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**Some Technical Considerations on the Benefits from
Economic and Monetary Union**

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1) Introduction

As requested this note analyzes the economic costs and benefits that could derive from the creation of a full EMU compared to the 1992 programme alone. The analysis is limited to technical criteria, it does therefore not take into account wider social and political considerations, such as equity and redistributive effects, political stability, political and social cohesion as required by the Single European Act. These wider considerations have already been extensively analyzed at other occasions, such as the so-called Padoa-Schioppa report or the report on the social dimension of the internal market.

The two hypothetical scenarios that are compared in this note are :

EMU : Successful completion of the internal market programme plus fixed exchange rates without margins of fluctuation and a credible commitment not to change parities (i.e. MU), significant funds for regional policy, effective coordination of demand policies, oversight over budgetary policies and Community policies in a number of specific sectors.

"Only 1992" : Successful completion of the internal market programme plus the EMS in its present form reinforced only by the minimum necessary to avoid speculative attacks on exchange rates after the abolition of capital controls in 1990.

The "only 1992" scenario already represents an economic union (EU) in the usual meaning of the word : an area without internal frontiers to economic activity (i.e. free movement of goods, services and factors of production). The EMU scenario can therefore be described as EU (= "only 1992") plus MU plus the regional policy and budgetary policies package. The difference between "only 1992" and "EMU" is therefore MU plus a package consisting of a reinforced regional policy, demand policy coordination, control over budgetary policy and Community policies in areas not included in the 1992 programme.

The economic benefits from the implementation of the internal market programme have already been estimated (and found to be large) in the report on the cost of non-Europe (1). This note therefore considers only the additional economic benefits that would derive from the creation of a MU which is supported by a reinforced regional policy and coordination of demand policies and control over budgetary policies.

Although a MU might not be viable, without the regional and budgetary support package this note analyzes their economic costs and benefits separately. The consequences of a MU have already been discussed extensively in the economic literature. It is therefore much easier to identify the costs and benefits from a MU (this is done in section 2) than for the regional and budgetary support package (this is done in section 3). In general the note does not consider political costs and benefits but restricts itself to those areas where costs and benefits can be evaluated in terms of economic welfare alone (2). (The term economic welfare is used here as in the Cecchini report on the cost of non-Europe.) Moreover, the note assumes that in general markets work well and takes into account only a limited number of the most important market imperfections. Taking into account the numerous and potentially unlimited other market imperfections that might exist in the real world would not be possible in a short note as this.

The main results may be presented schematically as follows :

- A MU (for Europe) would yield benefits that substantially outweigh the costs.

- Coordination of fiscal policy may be desirable because of the international spillover effects which will be increased by the internal market programme of domestic demand management, however, such a coordination would magnify the consequences of policy errors.
- Oversight over national public debts or deficits for countries with large deficits or debts may be beneficial for these countries and therefore would involve a net benefit for the entire Community since it would not involve any cost for the other countries.
- Regional policy seems to have mainly a redistributive function and could therefore offer gains mainly on equity grounds. However, there would be economic welfare gains for the entire Community to the extent that :
 - i) The authorities in some countries do not have adequate access to financial markets; or
 - ii) there are important Community wide external effects. These external effects would appear to be mainly in specific sectors and in general could therefore be treated by the appropriate sectoral policies which are discussed in the last point.
- An EU would also call for Community policies in areas where there are external effects, such as research, transportation, energy transmission, industrial policy and defence. The need for Community policy in these areas will arise in any case from the 1992 internal market programme and is therefore independent of the question whether the EU is also a MU.

2) Costs and benefits of a Monetary Union

- a) The main perceived cost from a MU is that the irrevocable fixing of exchange rates eliminates an instrument or mechanism of adjustment that might be needed to offset the effects of shocks to demand and supply of the products of regions of the MU. Such shocks might

require adjustments in real exchange rates or relative wages inside the Union. It is important to recognize that the adjustment instrument or mechanism that is lost is the nominal exchange rate which is an important variable only to the extent that nominal wages are rigid or that there is "money illusion" in general (3). For example it is often argued that the nominal exchange rate is important because a real shock, e.g. an increase in oil prices, would require that in some countries real wages decline relative to those of other countries. This decline would be difficult to achieve by a reduction in nominal wages at a constant nominal exchange rate, but might be easier to achieve at constant nominal wages through a devaluation of the nominal exchange rate.

