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European Monetary Union: Post-Maastricht Perspectives on Monetary and Real Integration in Europe

Abstract:
This paper analyzes the 1992 crisis in the EMS and raises the question whether EC monetary integration along the lines envisaged by the Maastricht Treaty is an efficient and viable way of monetary union. The challenge of the single market project for monetary integration is discussed and it is argued that an EMU is nonoptimal from the perspective of the Kenen criterion of economic diversification. Exchange rate instability is bound to affect real integration in the EC in a negative way and the growth effects of the single market program might be smaller than expected initially. The convergence criteria proposed in the Maastricht Treaty are only partly well founded and are likely to create serious conflicts of interest among EC members on the way to state III of EMU. From a German perspective the Maastricht proposals haver received increasingly weaker support from both the business community and the political system after German unification has turned out to be much more costly and more complex than anticipated initially.

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1. European Monetary Integration after Maastricht

With the Maastricht Treaty signed on February 7, 1992, the EC member countries seemed to be heading not only for the single market as of January 1, 1993, but also towards monetary union by the end of the 1990s. However, within months the EC was facing both (i) a confidence crisis on the side of market participants, (ii) an economic policy crisis in the sense of diverging views on the desired policy course in major EC countries and (iii) a growing concern that too rigid fiscal policy convergence criteria of the Maastricht Treaty would restrict the room to maneuver at the start of single market. The start of the single market was surprisingly characterized by slow growth and strong pressures for structural adjustment in all EC countries.

The Bundesbank faced problems with respect to monetary policy leadership Europe because Germany's inflation rate reached 4 % in 1992 and most of 1993 which is high by German standards and hence creates fear that the Bundesbank will pursue restrictive monetary policies which reduce German inflation a bit but other EC countries' growth prospects strongly. Moreover, in 1992 only Italy, Spain, Portugal, Ireland and Greece had a consumer inflation rate higher than than in (Western) Germany. Germany's monetary leadership faced external criticism on its policies, while central bank's in other EC countries, notably in France and Belgium, prepared for political independence which lets the Bundesbank's institutional position no longer look unique in Europe.

The confidence crisis in the EMS developed when the narrowly failed Danish referendum on Maastricht in June 1992 raised questions about the viability of the whole Maastricht Treaty in which not only European Monetary Union was a major element, but EC Political Union - meaning basics of common defence policies and common foreign policies. Danish voters' resistance obviously was focussing more on Political Union and the quest for national autonomy in this field than in monetary policy. When French President Mitterand called for a referendum on the Maastricht Treaty and opinion polls suggested a narrow outcome, speculative attacks against various currencies were mounted; these attacks were partly the reverse side of a move into the DM in an EC political environment in which a future ECU had become doubtful. DM denominated assets had in their own right become increasingly attractive in 1992 when Germany's Bundesbank, eager to demonstrate stability-oriented monetary leadership - in contrast to alleged excessive fiscal deficits of the Bonn government for the sake of German unification - had raised the discount rate to a post-1949 record level; all this while US short term interest rates were hitting record lows so that massive US capital outflows were strongly and disproportionately attracted by DM denominated assets. Speculative capital flows increased in a maximum damage EC environment, namely in a setting characterized by a newly established full capital mobility in all EC countries (except for Spain, Portugal and Greece) on the one hand, and, on the other hand, the anticipated unfolding of the single EC market which implied free trade not only in

commidities, but also in financial and nonfinancial services and the free movement of labor and capital.

Various aspects of EMU were analyzed in the recent literature where emphasis was place on both institutional problems of monetary policy in the EC (e.g. HASSE and SCHÄFER, 1990; WEBER, 1991; KENEN, 1992; FRATIANNI, VON HAGEN and WALLER, 1992; CANZONERI, GRILLI and MASSON, 1992) and problems of optimal currency area in the EC (EICHENGREEN, 1990; MENKHOFF and SELL, 1992; DE GRAUWE, 1992, SMEETS, 1993). While some critics argue that the EC is not an optimum currency union and hence monetary unification is an economic mistake other critical observers suggest that the transition towards full EMU is full of risks and should be prolongated because of the structural adjustment needs stemming from the single market project and the new EC problems faced in the context of systemic transformation and economic opening up in Eastern Europe (WELFENS, 1992b). In the subsequent analysis we will focus on the autumn crisis of 1992 (section 1) in order to draw some lessons for sustainable transition policies in the EC; in section 2 the Maastricht approach to EMU is analyzed and the link between the single market and monetary integration are analyzed. Finally, some issues of the transition to EMU are addressed and the question is raised whether or not Germany and the Bundesbank are likely to decisively shape a viable EMU.

