time the funds are locked up, the risk and the return provided by alternative investments on the market. While the energy and telecommunications sectors provide those who invest in their infrastructures with competitive conditions or at any rate conditions where their interests are secure, the situation is somewhat different in the transport sector where, for the reasons set out above, the authorities exert closer control over the prices charged for using the infrastructures, with a view to keeping them down.

Locking up funds in a project involves a loss of bank interest or means that the investor cannot obtain a greater yield from an alternative investment during the construction period. This lost income is added notionally to the capital and reduces even further the yield on the basis of future earnings. In financial terms, the return on investment will be negative during the years of construction and must be offset by sufficient earnings after it is over. This argument is naturally valid if private investment is involved in carrying out the project.

In cases where loans are granted by financial institutions, repayment normally begins in the first year, although arrangements under which the repayment of capital and interest does not start until after a given period are becoming more common. In such cases, a higher rate of interest is charged.

Risk is probably the factor in assessing an investment that most depends on the type of private participation and it is difficult to lay down principles that are generally valid. The duration of the investment is one of the risk elements which all private investors must take into account, just as, in the case of subscription to credit instruments and participation in joint ventures for the implementation and management of a project, the quality of management and the financial solvency of the other party are factors which must be taken into account as risk elements (in the event of inadequacy) of the operation. The EIB rightly notes:

'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'¹.

This argument will be covered more extensively when considering the various forms of private participation.

In the case of alternative investments, the considerations upon which a decision is based are the return, the comparative risk and the liquidity, i.e. the opportunity to disinvest and shift to an alternative investment. In the case of each of these criteria, transport infrastructure investment does not enjoy the best conditions.

The return on such investment is generally lower than that offered by alternative investments. If the difference in revenue is made good by the government, whether by taking on the loan directly (in the case of private participation in the form of financing) or by subsidizing the administration, the investment may become competitive, but the problem of checking whether recourse to the private sector is appropriate arises in respect of the public purse.

Some general considerations as regards risk have already been made and others will be made subsequently; here it is important to relate this factor to the other investments offered by the market: the market's confidence in the issuing body or in any guarantees will be important in the case of instruments of credit. This involves assessments which, at least to some extent, do not depend on the purpose of the credit but, where the return on investment is directly dependent on the financial flows produced by the infrastructure, the risks connected with the latter will become important.

Finally, in the case of liquidity, the form of participation is vital: in the case of negotiable instruments of credit, the liquidity of the investment is high; quoted shares will have the same liquidity but will be subject to risks on the stock-markets, which will respond to the undertaking's effectiveness, general economic conditions and internal market movements. Finally, in the case of direct participation as represented by the concession of the project or by ownership of a management company which is not quoted on the stock exchange, the liquidity will be lower than in the cases already considered and will be strictly related to the profitability of the project, the length of the concession and the conditions set at the end of the concession.

At many points in this exposition, the forms of private participation have been mentioned as differentiating factors in assessing the investment. In fact, private participation may vary from the form of public debt, with the consequent rigidity that determines budget policy over many years, to new forms which bring private capital into the infrastructure exercise, significantly altering the traditional approach in terms of utilization or classification among public goods.

The problem of private participation, therefore, must be analysed also in terms of its forms and in terms of the impact on the infrastructure and its utilization. The forms must be determined in

¹**EIB financing for TEN projects**, EIB note, Annex 5 to the Commission Communication on **financing the Trans-European Networks** (SEC(94)0860 final, 15.6.1994, p. 28).

accordance with the degree of control assumed by the private sector as a result of its participation in the infrastructure.

4. The private sector as a source of funding

The private sector assumes minority control when it **subscribes to instruments of credit**, whether these involve public debt or are issued specifically to finance the infrastructure project. In both cases, the instrument includes a cost which can be charged, indirectly or directly, to the infrastructure.

Normally, states do not charge the servicing of the public debt to specific projects undertaken, on the grounds that this is a general cost to public finances. It follows that the costs of public works which are wholly borne by the government do not include the cost of the money raised.

The behaviour of bodies, public or private, which issue instruments of credit that do not qualify as public debt is different. In such cases, their behaviour may be determined by the legislation applicable to them and by tax legislation but, in general, the interest paid on instruments of credit issued with specific reference to a project is charged to that project.

In the field of credits, whether these take the form of instruments offered to the public or negotiated financing specifically linked to a project, it is possible to conceive of arrangements which make reimbursement dependent on the results of the project¹. In such cases, investors will not only assess the value of the instrument in terms of its profitability, but also in terms of certainty of completion and the capacity of the financial returns produced by the infrastructure to guarantee reimbursement of the instruments. Faced with many offers of this kind, private investors will put together a portfolio of investments relating to projects whose risks are offset. This type of credit has not yet been tried out in the transport sector and raises some doubts.

In particular, the risk assumed by investors must be made good through a rate higher than that offered on the market, which reflects the confidence enjoyed by the debtor, and consequently the cost should be higher than that for a normal loan, particularly those guaranteed by the state. In addition, these credit arrangements presuppose that the project has been managed, at least until reimbursement is completed, by the undertaking which has carried it out or at least in a way that ensures that the cost is paid by the users.