In both cases real wages would eventually have to decline by the same amount. The argument that the same reduction in real wages is more easily achieved by a devaluation than by a reduction in nominal wages must therefore rest on the assumption that either nominal wages are fixed by law or through contract ("rigid nominal wages") or that wage earners do not realize their loss of purchasing power when it occurs through the rise in prices that comes with a devaluation ("money illusion").

It is also important to note that this argument acquires importance only if there are many shocks that affect entire countries and not just specific regions or industries. There is some research that indicates that the predominant shocks in modern economies are industry specific (shifts in technology and tastes). This implies that unless industries are highly concentrated by country (not region) the nominal exchange rate is not as important as an adjustment instrument as generally thought.

If some changes in relative prices do not take place in a MU because of rigid nominal wages the adjustment could take place through the movement of factors of production, mainly labor or capital. However, since factor movements always require some time and involve adjustment costs it is usually thought that migration of labor and capital cannot solve the unemployment problems caused by a lack of adjustment in wages.

b) The main types of benefit from a MU are the elimination of exchange rate uncertainty (4), the reduction in transaction costs and the increased transparency of prices that comes from the irrevocable fixing of exchange rates. The nature of the first two benefits is evident, they have always been widely used in support for efforts to reduce exchange rate variability and could in principle be estimated quantitatively. Given that by 1992 a well functioning EMS would have reduced intra EC exchange rate variability anyway to a low level, the direct gains, in terms of exchange rate variability, from a MU would be small. However the third type of benefits implies that this small step, from low exchange rate variability to zero, might have important indirect effects. For example, in assessing the benefits from the 1992 internal market programme it is usually assumed that after 1992 the Community will constitute a single unified market. However, as long as firms set prices in national currencies the transparency of prices is not total and changes in the exchange rate would not always be reflected in prices in national currency. It could therefore be argued that, without a MU, the Community might not represent exactly a unified market and firms would have more scope for price discrimination across national markets. In the "Cost of Non-Europe" study it was found that the welfare gains that can be expected from 1992 differ considerably depending on whether one assumes that 1992 just leads to an area without internal frontiers but where firms can practice price discrimination between markets or that 1992 implies a really unified market inside which price discrimination by national markets is impossible. The upper bound of the range found in the Cecchini report would correspond to the second hypothesis. It could be argued that these higher benefits will be easier to attain with a MU because a MU increases the transparency of prices and makes price discrimination more difficult.

or impossible

For financial markets the elimination of a residual degree of exchange rate variability might also be important. A comparison of interest rates on DM and HFL assets shows that, over the last five years, HFL interest rates have been almost 1 percentage point higher than DM interest rates although the HFL/DM exchange rate has been stable. With completely and credibly fixed exchange rates interest differentials of this type can be expected to disappear.

It is not clear whether the complete and irrevocable fixing of exchange rates could lead to a reduction in the direct transaction costs of exchanging national currencies since banks would still incur the costs of multiple accounting systems and cash holdings. These direct costs appear anyway to be modest, an estimate for the European parliament has been 10 billion ECU per year of which 7.6 billion could be saved by fixing parities.

The creation of a MU would also eliminate the possibility for the monetary authorities of the regions of the MU to use (unanticipated) monetary policy to affect employment or the real interest rate paid on public debt. For some countries this discipline coming from a MU could be beneficial because it might lead to a reduction of the real interest rate paid on public debt. With debt to GDP ratios exceeding 100 % in some countries a reduction in the risk premium of 1 percentage point would permit the government to reduce the deficit by 1 % of GDP (5).