1.2 The Ratification Crisis

Facing an uncertain and delayed ratification of the Maastricht Treaty raised serious stability problems in the EMS in 1992/93. In autumn 1992 a major crisis in the EMS erupted, when the Italian Lira and the British Pound left the Exchange Rate Mechanism and allowed their exchange rates to float and the Spanish Pesata and the Portuguese Escudo were devalued. Competitive devaluations in Island - with some advocates of devaluation pointing to competition of Island's fishing fleet against Spain's fleet - and Ireland occured at the turn of 1992/93; Ireland's strong trade links with the U.K. almost forced it shadow the Pound's 20 percent devaluation within three months. Ireland had tried to defend the Punt parity with triple digit interest rates as had been the case in Sweden a few months earlier. Finland's, Sweden's and Norway's unilateral pegging of their respective exchange rate to the ECU was not viable in the heavy weather of speculative attacks and high nominal and real interest rates in late 1992: Finland's double digit unemployment rate, partly caused by the collapse of the USSR and its strong trade links with it, induced Finland to switch back to floating again, while Sweden tried to defend parity for a few weeks with record interest rates necessary to compensate those holding Swedish Crowns instead of DM in an exchange rate crisis/an anticipated devaluation (a 4 percent devaluation taking place over a two-day weekend will result in an annualized yield of some 750 percent for those boorowing Crowns on Friday - prior to devaluation - and repaying the Crown loan with depreciated currency after the had converted DM assets into crowns on Monday; hence a "weekend devaluation probability" of

0.15 or 0.5 requires two-day annualized Crown rates of about 100 % or 300 %, respectively). Watching Finland's exports and stock market index benefitting from devaluation, while Swedish industry suffered from record nominal and real short term interest rates, the government of Sweden finally decided to also return to floating. Norway did the same. Speculative attacks against the French Franc were countered in France by high interest rate policies and government's arm-twisting of state banks on the one hand, by Bundesbank intervention (including public statements) in favor of the Franc and, finally, by a first reduction of Germany's discount rate in January 1993 which was followed by several other small interest rate reductions. French interest rates could be strongly reduced after the new conservative government took over, but in real terms interest rates remain at high levels in France.

From the Bundesbank's point of view the virtue of small reductions in the discount and lombard rate is consistent to the extent that this policy fuels anticipation of further future interest rate reductions and does not undermine the prospects for an increase in the long term inflation rate. Both effects can reduce real long term interest rates strongly, and long term interest rates are more important in German financial markets - and for investment - than short term interest rates. Lower real interest rates also support the Bundesbank's goal to induce the government to reduce government borrowing which sharply increased in the context of German unification and is considered as a potential threat for antiinflationary monetary policy.

By contrast, British financial markets are characterized by a dominance of short term borrowing and long term interest rates are often adjustable so that short term interest rates are truly dominating. The U.K. as well as Italy (and some other EC countries) face a much higher vulnerability to short term interest rates shocks than Germany, the Netherlands, Belgium or France. Theory suggests that low inflation rates will increase the average maturity of bonds and generally will encourage more long term financing. The diverging historical inflation records of EC countries thus influence the term structure of financial markets and this in turn creates countries vulnerable to short term interest rate shocks and those which are more robust in this respect. Countries in which dominant short term interst rates coincide with a high debt GNP ratio (as in Italy and Greece) are most exposed to interest rate shocks arising from Germany's monetary policy reactions. Moreover, such countries then obviously cannot afford to defend overvalued currencies by a high interest rate policy over the long term.