Finally, the return produced by transport infrastructures - if the possibility of a substantial increase in the cost of using the infrastructures is ruled out - appears to be considerably lower than that for energy and telecommunications infrastructures: as a result, it appears somewhat difficult to imagine that the funds produced as a result of managing the transport infrastructures can finance rates of interest much higher than those on the market. Finally, if investors are to agree to this type of credit, a comparison must be made with other investment opportunities with comparable risks, and, on the basis of the above considerations, it seems doubtful that such a solution would be competitive if applied to transport infrastructures.

5. The private sector as infrastructure entrepreneur

¹Ibid.

Private investors may buy shares in companies which are completely private or which are joint public and private undertakings, which implement and manage transport infrastructures. It is not necessary to make a distinction on the basis of a greater or lesser public stake, as the existence of private-sector involvement means that as far as strategy is concerned the joint undertaking has to adopt a profit-oriented attitude aimed at ensuring returns on capital. From the legal viewpoint, such undertakings will normally be governed by private law, while their activity will usually follow the BOT scheme.

The first question that arises in connection with private participation in company form, the form in which the private sector's control over the public project and its involvement with it is greatest, is whether it is economically worthwhile investing in infrastructures. When such projects, as in the case of the trans-European transport networks, are of huge dimensions and require vast capital, such capital must be raised on the financial markets by the appropriate financial institutions, each of which, in relation to its nature, the raising of capital and its strategy, must guarantee itself a particular level of return, the security of the investment and its repayment.

Since every infrastructure undertaking will generally be a joint venture involving a number of financial institutions and probably a number of public bodies, it must simultaneously meet the different requirements of its own economic components, which means optimizing the undertaking's combined productive factors in relation to the risk connected with its objective. In particular, there are three investment features which determine the optimization of productive factors:

- the high ratio between financial and management costs;
- the concentration at the beginning of capital outlays, which helps determine the ratio mentioned in the preceding indent;
- the 'future' character of revenue.

These characteristics must be considered on the basis of the different stages in the activity of an infrastructure undertaking: **promotion and preparation, construction and management**. For each of these stages, there may be different creditors and this increases the possibility that the requirements to be met may vary, but, for practical reasons, this document assumes that all investors have contributed part of the capital at the beginning of the first stage and the whole of it at the beginning of the second stage.

6. The promotion and preparation stage

In the first stage of **promotion and preparation**, the capital invested will be a minimum part - albeit not small - of the total investment. It will tend to be equal to the cost of the feasibility studies and the administrative expenditure needed to launch the activity, less any public subsidies for preliminary studies¹.

In such circumstances, there is no profit but a loss of potential profit and some risks, i.e. the negative result of the feasibility study, the failure of the offer, and the refusal of authorization or its delay.

¹See, for example, the proposal for a regulation to finance the trans-European transport networks, which is examined in the first chapter. However, it must be stressed that the granting of public subsidies for feasibility studies presupposes that the work, or at least the proposal, is awarded beforehand. Such subsidies may not be granted to someone competing for a contract, who must carry out complex studies to determine the terms of his tender.

The negative result of the feasibility studies represents a complete loss of the whole investment, and the only way to reduce the loss is to grant public subsidies. In fact, the feasibility studies should be carried out before the public decision to carry out a project is taken, at least as regards the geological, environmental and economic aspects, and, in such cases, it is the public body which would bear the cost, but there is an area of the studies for which the entrepreneur is responsible, concerning his decision as to whether or not to invest in the infrastructure: he must assess the costs of construction and of the return on administering the project in relation to alternative investment. The cost of these studies may not be small.

The failure of the offer also represents the loss of the investment made in preparing it. The considerations already set out in connection with the negative result of the feasibility studies also apply to this loss, since, as far as the entrepreneur is concerned, it is quite simply that, and the only difference lies in the cause: either the greater competitiveness of his competitors, or a negative decision by the authorities. Leaving aside the possibility of a legal appeal, which may result in a settlement that could partly offset the loss, the only possible solution is a partial reimbursement by the grant body of the expenditure incurred by the losing applicant. This method has not yet been tried.

The refusal of authorization can also be compared to the previous risks, while **delayed authorization** results in an increase in costs. In tackling this aspect of participation by private investors, the European Investment Bank has called for a simplification of administrative procedures. However, this involves an appeal to the goodwill of Member States and, in many cases, of regional and local authorities, since the Community cannot intervene in the field of administrative procedures, which is completely the preserve of national legislation¹.

The present author considers that the only practicable solution is the so-called **programme contract**, i.e. a contract involving an understanding among all the public and private bodies concerned with a project, which would regulate and coordinate the operations and activities of every party. This would have a Community precedent in the **partnership** arrangements for the Structural Funds

7. The construction stage

The risks at this stage mainly consist of delays in implementation and circumstances not foreseen at the previous stage which increase the cost. The causes of such delays and difficulties may be **natural**, the result, for example, of: a different geological situation from that foreseen at the planning stage, or a disaster which affects the construction sites; **technical** causes as a result of mistakes in implementation or malfunctions, although this can be charged to the constructor; or **economic** causes, such as an exceptional increase in the price of raw materials or labour or, more generally, an increase in interest rates or, in the case of foreign investors, in exchange rates. Finally, there are **political** causes involving the failure by public bodies to carry out the ancillary works for

¹The Kinnock Group is examining this problem, and is to report on the matter to the Amsterdam European Council in June 1997 (cf: Chapter III, section 1).

which they are responsible or, more generally, a change in building regulations (e.g., those relating to environmental impact).