On balance, it appears that for the Community the benefits from a MU outweigh the costs because the Community constitutes a highly integrated area. Technically speaking this has been expressed in the statement that Europe constitutes an "optimum currency area". This term means that it is beneficial to have one currency (or the equivalent) for an area inside which trade is intense, factors are mobile and most shocks do not affect entire regions but industries which are distributed on the entire currency area. Intensive intra-Community trade implies that the costs in terms of transaction costs and lack of transparency of prices from fluctuating exchange rates are high. Mobility of factors implies that problems due to rigid nominal wages can be mitigated by migration or capital flows. Industry specific shocks imply that the appropriate adjustment would not be on a national basis, but on the basis of specific sectors, such an adjustment would not be facilitated by exchange rate changes which affect the entire economy of a country (6).

c) Other benefits from a MU that are frequently cited, but that are more difficult to evaluate in terms of economic welfare are :

- The creation of a MU would be a condition for the stability of the internal market to be achieved by 1992. According to this argument the inconsistency of a) fixed exchange rates, b) integrated capital markets, c) autonomy for national monetary policy and d) a high degree of trade integration risks to destroy the EMS once capital movements have been liberalized. This would then put the entire 1992 programme in jeopardy. The creation of a MU, or more precisely abandoning the desire to preserve autonomy for national monetary policy, would therefore be necessary to preserve the EMS and the entire 1992 programme. ..
- The creation of a MU would diminish the exposure of the member economies to shocks coming from outside.
- The creation of a MU would give Europe a "monetary identity" and would increase the weight of Europe in the rest of the world.

3) Costs and benefits of the Demand and Budgetary Policy Package

This section discusses the costs and benefits from the coordination of demand policies and oversight over budgetary policy. The basic idea of this section is that economic policies need to be integrated or coordinated if there are external effects, that is if action by one state or private agent affect directly the welfare of others.

The management of aggregate demand over the cycle, is often assumed to imply external effects because a change in e.g. the fiscal stance in one country affects demand and inflation in other countries, but this beneficial side effect is not taken into account by the country that undertakes to change its fiscal stance for domestic reasons. For example, since expansionary policies are perceived to lead to a cost in terms of deteriorating external accounts it has been argued that in a fixed exchange rate system an insufficient coordination of fiscal policies leads to a deflationary bias because each individual country ignores the effects of its action on the system and operates an extensively restrictive fiscal policy. This example could be changed by taking into account the effects of the fiscal stance on inflation which

might result in an inflationary bias instead of a deflationary one. However, whatever the signs of the external effect of fiscal policy, the general principle is that coordination of fiscal policies would have the aim of ensuring that all member countries set their fiscal policy taking into account, not only their interests, but also the interests of the entire system. Although each individual member country might feel that fiscal policy coordination imposes a cost on it, participation by all might lead to better demand management and hence a benefit in terms of overall economic welfare. The process of coordination could not impose any economic costs per se. But a potential cost of fiscal policy coordination could come from the fact that fiscal policy is always based on imperfect information. An increased coordination of fiscal policies would magnify the errors resulting from wrong information. Without coordination the errors of different independent national authorities would be likely to be of different signs and therefore cancel out at least partially.

Community control over public sector deficits and public debt might also yield benefits if deficits or debts become large enough to threaten the credibility of the national authorities. If a perception develops in the market that the authorities of a certain country might experience difficulties in serving their debt, or might be induced to devalue their currency to reduce the real burden of the debt, interest rates on the debt of these countries would increase (7). A lack of credibility acts like a tax or any other distortion, removal of this distortion through Community control would increase economic welfare.

4) Additional Areas for Community Policies in an EMU

The logic of an integrated market, in the sense of a free trade area is that of adjustment between countries and regions via market mechanisms, i.e. a coordination via the invisible hand of competition. In contrast an EMU is based on a deliberate coordination based on common institutions and policies in order to complete and correct the market mechanisms. The economic justification of such a coordination lies in the market failures and imperfections that exist in certain sectors. The objective 1992 - namely a reinforcement of the role of market mechanisms via the elimination of non-tariff barriers to trade - should therefore be viewed in the optique of the creation of a real EMU, which would correct the internal market wherever there are market imperfections and complete the internal market in the regional dimension.