After the negative Danish referendum on Maastricht in June and in anticipation of a narrow result at the French referendum in September 1992, the Maastricht plan for a future EC currency become less credible and by the same token the idea of a dominating DM more likely. In a period of high DM interest rates the movement out of ECU assets, out of dollar assets and out of weak EMS currencies, but moving into DM assets became appealing. Italy's currency was the first country to fall victim to its accumulated currency overvaluation and the rising DM attractiveness which had been reinforced by Germany's high interest rate policy adopted in 1992 as a means to

reduce inflationary pressures (with inflation running at 4 %) and a signal to the Bonn government that fiscal restraint was necessary. The role of the DM as an international reserve asset had strongly increased since 1973 and its share in world currency reserves - reaching 15 % by the late 1980s (ISSING, 1992) - could be expected to increase at the expense of the ECU or even the dollar if Maastricht failed.

Italy's foreign exchange reserves had already been melting away in the first half of 1992 and therefore the lira devaluation was inevitable. On September 14 the lira was devalued by 7 %, and three days later the Peseta followed with a 5 % devaluation (later followed by a second devaluation), while the Pound Sterling and the Lira left the exchange rate mechanism. The Bundesbank's "interview policy" - indicating in mid-September that a broader EMS realigment was adequate - might indeed have weakened the British pound. However, as the following Tab. 1 shows the pound indeed was overvalued and rumors had hardly affected its position if this had not been the case. Compare 1987.IV (the last realignment prior to 1992 was in early 1987) and the index for 1992.II showing a strong overvaluation of the Lira and the Pound Sterling: For the Lira the overvaluation was about 13 %, for the Pound about 9 %, much in contrast to the Irish Punt, the Danish Crown, the Belgian Franc and the French Franc whose real exchange rate had changed only slightly in the period 1987 to mid-1992. Postponed adjustment requirements and fundamental changes, including considerations of relative political instability, led to sharp devaluations of the Lira and the Pound, once it was decided to let the two currencies float. Vis-à-vis the DM the Lira and the Pound Sterling lost about 25 % within three months. Joint German-French measures to defend the Franc in the run-up to the French parliamentary elections in early 1993 were justified by underlying fundamentals to a large extent. However, while French nominal and real interest rates came down after the French election real long term interest rates remained about one percentage point above the German real interest rate; compared to 1979 the Franco German real interest rate differential was nearly halved.

If one takes the simple monetarist exchange rate model which relies on purchasing power parity $p = e + p^*$ (P,P*,E denote the domestic and foreign price level, respectively, E the nominal exchange rate; small letters denote logarithms of the variable), money market equilibrium $m-p = \Omega y - \sigma i$ (M=money stock; Ω=income elasticity of the money demand; σ=interest elasticity of the money demand, i=nominal interest rate in %) and interest rate parity $i = i^* + a$ (i^*= foreign interest rate and a is the expected devalution rate) the nominal equilibrium exchange rate will be:

(1) $e = m-\Omega y + \sigma i^* + \sigma a - p^*$

If we assume a symmetric money demand function abroad (starred variables) and money market equilibrium abroad $m^*-p^* = \Omega y^* - \sigma i^*$ the fundamental monetarist equilibrium equation is $e = m-m^* - \Omega(y-y^*) + \sigma(i-i^*)$. From a German perspective the Bundesbank's high interest rate policy which forced other EC countries to increase their nominal interest rate overproportionately as well as high German economic growth in 1990/91 - or unification induced higher economic growth in the 1990s - would explain a need for a DM revaluation.

Tab. 1: Real DM-Exchange Rate Index [P/eP*: (1972) = 100; on the basis of consumer prices] Vis-à-Vis EMS Countries#