For a long time, national civil provisions and commercial practices have provided ways of mitigating the risks of construction companies, which can take out insurance policies against losses resulting from disasters. Moreover, in normal circumstances, cost increases above a certain level are covered by price reviews laid down in the tender contracts, although these are not applicable to BOT arrangements. Other risks are not covered and involve risk-taking by entrepreneurs.

If we look at things from the point of view of the commissioning body, the situation is different, since the delays mean the deferred operation of the project and increased costs (the grounds on which a price review is allowed) have to be paid by the commissioning body. Commissioning bodies guard against delays by means of penalty clauses whereby the price of the project is reduced if there is delay in handing it over, with the builder recouping the loss in other ways: insurance¹ and recovery actions against the third parties responsible, insofar as this is possible.

The possibility exists for the commissioning body of protecting itself against price increases deriving from higher costs by using an instrument which has, to date, been utilized mainly by private-sector, rather than public-sector, bodies: this is the so-called **turnkey contract**, which transfers all risks to the constructor by ruling out any price revision. This naturally involves an increase in the prices fixed in contracts, since the undertaking carrying out a project may protect itself against possible risks. The commissioning body remains responsible for the economic risks relating to the provision of the resources required for paying for the finished work, such as those related to increases in financial and exchange rates, in respect of which the body concerned may use specific forms of loan guarantees offered by the financial markets.

The reduction in political risks may result, for the most part, from programme agreements with the public bodies involved. By such means, the undertaking carrying out an infrastructure project in accordance with the BOT arrangements may protect itself against most construction risks.

Some risks, however, cannot be eliminated or can be covered only through very expensive insurance policies and financial guarantees, which could, moreover, have the perverse effect of causing less care to be taken in carrying out the works.

8. The management stage

Compared to the previous stages, this one contains minor risks and is the stage at which the expected financial flows from the undertaking become positive. The entrepreneurial risk at this stage depends on the intensity of the traffic (demand), the level of charges (price) and management costs.

The intensity of the traffic depends on the marginal utility that the project managed offers relative to alternative routes or means of transport and on the level of prices charged, which in turn depends

¹Insurance advisers provide builders in this sector with policies to cover the risk of penalties imposed as a result of technical defects and delays.

on factors that will be considered below. The possibility that consumers will use alternative routes and means of transport does not depend only on subjective preferences, but may also be determined by political decisions taken after the project managed has been carried out.

The so-called political risk arises in this connection and may assume two different forms at the management stage: that relating to traffic intensity and that concerned with the level of charges, which are considered separately here.

The first form appears in strategic decisions by the authorities who, once private management of an infrastructure has begun, give preference to a different means of transport, or in environmental planning and investment decisions which make alternative routes feasible or less expensive. While the former are normally long-term decisions, which it will be difficult to adopt shortly after the decisions to launch the project being managed, the latter may occur in a shorter period of time and may, in particular, be adopted at a level of government different from that which took a decision on the project. This type of political risk has different effects depending on the kind of relationship that exists between the management and the public body which commissioned the project: in the case of the BOT arrangements, a lower level of traffic may in fact jeopardize the recovery of capital by the deadline for transferring the project, whereas, in the rarer BOO form, in which the project remains the property of the management and there is no deadline laid down in law for recouping the investment, the effect of a lower level of traffic will be lower returns from the project and a delay in recovering the capital invested.

The level of charges is the second variable at the management stage: if it is left to the entrepreneur, he will set it at a level higher than is allowed by the elasticity curve of the traffic in relation to the charges without jeopardizing the economic stability of the undertaking itself: this might lead the entrepreneur to forgo traffic quotas, where these are largely offset by higher charges. The type of political risk to management connected with this variable involves public intervention in determining charges and so in the imposition of a limit on the management's entrepreneurial independence. Although the BOT arrangements do not necessarily provide for such public intervention, this is the normal situation in the case of transport infrastructures and is generally laid down in legislation. It involves public intervention, which takes the form of **approval** of charges decided by the management or of **decisions** by the authorities, and not only meets price-fixing objectives in respect of transport policy (socially or as regards competition between modes and infrastructures), but also eliminates the effects of monopolies which could be brought about by the lack of valid mode or route alternatives.

The political risk connected with the charges becomes a reality when the authorities refuse to adjust prices or adjust them inadequately. Normally, commissioning contracts based on BOT arrangements contain provision for automatic adjustment machinery, but they can hardly provide for every event that might alter management costs.

The political risks considered in this and the preceding sections may also occur in the Union's Member States; no account has been taken of risks due to wars, revolutions and changes of political regime, from which the Union seems happily exempt.

Finally, management costs are a variable which depends on the nature of the infrastructure and management procedures: in the event of a road they will mainly consist of the costs of collecting tolls and maintaining the project; in the case of a railway they will be higher and will reflect an industrial strategy with major implications for profitability.

One contractual factor of considerable importance for the financial equilibrium of the operation is closely connected with management - the duration of the period of management. This determines the time within which the capital invested must be recovered and the profit earned: it is a function of the extent to which funds are locked up, the flows of traffic expected and charges. In view of the size of the trans-European transport networks it is to be expected that the period of management will be very long.