This section therefore considers some additional areas that are not already contained in the 1992 programme but that seem to require policy coordination or Community policies on economic welfare grounds. Although strictly speaking the need for Community policies in these areas arises from the 1992 programme alone only the EMU scenario might allow the Community to overcome vested national interests. The need for Community policies in these areas because there are market imperfections that operate on a Community wide scale and can therefore not be taken into account on a national level. In several of these areas the Treaty already contains provisions, but the implementation has so far been insufficient. The remainder of this note considers some specific examples of sectors in which a reinforced Community presence would yield economic benefits.

Information is a good that is difficult to trade in private markets because its value cannot be evaluated without it being revealed. Private markets in information may therefore be underdeveloped and some public intervention may be required. A strong Community policy in the field of research and development can therefore be justified on economic grounds, not only to avoid duplication efforts, but also to help to create the appropriate framework that makes sure that private agents perceive the appropriate social value of research and development. Given that most research and development will be valuable throughout Europe, action by member states is not sufficient to provide the right incentives.

A need for Community oversight over industrial policy arises in those sectors in which there is only a small number of firms which make high profits. Each individual member state might try to attract these industries using different types of intervention because this would be beneficial from a national welfare point of view. However, if all member states do this their efforts will of course neutralize each other and a waste of resources will be the result.

Finally a similar reasoning can be used to establish the need for a Community policy in all sectors producing international public goods, such as infrastructure for transportation environment and long distance energy transmission.

It is difficult to assess the costs and benefits of a reinforced regional policy directed at the financing of infrastructure investments on the basis of the considerations of market imperfections that underly the need for Community policies in the specific sectors analyzed so far. If the infrastructure and other investments financed by the Community yield a net benefit they would also have been undertaken by the regional or national authorities as long as these regional or national authorities had access to financing. If the Community regional policy is limited to financing economically viable investment its main impact would therefore come through the fact that the financing of the investment is borne by the entire Community instead of the specific region or nation in which it takes place. However, this is an income redistribution aspect. This result relies on the assumption that national or regional authorities have free access to international capital markets. It appears difficult to decide a priori whether this is the case, since as the current LDC debt crises shows, entire groups of countries can be excluded from this market. The reason for this phenomenon is that in capital markets information about the solvency of the debtor is the critical variable and it is difficult for creditors to assess the solvency of souverain borrowers. Once the solvency of a debtor is in doubt, it is often not in the interest of creditors to simply raise the interest rate to reflect this risk because a higher interest rate in itself raises the probability of that the debtor becomes insolvent, moreover, a higher interest rate eliminates the good credit risks from the markets. Under these circumstances credit to bad credit risks is often rationed. It has been argued that no member country has so far been rationed because member countries of the EC are judged less likely to undertake the domestic policies that have put the solvency of other countries into jeopardy and have led to their exclusion from the international capital markets.

The programme for the interpretation of European financial markets, at which the beneficiaries of the regional policy will participate only after 1992, should further diminish the probability that authorities of a member country are rationed by international capital markets because, for example, the abolition of capital controls alone would strengthen the credibility of sound domestic policies. Moreover, as the domestic capital markets of these countries become more efficient it will be

easier to finance the necessary investment in industries with large learning effects. (Footnote on report on impact of capital market liberalization although it does not contain a reference to regional policies??)

A reinforced regional policy for the Community would therefore be necessary to eliminate a market imperfection only if either one of two conditions is satisfied :

- i) National authorities do not have adequate access to financial markets.
- ii) There are important international external effects in the sense that development in one country affects other countries directly. This appears to be the case mainly in some specific sectors for which a Community policy is appropriate in the light of the nature of the economic activity in the sector. But in this case the appropriate "regional" policy is in fact a sectoral one, as analyzed in the beginning of this section.

If these two conditions are not satisfied a reinforced regional policy might also lead to economic costs for two reasons :

- i) To the extent that the regional or national authorities support only part of the costs of certain investments they will be lead to undertake more of the investments than can be justified from a Community wide point of view which has to take into account the whole cost (8).
- ii) Since regional and national authorities can expect to benefit from regional funds they may be induced to spend valuable resources to lobby the Community. This phenomenon is also called "rent seeking".