	Pound Sterl.	Ital. Lira	Ir. Punt	Dan. Crown	Belg. Franc	French Franc	Guil-der	Port. Escu.	Pese-ta	US $
1973.IV	121.3	123.4	118.2	103.3	109.2	107.9	102.6	104.1	104.8	125.1
1979.IV	102.8	126.9	107.2	93.3	94.2	102.7	93.9	111.0	84.0	141.7
1981.IV	80.9	114.1	86.7	91.1	95.1	95.8	91.7	90.8	81.8	101.7
1982.IV	81.8	110.2	84.8	94.7	105.9	103.0	91.4	100.7	84.6	91.5
1985.IV	83.3	103.2	80.0	89.8	100.1	96.3	93.0	97.1	86.3	84.8
1987.IV	96.1	101.3	87.3	87.9	100.9	101.0	93.6	103.5	82.8	121.5
1988.IV	86.2	99.2	86.2	85.6	101.3	100.9	94.5	97.0	78.0	113.6
1990.IV	84.2	94.0	85.1	84.3	98.2	98.5	96.3	86.0	69.9	128.3
1992.II	83.8	92.1	86.0	87.2	100.4	100.3	96.5	74.8	67.9	121.3
% change										
'92/'87*	-12.8	-9.1	-1.5	-0.8	-0.5	-0.7	3.1	-27.7	-18.0	-0.2
'92/1972	-16.2	-7.9	-14.0	-13.8	+0.4	+0.3	-3.5	-25.2	-32.1	21.3

Except for Greece

**: percent change of IIth quarter 1992 vis-à-vis IVth quarter 1987; own computation, based on Bundesbank Statistics.*

Chances to save the pound parity by orchestrated intervention were minimal because once a currency has reached its lower margin in the parity grid even massive interventions were insufficient in view of the huge market volume. Only if the British economy had been able to easily get along with very high real interest rates as a means to defend the Pound had there been a slight chance for defending the overvalued British currency. Market volume in foreign exchange markets has strongly increased and interventions have to be both massive and credible - which probably requires full Bundesbank support - if currencies unter attack are to be defended at manageable costs. Daily turnover figures in major currency markets continued to increase in the 1980s: from $ 188 bill. in 1986 they rose to 623 Mrd. $ in spring 1992; foreign exchange reserve of the G-7-countries reached about $ 350 bill.[1] This amount certainly is insufficient to counterbalance speculative attacks unless interventions are undertaken in an early speculation stage and are mainly intra-marginal interventions.

Currency Substitution

Currency substitution played a major role for the September 1992 crisis in the EMS. With nominal interest rates in the U.S. at very low levels and German rates at post-1945 record levels the interest differential generated transatlantic passat-like winds: short term capital was massively moved out of the US dollar to be poured into DM denominated assets (DM interest rates exceeded US interest rates in 1971, too). As a consequence of massive capital inflows German interest rates started to slightly fall in late 1992. Since the Bundesbank refused to lower the discount rate and because inflationary expectations were running at unchanged high levels of around 4 % in 1992/93 nominal interest rates in Germany were unlikely to come down quickly, and indications for rising US interest rates remained weak even after the Clinton administration took office in the US. Transatlantic interest rate differentials disproportionately affect the $-DM exchange rate in Europe because the DM is a closer substitute to the dollar than any other European currency. This in itself is bound to create tensions within the EMS, a link analyzed earlier by GIAVAZZI and GIOVANNINI (1986).

It is unclear which mechanisms account for the uneven tensions within the EMS. Two hypotheses may be advanced: (i) Since in integrated European capital markets Germany's EC partner countries (more strictly the ERM partner countries) have to raise nominal interest rates parallel to the German interest rate, the economic situation in each country is critical: countries with high budget deficits or high unemployment rates can hardly be expected to be able to live with higher real interest rates. Italy with its double problem of high budget deficits and high unemployment therefore could only devalue, and finally leave the ERM. (ii) Countries which a major producers and exporters of innovative capital equipment - such as Germany, the Netherlands, Austria and

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1 For these figures see BLITZ (1992), How Central Banks Ran into the Hedge, Financial Times (30. Sept.). Portfolio investments and the rising volume of futures contracts played a crucial role for the overall growth of international financial market transactions. In the U.K. pensions funds' shares of investments abroad increased from 6 to 20 % in the period 1980-92. See on the rising internationalization also Tab. A1.

Switzerland - are less likely to be forced to devalue in a period of rising European real interest rates because the European-wide need to match higher real interest rates with a rising marginal product of capital cannot only be achieved by reducing output, but also by accelerating capital modernization. While for nonproducers of capital equipment in Europe high real interest rates imply only the pain of lower investment-output ratio and increased budget problems for government, countries which are major producers of capital equipment and known for a high supply side flexibility will face smaller economic problems in periods of higher real interest rates. (iii) European countries differ in their international net creditor status. Countries with a net creditor position are likely to partly benefit from rising interest income from abroad in periods of high real interest rates. As regards the credibility of policy measures defending an overvalued parity speculators will take these aspects into account. The less favorable (i)-(iii) are for a given country and the higher the intial overvaluation, the less risky is it to mount speculative attacks against a certain currency.