The points made up to now regarding the management stage have taken as a model road infrastructures, in which BOT arrangements take a very simplified form, since management simply makes the infrastructure available to the user and, naturally, maintains it, without providing any direct service. Such a service is, however, provided in other modes, in which management costs, which may become real industrial costs, assume greater importance.

Direct services allow management to differentiate, to a greater degree, its own product from the routes and modes of competitors on the grounds of both the quality of the basic service (e.g. rail transport) and the so-called **pluses**, i.e., commercial services, even if these are not directly linked to infrastructure - e.g. an efficient service delivering goods from the station at which they arrive to the home of the consignee.

The management of a port or airport may also exploit the real estate potential of the infrastructure by renting to third parties areas required for the exercise of commercial activities linked to that type of infrastructure, or may manage them directly.

9. Other considerations relating to the BOT arrangements from the viewpoint of the private sector

One negative aspect of infrastructure investment is the constraint as regards the purpose - in physical rather than legal terms - of the work and, in the specific case of BOT arrangements, the concession system, which does not usually treat the management as the owner of the project. This means that, even where this is economically necessary or desirable, management cannot dispose of its own investment, as can be done with any piece of real estate.

In other words, the investment is frozen and the initial entrepreneurial decision becomes irrevocable. If the project cannot be sold, disinvestment may be carried out by transferring the undertaking, but this constitutes a rigid constraint which is a considerable negative factor in the overall assessment of an infrastructure investment.

10. The BOT arrangements from the commissioning body's viewpoint

The public body which chooses these arrangements to carry out an infrastructure project significantly reduces its own financial commitment and frees itself from technical responsibilities related to construction or supervision of the work; however, in the context of the operation as a whole, it will bear total costs greater than if the project were carried out by the public sector, since, in addition to the cost of the infrastructure, the charges will include the entrepreneur's profit. Nevertheless, it is generally thought - if not theoretically proven - that the private sector, which is credited with greater efficiency than the public sector, is able to guarantee a cost that is lower overall than the cost of direct implementation, even though it reserves a margin of profit for itself.

A positive factor in the BOT arrangement is internalization of the costs of the infrastructure project being carried out, through road tolls. One factor which distorts competition between modes is the failure to charge users road costs, which is not what happens with the other modes. Furthermore, in the context of sustainable development, the internalization of all costs is regarded as a way of encouraging the use of less polluting modes of transport. The BOT arrangement makes it possible to overcome traditional resistance to tolls, since the principle of rewarding private capital is commonly accepted.

This advantage does not exist, however, in the case of those infrastructures, such as rail, whose charges internalize construction costs, even where the project is carried out and managed by the public sector. In this case, the BOT arrangement will restrict the public body's charging policy, as it may not reduce charges below the level agreed with management. In this way, the principle of competition between modes and infrastructures is guaranteed.

11. The BOT arrangements from the user's viewpoint

The user wants to use an infrastructure which offers him lower **costs** than alternative routes and modes. These costs include not only charges, but also the cost of fuel, maintenance costs, wear and tear on his vehicle¹ and greater time saving. Cost factors are normally a function of the length of the route established for each infrastructure, while time saving is a function of length and the speed allowed: a transporter may be interested in using an infrastructure which requires him to follow a longer route but allows him to travel at higher speeds, but other factors may influence the choice, e.g. he may choose a route which is not the best one in terms of cost/benefit parameters where it offers greater opportunities for cabotage.

What is described here is the behaviour expected of someone who uses an infrastructure for business reasons, but tourists will not make their choices exclusively on economic grounds, but also on the basis of assessments related to landscape amenity or the availability of stopping points along the route. Moreover, such considerations are not unknown among those who travel for business reasons, particularly when it is the entrepreneur himself: for example, many carriers prefer to use the ferry rather than the tunnel under the Channel, for personal convenience.

The considerations discussed in this section refer mainly to road transport, but may also be applied to other modes, albeit with some significant differences: in the case of rail transport, almost the only cost factor is the charge, but speed, punctuality and the safety of this mode of transport will be factors to be considered, all the more so since responsibility for them is a matter not for the user, but for the transporter, who is normally the infrastructure manager; in the case of ports and airports, services provided within such infrastructures, their connections with other transport networks and access roads will be decisive. Clearly, these are factors for which the management alone is not responsible.

¹These three factors refer to road transport.

CONCLUSIONS

1. The question of profitability

It has been shown in the previous chapters how the trans-European networks represent a strategy of considerable importance, involving large-scale investments exceeding the expenditure capacities of the European political-administrative system - not only of the Union but also of the Member States and the territorial and sectoral public administrations, including the rail companies, which are concerned by the networks.

Despite political resistance and legal obstacles, the public debt and deficit criteria which the Member States have to observe under the Treaty, as the Stability Pact is to confirm for the future, appear to mean that the private sector will have to be brought in: this represents the sole alternative to an increase in the fiscal burden or a wholesale restructuring of public spending to the detriment of other areas.

The present writer believes that, out of the various possible forms of private-sector participation, the BOT formula, in one or other of its numerous variants, is the most suitable.