The need for a Community regional policy may therefore be based on equity considerations, these redistributive considerations are analyzed in detail in the report "Efficiency, Stability and Equity" produced by a study group headed by T. Padoa-Schioppa (9). Other political reasons must also be kept in mind, for example the political and social risks of rupture vis-à-vis the white pages programme in the case of a too unfair redistribution of the global gains.

Footnotes

- 1) See the attached Annex which summarizes the main results of the Cecchini report.
- 2) For example the creation of a MU would eliminate the political tensions that come from the asymmetric working of the EMS.
- 3) Wages are the usual example because product prices or the price of capital (the interest rate) can be assumed to react quickly to changes in market conditions. However, in countries with consistently high inflation rates it is probable that trade unions and individual workers will note that price increases can eliminate any gains in purchasing power from increases in nominal wages and "money illusion" is therefore unlikely to persist in high-inflation economies.
- 4) It is widely assumed that a reduction in exchange rate variability should increase trade. However, empirical studies have usually had difficulties in finding this relationship and there are also some theoretical arguments that imply that a reduction in exchange rate variability does not necessarily increase trade. The result that exchange rate variability might have little negative, or even a positive impact on trade does not imply necessarily that a reduction in exchange rate variability does not increase welfare. The reduction in a source of uncertainty might increase welfare even if it stimulates some economic activity.
- 5) Only a part of these savings can be considered a net gain to the Community because its interest payments just represent a transfer. A welfare gain would come through the reduction in distorting taxes that is made possible by the reduction in the risk premium.
- 6) Changes in the policy stance of member governments might represent the main source of shocks that affect entire countries, but this source cannot be considered a valid reason for the need for exchange rate flexibility.
- 7) The discussion of regional policy below analyzes also a phenomenon in credit markets, the rationing of bad risks, that would reinforce this argument.
- 8) Co-financing acts like a negative tax that represents a distortion just like any other tax.
- 9) See particularly chapter 13 of the report.

APPENDIX

Expected benefits from the completion of the internal market (Research on the cost of non-Europe)

The creation of a true European internal market will, on the one hand, suppress a series of constraints that today prevent enterprises from being as efficient as they could be and from employing their resources to the full, and on the other hand, establish a more competitive environment which will incite them to exploit new opportunities. The removal of the constraints and the emergence of the new competitive incentives will lead to four principal types of effect :

- (i) a significant reduction in costs due to a better exploitation of several kinds of economies of scale associated with the size of production and enterprises;
- (ii) an improved efficiency in enterprises, a rationalization of industrial structures and a setting of prices closer to costs of production, all resulting from more competitive markets;
- (iii) adjustment between industries on the basis of a fuller play of comparative advantages in an integrated market;
- (iv) a flow of innovations, new processes and new products, stimulated by the dynamics of the internal market.

Condensed into a few figures, the estimates derived from the research on the cost of non-Europe are shown in the following table.

Potential consequences of completion of the internal market for the Community in the medium/long term

| Microeconomic approach | | | Welfare gains as % of GDP | | |
|--|-------------|----------------|------------------------------|---|---|
| | | | 4 1/4 - 6 1/2 | | |
| Macroeconomic approach | GDP as % | Prices as % | Employment in millions | Public balance as percentage point(s) of GDP | External balance as percentage point(s) of GDP |
| Without accompanying economic measures (1) | 4 1/2 | -6 | 1 3/4 | 2 1/4 | 1 |
| With accompanying economic measures (1) | 7 | -4 1/2 | 5 | 1/2 | -1/4 |

(1) Margin of error \approx 30 %.

While these estimates must be treated with all due caution in view of the many difficulties involved, the consequences are shown to be not only beneficial but also of considerable magnitude. The welfare gains could amount to between 4 1/4 % and 6 1/2 % of GDP in the medium to long term for the Community as a whole. The increase in economic activity would be of a similar order. Without accompanying economic measures, the additional GDP could amount to 4 1/2 % and the number of jobs created to 1,8 million. A further possible scenario, however, is where the easing of macroeconomic constraints - improved public or external balances, reduced inflationary pressure - is used to boost activity by means of expansionary economic policy measures. The GDP gain would then be 7 % in the medium term over the Community as a whole and 5 million additional jobs would be created - and this without inflationary risks or any deterioration in public finances.