1.2 Competitive Devaluations

The devaluation of one currency (country A) can trigger a cascade of devaluations in other countries B...F. If A has strong trade links with B and a strong overlap in exports on third country markets B is likely to respond to A's devaluation with a devaluation, too; and similar arguments could apply to B with respect to C...F. A clear example is the link between Spain and Portugal in May 1993 when the Peseta was devalued by 8 %, while the Escudo was devalued by 6.5 % (in the 6 % devaluation of the Peseta in November the Escudo also had followed suit). Another example is the pair U.K. and Ireland. The Pound devalution and the fall of the Sterling exchange rate after the switch to floating implied that the Irish Punt bound to be devaluated, and it probably was only the political indeterminacy of pending elections in late 1992 that postponed the 10 % devaluation of the Punt to as late as January 30, 1993. The lira devaluation weakened the Iberian currencies, because part of Italian exports show a strong overlap with Spanish and Portuguise exports; indeed the Pesata was devalued twice, and the Escudo - having entered the ERM in 1992 - was devalued, too. Finally, the Swedish strategy of unilaterally pegging its currency to the ECU became unfeasible not only because the weak Swedish economy could not survive short term interest rates of up to 500 %, but also because the Finnish decision to switch from pegging to floating in autumn 1992 was bound to erode Swedish export positions in all markets with direct competition against Finnish exporters. "Hpyer interest rates" can occur during an exchange rate crisis and during policy switching. What happened in 1992 was not very different from the crisis of the French Franc in 1983 when France devalued on Monday, March 21 - after the FF had reached annualized interest rates of 350 % during the weak before. The 1983 devaluation of 3.75 % vis-à-vis the DM took place over a two-day weekend and implied an annualized yield of 675% for those happy speculators who borrowed Francs on Friday in order to convert them into DM over the weekend, and repaying the FF loan with depreciated currency. Market signals had strongly suggested an impending devaluation. Dealers in foreign exchange

who assumed over a given weekend a 0.5 probability of a 3.75% devaluation would be willing to hold short term FF position - rather than DM position - only if markets offered a two-day interest rates of some 300 % at an annual rate. Anticipated policy switching is an important theoretical issue and is covered in the analysis of GARBER and FLOOD (1993).

The EMS had narrowly escaped a full disintegration in a period where it was supposed to develop toward European Monetary Union with irrevocably fixed exchange rates. In the U.K. interest rates had strongly been reduced immediately after the switch to floating and for some time it seemed that countries following the British course of floating would benefit in a similar way; indeed, it seemed that a situation similar to 1931 had occured when the U.K. gave up the gold standard and the pre-World War I parity (reestablished, based on a deflationary process, in 1925) and devalued by the Pound by some 30 %, with more than 20 countries from the Pound block following suit, thereby leaving the gold block France, Switzerland, the Netherlands, Belgium and Poland plus Germany and Italy - the latter two introducing capital controls - in a situation of overvalued currencies, rising real interest rates and rapidly falling industrial output. However, in 1993 long term nominal and real interest rates in the ERM bloc group started to gradually fall, while fear of rising inflation gradually pushed up interest rates in the U.K., Italy and other countries which had strongly devalued. Fear of future devaluation certainly implied a risk premium for foreigners investing in U.K. or Italian government bonds, and high British and Italian deficits required considerable capital inflows such that the emerging risk premium could not be expected to leave interest rates unaffected. High interest rate policies and overvalued currencies as well as competitive devaluations could strongly reduce the growth effects of the single market program. Sharp devaluations impose a shock-like adjustment pressure on the EC.