The main obstacles to be overcome if private capital is to be involved appear to be: **profitability**; **the 'locking-up' of investment (tied-up capital)**; and the various types of **risk**.

In most cases, the public sector intervenes via contributions aimed at raising the often low profile of infrastructures and public services; this is a practice which yields immediate results but nonetheless raises some degree of perplexity in relation to the 'normal' development of the public-private relationship, unless the contribution has already been clearly defined from the moment when the public body began to seek out private partners. The aspects relating to guaranteeing the administration's impartiality when awarding public contracts, while certainly of great importance, do not fall within the scope of the present study, and will therefore not be commented on further.

An alternative to the contribution approach, which is in the present writer's view preferable from the viewpoint of the public-private relationship but poses problems concerning the containment of inflation and, probably, social desirability, is to introduce criteria for setting toll levels on a basis more favourable to the operator. However, higher tolls tend to reduce the socio-economic profitability of a project. This question will have to be resolved by the Community institutions and the Member States, in the context of the more general problem of the internalization of the external costs of infrastructures.

One factor which should, however, be borne in mind is that public opinion is more willing to accept tolls on projects administered by the private sector than on projects which are 100% public-funded: the right to a return on capital is a generally accepted principle, whereas charging for public infrastructures runs up against the perception of them as common property.

If an investment is to be made more profitable, it is essential to make a study of the individual project to identify potentially profitable niches which may interest private investors. The Christophersen Group has made proposals to this effect, and the Kinnock Group is moving in the same direction.

In general, it may be said that profitability is enhanced where the characteristics of the project enable the operator to offer not only the use of the infrastructures proper but also additional services, as in the case of ports and airports.

However, where the operator is also the provider of the transport service itself, the nature of the business is transformed by the addition of industrial costs and market factors: the problem then becomes one of the profitability of the service, not of the infrastructure.

From the viewpoint of a public administration wishing to involve the private sector in the construction and management of a transport infrastructure, it would seem preferable to act on the tied-up capital aspect and the risk factor, rather than directly on profitability (although this factor will be influenced by the other two).

2. A proposal concerning tied-up capital

The question of tied-up capital, which is closely linked to the profitability aspect, is a major deterrent to private enterprise as far as infrastructure investment is concerned: deferred profitability is perceived as meaning less profit, a problem accentuated by the possibility of substantial delays in project completion. The present writer considers that this obstacle could be alleviated where the project is undertaken on the basis of interest-free bonds issued to the constructor-manager, convertible into shares either once construction has finished or once management activity has begun. Reimbursement would be guaranteed by the state.

By this means, the constructor-manager could have recourse to the financial markets without having to pay interest, over a period which, whatever its actual length, would include the construction stage; after conversion into shares, reimbursement would be subject to a total or partial deduction, in line with the profitability of the management activity.

Investors taking out the interest-free bonds would enjoy the benefits attached to them, as well as being able to opt either for their conversion into shares at the appropriate moment or for a state-guaranteed reimbursement at face value. It is probable that constructor-managers would want a high conversion rate to counteract the pressure of new shareholders on the capital; the validity period of the bonds would therefore probably have to include a suitable number of years of operation, thus enabling the bondholder to evaluate the desirability of conversion over a reasonable time.

This arrangement would not entail an increase in the public debt: the only risk run by the state would be that of the constructor becoming insolvent, and this could be reduced by recourse to the financial instruments offered in relation to such eventualities by the financial institutions. A state guarantee would function as an alternative to conversion rights.

The present writer considers that such a mechanism would be of particular interest to institutional investors, especially pension funds, which tend, by their nature, to prefer long-term investments offering maximum security.

This proposal should be considered in relation to the option of acquiring stakes in companies which is, under its own rules, open to the EIF; one should also bear in mind the related institutional function of agreeing loan guarantees. On such a basis, this Community credit institution could offer the Community a direct instrument for participation in the capital of undertakings responsible for managing public works projects: this would enable it, rather than the Member States, to fill the existing operational and experiential gaps.

3. The risk aspect

The other main obstacle to private-sector participation in this field is the risk aspect (in its various forms, as examined in the previous section). Natural, technical and economic risks may be provided against via the relevant instruments offered by financial institutions and insurance companies; public intervention in its various (financial) forms may also help.

Political risks, being more complex in nature, require action by all the relevant public bodies, with a view to offering private investors a stable framework for physical planning and legal institutions which may be applied to their relations with the public authorities and to the efficiency of the latter.

The EC, in view of the limits set on its powers by the Treaty, in particular by Article 3b (given the specific terms of the latter), is only enabled to exercise its guidance function responsibly by offering public administrations a stable framework for their physical planning¹, and to act to remove, in line with its function of harmonizing Member State law, those legal provisions relating to public service which could block the provision of such services by the private sector. Such action falls within the brief of the Kinnock Group. A further possibility would be for the Community to promote programme contracts between public administrations and the companies concerned, making use of its potential influence as a financing body.

¹This has been done in the case of the **Guidelines** (cited above).

CRITICAL NOTE ON SOURCES AND LITERATURE

The basic documentation on trans-European networks policy is to be found in the legislative acts of the various Community institutions, which are normally available in all the Community's working languages.