The basic problem in the EMS in 1992 was not devaluation itself, but the order of magnitude which basically reflected cumulated inflation differentials of the U.K. and Italy vis-à-vis Germany. Several observers had pointed out early on that the pound had entered the ERM at too high an exchange rate and that sustaining inflation differentials were, of course, not consistent with fixed nominal exchange rates (e.g. DORNBUSCH, 1991; WELFENS, 1991, this volume). What seemed surprising, however, was the political self-blocade implicit in one of the convergence criteria of the Maastricht Treaty which stipulated, among other criteria, that no devaluation should have occured for two consecutive years if an EC country was to enter stage III of Economic and Monetary Union. Instead of interpreting this clause as freedom to devalue if necessary in the first half of the 1990s, most governments obviously were determined to fix parities already well before the immediate run-up to stage III envisaged for 1997 or 1999 in the Maastricht Treaty. Had the U.K. devalued by a small percentage in 1991 and Italy accepted a real devaluation when it entered the narrow band in the EMS in 1990, speculators had found their victims in much better shape. Record German interest rates as a consequence of German unification and - this should be emphasized - persistent Italian deficits that remained at the equivalent of 2 % of EC GNP posed difficult problems for all EC countries, but countries with

overvalued currencies were unable to weather this interest rate shock in a period of confidence crisis and rising capital mobility.

Competitive devaluations undermined European free trade and thus caused market disintegration in the 1930s in Europe when misalignment (overvaluation of the Franc, undervaluation of the Pound and the sterling bloc) distorted trade and allocation, while encouraging compensating tariff policies and regional bloc building.

Monetary institutions in Europe have a long record of slowly learning about feasible and necessary policy strategies consistent with sustained growth and price stability. Maintaining an overvalued currency over many years is not only a trait of the 1980s but can be found in the 1920s, too. E.g. British policy inconsistency in exchange rate policies indeed has a long record if one recalls the return to the pre-World War I gold parity of the Pound in 1925 which had to be sharply devalued by 1931, and one may also recall the aborted move to convertibility in 1946. Misalignment and inadequate policies are certainly not a British specialty but adequate policies of reserve currency countries are of significant internal and external importance in all exchange rate regimes. With respect to the EMS the German Bundesbank still has to prove that it can exert monetary leadership that takes into account both national and EC aspects. The Bundesbank can, however, claim that in spring 1990 it suggested to consider a realignment but EC partners - especially France and the U.K. - were unwilling to really envisage a timely revaluation of the DM. Creating closer similarities in the institututional setup of central banks might reinforce the willingness to cooperate in a consistent manner. From this perspective the French move towards an independent central could indeed facilitate German-French monetary cooperation, and if the U.K. and Italy cannot follow in institutional central bank reform quickly the interests of both countries might become less taken into account in the future by German-French monetary policy strategies; moreover, both the Pound and the Lira are likely to face an eroding position in international currency markets if central bank independence cannot be established relatively fast.

Misalignment risks are prevalent in the EC in the 1990s. If major EC countries should face unemployment problems at the same time competitive devaluations could destroy not only the European Monetary System but also the single market. Governments that face devaluations in competing countries but want to avoid devaluation themselves could quickly face pressure to reimpose nontariff and tariff barriers in the EC. Finally, increased use of EC funds for structural and regional policies could become a means of compensating adverse exchange rate effects.

1.3 Some Problems with the Maastricht Design of EMU

The Maastricht Treaty emphasizes price stability as the priority goal of a future EC central banking system. Germany's political preferences as well as the institutional model of the

Deutsche Bundesbank have strongly influenced the envisaged main goal and EC central banking design. If the Bundesbank would be replaced by European System of Central Banks (ESCB) in accord with the Maastricht Treaty the Federal Republic of Germany would lose its monetary autonomy and the DM, while there would be an uncertain gain from currency union in the EC; however, part of the Maastricht dividend for the FRG obviously was the support of France - and other EC member countries - for German unification in 1990. Paradoxically, the problems of German monetary union which brought a sharp revaluation of the East German currency and rather generous conversion rates, associated with steep increases of unit labor costs and additional unemployment, has reinforced the political resistance against EMU in Germany.

The Maastricht Treaty envisages, following the Delors Report, a three stage approach to EMU. A first stage - already started on July 1, 1990 and lasting until end-1993 - will bring full capital mobility as well as increasing policy coordination. The latter could require in some EC countries to submit convergence programs that shows ways for achieving the convergence criteria of the Maastricht Treaty: a deficit GNP ratio of below 3 percent, a debt-GNP not exceeding 60 %, an inflation rate that must not exceed the average of those three countries with the lowest inflation rate by more than 1.5 percentage points and a nominal long term interest rate (bond rate) which should not exceed the rate in the three countries with the lowest inflation rate by more than 2 percentage points. Since the nominal interest rate is the result of "market real interest rate" plus expected inflation rate, one may argue that the interest rate criterion emphasizes that convergence in actual inflation rates should be accompanied by convergence in expected inflation rates. The fact that the ERM crisis in autumn 1992 brought a transitory reinforcement of capital controls in some EC countries (Spain, Portugal, Ireland) shows that even stage I is difficult to realize. As regards the desired membership of all EC countries in the ERM - within the narrow band - Italy's and the UK's leaving of the EMS clearly is the opposite of the development to be achieved.

In Stage II of EMU a new institution will be created: the European Monetary Institute (EMI) as the succesor organization of the EC committe of central bank governors and the European Fund for Foreign Exchange Cooperation. EMI will be responsible for coordinating monetary policies. The responsibility for monetary policy will remain at the national level which could mean that German monetary policy will continue its strong impact upon EC monetary policy. The EMI will untertake preparatory steps for stage III which could start as early as 1997; 1999 is the alternative date. For Italy, Greece, Spain and Portugal stage III would bring an important change with respect to central bank financing of government budget deficits. Direct monetary financing of government budget deficits will be no longer possible; technically this will even affect the German government which formerly could draw short-term credits from the central bank (within certain limits) in order to bridge the period between major tax receipt dates. National central banks will obtain political independence; at the latest this measure must

be at the beginning of stage III. The Benulux countries, France and Spain have prepared in 1992/93 steps towards central bank independence. Governments face the risk of losing some seignorage gain if one assumes that independent central banks will adopt a less inflationary monetary policy than otherwise, however, governments could gain from lower nominal and real interest rates to the extent that market participants associate an independent central bank with less unstable monetary policies, declining uncertainty and therefore finally reduced interest rates. Risk premiums could reduce and possibly lower real interest rates could stimulate economic growth.

At the end of stage II the Council of Economics and Finance Ministers (ECOFIN) will evaluate whether progress in achieving the convergence criteria has been achieved. Based on the ECOFIN report about the fulfillment of convergence criteria the EC Council will decide with qualified majority until end-1996 whether a majority of countries has achieved convergence and whether it is useful for the EC to enter stage III of EMU; if so a date for entry in stage III will be fixed. An additional criterion for would-be members in stage III of monetary union is that two years prior to the ECOFIN report no devaluation of the respective currency has occurred. This clause has stimulated the tabooing of devaluations in stage I beyond the normal political reluctance to devalue a currency whose parity if often held to have a political value of its own. The Maastricht Treaty did not emphasize the necessity to regularly adjust parities - e.g. within small margins, in annual intervals - during the transition period 1990-95. The dynamics of the single EC market and the structural adjustments resulting from the unfolding of the EC '93 project indeed suggest that real exchange rate adjustment will be necessary in the 1990s within the EMS. If the 1997 date cannot be realized the Maastricht Treaty proposes another convergence report in 1998. In accordance with this report EMU III will enter into force for at least two countries on January 1, 1999, and a European Central Bank (ECB) will be established as of July 1, 1998; a possible option to fulfill the Treaty, while avoiding sharp conflicts about a revision of the Treaty, could be that the currency union between Belgium and Luxembourg would be the two countries to introduce the ECU in 1999. The revision clause of the Maastricht Treaty leaves open whether the EC government conference of 1996 will introduce some refinements with respect to the switch to stage III.

In stage III the ESCB will be established (as most anticipate its seat will be in Germany). Paid-up equity capital will be according to equal weights for national shares of GNP and the population in the respective EC total. Equity capital is the basis for disbursing profits. Parities of EMS currencies will be frozen with a zero margin. Since in stage II the currencies will be defined that will compose the "new ECU", the enlargement of the EC by some EFTA members should have been settled: The ECU will become a real currency in stage III. Governments will agree on guidelines for fiscal policies and economic policies.