In the first place, there is the **Treaty on European Union**, various editions of which exist: that used for this working document is the one published by EUR-OP¹: *European Union: Selected instruments taken from the Treaties*, Book I, Luxembourg, 1993.

The Official Journals of the European Community contain the regulations and proposals for regulations and the most important Commission communications. References to each act quoted is given in the notes.

Other documents which have not been published, or which have not yet been published in the Official Journal, may be obtained from the Community institutions. References to these are given in the notes; however, in the case of the **interim report** of the **Group of Personal Representatives of Heads of State and Government** (the so-called Christophersen group) there are no references other than the title. The **final report** of the Group has now been published, and details are as follows:

Trans-European Networks (Luxembourg, EUR-OP, 1995 - ISBN: 92-826-899-4), available in all the Community languages except Swedish and Finnish².

This document is essential for the study of the trans-European networks. Other basic texts, especially with regard to the financial aspects, are: the Commission communications **Financing the Trans-European Networks** (SEC(94)0860, 15 June 1994), and **Trans-European Networks - 1996 Annual Report** (COM(96)0645, 6 December 1996), and the publication:

EUROPEAN COMMISSION: *Trans-European Networks*, Luxembourg (EUR-OP), 1996 (ISBN 92-827-8642-0), available in French and English³.

In the case of European Council decisions, use has been made of the press releases issued by the Presidency-in-office of the Council, which are contained in the bulletin of the European Parliament's activities published by Parliament's DG I.

¹ By 'EUR-OP', here and throughout, is meant the Official Publications Office of the European Communities.

² The French version has been used for this study.

³ idem

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Important points have been taken from the EIB's **annual reports**.

As regards the literature on the subject, the following works merit particular attention:

AAVV, *The state of European Infrastructure 1996*, Rotterdam ECSI¹, 1996 (ISBN 90-803155-1-6). This work, apart from containing interesting background essays, offers a detailed overview of the transport infrastructure policies of the EU Member States, Norway and Switzerland. Substantial use has been made in the present document of this invaluable aid to the study of the subject.

S. GRIFFITH-JONES, *Loan guarantees for large infrastructure projects: the issues and possible lessons for a European facility*, Luxembourg (EUR-OP), 1993, which is based on a study carried out on behalf of the European Commission by the Institute of Development Studies at the University of Sussex;

C. KESSIDES, *Institutional Options for the Provisions of Infrastructure*, World Bank Discussion Papers, Washington 1993.

Both of these volumes, although from different perspectives (that of Griffith-Jones, in particular, is concerned to show the value of loan guarantees), set out the economic and financial problems connected with the implementation and management of public works by the private sector, and, while reflecting the approach of the English-speaking world to relations between the authorities and companies, offer a complete survey of the subject; Kessides, in particular, carries out a detailed examination of the options with reference to different types of infrastructure.

The round tables of the European Conference of Ministers of Transport are useful for a general approach to the problem, although they are not always up-to-date. These round tables, in which national experts take part, provide in-depth consideration of special topics from the point of view of national experience or economic theory. In the specific field covered by this working document, we refer to the following:

Private and public investment in the transport sector, Round Table 81, Paris 1990 (ISBN 92-821109-6-6), which provides an exhaustive analysis of the subject from the point of view of economic theory;

Evaluating investment in transport infrastructure, Round Table 86, Paris 1992 (ISBN 92-8212160-7);

Transport infrastructure and systems for a new Europe, Round Table 95, Paris 1994 (ISBN 92-821828).

Also published by the European Conference of Ministers of Transport, but outside the round table framework, are the following:

Investment in the transport infrastructures of ECMT countries, Paris 1988 (ISBN 92-821216-2-3); and

Investment in transport infrastructures in the 1980s, Paris 1990 (ISBN 92-821216-6-3) (containing a wealth of statistics, although the first is somewhat out-of-date).

¹ European Centre for Infrastructure Studies

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The OECD also publishes economic and technical studies on transport. In the specific field covered by this document, we can mention the following:

Toll financing and private sector involvement in road infrastructure development, Paris 1987 (ISBN 92-642294-3-4), which, although not a recent work, provides a still valid account of the technical, economic and cultural problems connected with introducing road tolls.

Both the ECMT and the OECD publications are available in French and English.

Numerous articles have been published on the subject. A non-exhaustive list follows:

- J-A. VINOIS. *Le réseau transeuropéen de transport: après les décisions juridiques, reste le financement* in 'Revue du Marché Commun et de l'Union européenne'. Paris. N° 401. September - October 1996, pp. 569-578.
- S. VACCARO. *Le politiche interne dell'Unione europea* in 'Mulino. Europa'. Bologna. Year 45. N° 1. July 1996, pp. 58-65.
- E. QUINET. *Coopération entre gestion publique et privée dans la construction d'un réseau européen de trains à grande vitesse* in 'Transports'. Paris. Year 41. N° 377. May-June 1996, pp. 181-188.
- A. L. NECCI. *Le financement pour la construction des nouvelles lignes ferroviaires: la dimension européenne et le cas italien* in 'Transports'. Paris. Year 41. N° 375. January-February 1996, pp. 5-11.
- L. GUIHERY. *Quelles grandes infrastructures de transport pour l'Allemagne unifiée?* in 'Allemagne d'aujourd'hui'. Paris. N° 134. October-December 1995, pp. 46-48.
- S. PARUDLO. *Le grandi reti europee di trasporto* in 'Affari Sociali Internazionali'. Milan. Year 22. N° 4. 1995, pp. 59-113.
- M. Le DUC, E. BAYE, D. DROUET, et al.: *Services publics de réseau et Europe. Les exemples de l'Allemagne, de l'Espagne, de l'Italie et du Royaume-Uni (fer, route, air et eau-assainissement). II* in 'Notes et études documentaires'. Paris. N° 5016. 1995, pp. 77-129. Tables. Maps.
- *El papel de la Unión Europea en materia de turismo. Libro Verde de la Comisión* in 'Comunidad Europea Aranzadi'. Editorial. Pamplona. Year 22. N° 6. June 1995, pp. 51-54.
- J. GONZÁLEZ CID. *Infraestructuras: Redes transeuropeas* in 'Noticias de la Unión Europea'. CISS. Valencia. Year 11. N° 124. May 1995, pp. 69-91. Annex. Bibliography.
- C. REYNAUD. *Le cheminement des réseaux transeuropéens: approche pragmatique ou démarche conceptuelle* in 'Transports'. Paris. Year 40. N° 371. May-June 1995, pp. 157-165. Maps.

The financing of trans-European transport networks

- R. MASERA. *Il privato e la realizzazione di un sistema infrastrutturale* in 'Affari Esteri'. Rome. Year 26. N° 104. October 1994, pp. 788-801.
- G. RICHERI. *Le 'autostrade dell'informazione'. Modelli e problemi* in 'Problemi dell'Informazione'. Bologna. Year 20. N° 1. March 1995, pp. 25-38. Bibliography.
- M. FRYBOURG. *Les réseaux transeuropéens au sens du titre 12 du traité de Maastricht* in 'Transports'. Paris. Year 40. N° 369. January-February 1995, pp. 44-56. Tables. Graphs.
- J-A. VINOIS. *Après les Conseils européens de Bruxelles, de Corfou et d'Essen, quelles perspectives pour le réseau transeuropéen de transport?* in 'Revue du Marché Commun et de l'Union européenne'. Paris. N° 385. February 1995, pp. 83-97. Annexes.
- P. TREUNER. *Eine neue Karte europäischer Raumentwicklungsziele. Une carte nouvelle des objectifs de développement de l'espace européen. A New Map of Europe's Spatial Development Objectives* in 'EUREG. Europäische Zeitschrift für Regionalentwicklung'. Stuttgart. N° 1. 1994, pp. 38-43. Maps.
- K. G. BINDER, F. WALTHES. *Der Kohäsionsfonds: Ein strukturpolitisches Finanzinstrument der Europäischen Union* in 'Raumforschung und Raumordnung'. Cologne. Year 52. N° 4-5. July-October 1994, pp. 261-269. Tables. Graphs.
- B. GELLNER. *Transeuropäische Netze - eine Infrastruktur-Offensive* in 'Arbeitgeber'. Cologne. Year 46. N° 5-16. 12 August 1994, pp. 533-536. Tables.
- M. KRAUTZBERGER, W. SELKE. *Auf dem Wege zu einem Europäischen Raumentwicklungskonzept* in 'Öffentliche Verwaltung'. Stuttgart. Year 47. N° 16. August 1994, pp. 685-690.
- J-C. LEYGUES. *Évaluation des politiques internes communautaires et de leurs dépenses* in 'Revue française de finances publiques'. Paris. N° 45. 1994, pp. 97-164.
- M. FORNACCIARI. *Infrastructures et réseaux européens: les artères de la grande Europe* in 'Belles Feuilles. Revue des débats européens'. Paris. 1993, pp. 157-159.
- S. CRUELLAS. *Gli orizzonti delle reti transeuropee* in 'Europaforum'. Rome. Year 6. N° 3. April 1993, pp. 39-46.
- A. RÜHL. *La politique européenne des infrastructures de transport. Un défi pour la fin du siècle* in 'Transports'. Paris. N° 361. September-October 1993, pp. 314-318.
- L. MARINI. *Obiettivo: crescita omogenea* in 'Europaforum'. Rome. Year 6. N°8. September 1993, pp. 51-55.
- R. S. MASERA, F. MASTRONARDI. *Le reti transeuropee e il loro finanziamento* in 'Affari Esteri'. Rome. Year 25. N° 99. July 1993, pp. 589-604.
- J-M. BAER. *Politique régionale communautaire* in 'Chronique européenne'. Nantes. N° 4. October-December 1991, pp. 10-14; 23-24.

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- P. FOURNIER. *Perspectives du réseau autoroutier communautaire horizon 2010* in 'Transports'. Paris. Year 37. N° 353. May-June 1992, pp.150-158. Tables. Graphs. Maps.
- *Proposition (par la Communauté des chemins de fer européens) pour un réseau européen à grande vitesse* in 'Union internationale des Chemins de fer'. Paris. January 1989, pp. 1-29. Tables. Graphs. Maps.
- H. MALOSSE. *Du bon usage des mécanismes européens. VI. La recherche de partenaires et les réseaux pour la coopération entre opérateurs économiques* in 'L'Europe à votre porte. Centre français du commerce extérieur'. Collection 'L'Exportateur'. Paris. 4 August 1988, pp. 153-167.
- G. ELLWANGER, C. HAMELBECK. *Das Schienennetz der DB: Bestandteil der staatlicher Infrastruktur* in 'Bundesbahn'. Darmstadt. Year 65. N° 6. June 1989, pp. 475-479. Tables. Bibliography.
- P. TABARY. *À l'heure du transmanche. Les prêts de la BEI pour le financement des infrastructures de transport* in 'Transports'. Paris. Year 34. N° 334. March-April 1989, pp. 75-79. Tables.
- *Le tunnel sous la Manche* in 'Reference Services. Central Office of Information'. London. N° 278. November 1988, pp. 1-9. Maps. Bibliography.
- *Manual de ayudas de la CEE. V. (Fin)* in 'Comercio Exterior. Banco Popular Español'. September 1988, pp. 457-463.
- F. GESCAUD. *Italie (le dossier de la semaine)* in 'Moniteur du Commerce international. MOCI'. Paris. N° 812. 18 April 1988, pp. 19-60. Tables. Maps.
- J-E. RAY. *Des radios libres aux radios locales privées (France)* in 'Projet'. Paris. N° 196. November-December 1985, pp. 41-50.
- *1995: Un soutien actif de la BEI à l'intégration économique européenne* in 'BEI Informations'. N° 87. February 1996. European Investment Bank, Luxembourg. 16 pp. Tables. Graphs. Maps. Illustrations.
- *La BEI et les réseaux transeuropéens* in 'BEI Informations'. N° 86. November 1995. European Investment Bank, Luxembourg. 8 pp. Tables. Graphs. Maps. Free.
- European Commission. *L'Europe à grande vitesse*. Official Publications Office of the European Communities, Luxembourg. 1995. 168 pp. Tables. Graphs. Maps.
- European Commission. *Réseaux transeuropéens - Le groupe des représentants personnels des chefs d'Etat ou de gouvernement. Rapport*. Official Publications Office of the European Communities, Luxembourg. 1995. 257 pp. Tables. Maps. Annexes. Free.
- *Près de 20 milliards d'ECUs prêtés en 1994* in 'BEI Informations.' N° 83. February 1995. European Investment Bank, Luxembourg. 16 pp. Tables Graphs. Maps. Illustrations. Free.
- European Commission. *Entreprendre l'Europe (Belgique - région francophone)*. Official Publications Office of the European Communities. Luxembourg. 1994. 16 pp. Free.

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- European Commission. *Entreprendre l'Europe (Luxembourg)*. Official Publications Office of the European Communities. Luxembourg. 1994. 16 pp. Free.
- European Commission. DG for Information, Communication, Culture and Audiovisual Services. *Le Fonds de cohésion de l'Union européenne*, in 'L'Europe en mouvement'. Official Publications Office of the European Communities. Luxembourg. 1994. 8 pp. Tables. Illustrations.. Free.
- European Commission. DG for Enterprise Policy, Trade, Tourism and the Social Economy. *La transmission des entreprises: lancement d'une vaste consultation*, in 'EURO-INFO'. N° 71. July-August 1994. Brussels. 8 pp. Free.
- *Près de 20 milliards d'ECUs prêtés en 1993* in 'BEI-Informations'. N° 79. February 1994. European Investment Bank. Luxembourg. 8 pp. Tables Graphs. Free.
- S. GRIFFITH-JONES. European Commission. *Garanties de prêts pour les grands projets d'équipement: questions et enseignements possibles pour un mécanisme européen*'. Official Publications Office of the European Communities. Luxembourg. 1994. 92 pp. Tables Bibliography. Annexes.
- European Commission. DG for Transport. *Réseaux transeuropéens - Vers un schéma directeur du réseau routier et de la circulation routière*. Official Publications Office of the European Communities. Luxembourg. 1993. 119 pp. Tables. Graphs. Maps. Illustrations. Annexes.
- S. HORNER, A. CAPITANIO, A. BRÜSER, et al. European Commission. DG for Development. *Dossier: Les routes* in 'Le Courrier. Afrique - Caraïbes - Pacifique - Communauté européenne', N° 125. January-February 1991. Brussels (pp. 59-90). Free.
- European Commission. *Les actions de la Communauté européenne intéressant les petites et moyennes entreprises. Belgique. Manuel pratique. Edition 1988. Document. (Objectif 1992)*. Official Publications Office of the European Communities. Luxembourg. 1989. 214 pp. Annexes.
- A. WRIGHT. European Commission. *Les actions de la Communauté européenne intéressant les petites et moyennes entreprises. France. Manuel pratique. Edition 1988. Document*. Official Publications Office of the European Communities. Luxembourg. 1989. 226 pp. Annexes.
- Economic and Social Committee of the European Communities. *Politique ferroviaire commune. Bilan et perspectives. Avis d'initiative du Comité économique et social. Rapport d'information de la section des transports et communications*. Brussels. 1987. 49 pp. Annexes. Free.
- European Commission. DG for Information. *Les maillons manquants. La modernisation des infrastructures de transport terrestre en Europe* in 'Fiches pédagogiques. 30 jours d'Europe'. Bureau de Presse et d'Information des CE. Paris. N° 321. April 1985 (pp. 19-42). Maps. Illustrations.