Fig. 1: Stages of European Monetary Union According to the Maastricht Treaty

STAGE I (July 1, 1990 - end-1993

1a) Full liberalization of the capital account in all EC countries; transition periods for Greece, Spain and Portugal (the latter until 1995, due to provisions in the treaties of the Ibererian enlargment of the EC).

1b) Increasing macroeconomic policy coordination of EC member countries, which are expected to develop convergence programs.

1c) All EC currencies should be integrated in the ERM mechanism under the standard parity margin of +/- 2.25 %.

STAGE II (1994 to end-1996 or end-1998)

2a) Creation of the European Monetary Institute (EMI) as the succesor organization of the EC committe of central bank governors and the European Fund for Foreign Exchange Cooperation. EMI will be responsible for coordinating monetary policies, but responsibility for monetary policy will remain at the national level. EMI will untertake preparatory steps for stage III.

2b) Direct monetary financing of government budget deficits no longer possible;

2c) National central banks will obtain political independence; at the latest at the beginning of stage III.

2d) The weights of the currencies in the ECU are irrevocably fixed which makes the mid-1990s critical with respect to EC enlargement. Should more stability-oriented countries join the EC (e.g. Austria and Sweden) could one expect a grater political weight of EC countries in favor of low inflation rates.

2e) The Council of Economics and Finance Ministers (ECOFIN) will evaluate whether progress in achieving the convergence criteria has been achieved; moreover, ECOFIN will report whether a majority of countries have achieved convergence, and based on this report the EC Council will decide with qualified majority until end-1996 whether it is useful for the EC to enter stage III of EMU; if so a date for entry in stage III will be fixed. After another convergence report EMU III will enter into force for at least two countries on January 1, 1999, and a European Central Bank (ECB) will be established as of July 1, 1998.

Stage III/Final Stage (at the earliest as of Januar 1, 1997) - Creation of the European System of Central Banks (ESCB)

(3a) The ESCB will be established. Paid-up equity capital according to equal weights for national shares of GNP and the population in the respective EC total. Equity capital is the basis for disbursing profits.

(3b) Freezing of parities with a zero margin. ECU will become a real currency.

(3c) Governments will agree on guidelines for fiscal policies and economic policies.

STATUTE OF EUROPEAN CENTRAL BANKING SYSTEM (EUROPEAN CENTRAL BANK + NATIONAL CENTRAL BANKS)

Main goal: Price level stability

Position of the ESCB: a) funktionally independent. b) no-bailout clause for other EC member countries' debt. The ECB Council consists of the six members of the ECB Directorate - who have to be appointed unanimously - plus the national central bank presidents. c) operationally independent ESCB which means that monetary policy (indicators and instruments) will be chosen by the ESCB; e) personally independent which is achieved by eight years terms for the board members - no reelection possible; national central bank presidents must have at least a five year term.

The convergence criteria chosen are clear, but first one can object that they are not really hard targets because the EC summit could always argue in a somewhat arbitrary way that sufficient progress has been achieved by member countries which have failed to meet convergence targets; second some criteria are doubful and partly lack convincing economic justification.

An inflation rate convergence criterion certainly is a useful requirement if the goal of price stability is to be achievable in the first critical stage of the ESCB which will face the natural credibility problem of a newly created institution. Even if it is modelled on the German Bundesbank (which until 1957 was a "Bank deutscher Länder" - Bank of German States - in turn was modelled on the US Federal Reserve System) it is obvious that market participants would strongly doubt the goal of price stability if the initial stage III club would consist of countries with strongly diverging inflation rates. The inflation criterion and the interest rate criterion are convincing ideas for countries that want to establish a low-inflation community at the final stage of EMU - and want to maintain price stability; it is, however, doubtful whether high real interest rates that characterized almost all EC members in 1992 would be an ideal starting position for a stability oriented EMU. Low real interest rates and high growth rates which would reduce unemployment are desirable if a discussion about an inflation unemplyoment trade off in the inital stage of EC monetary union is not to undermine the credibility of EC monetary policy.

The debt deficit criterion of a GNP ratio of 60 % is quite doubtful as a convergence criterion because it is reflecting rather past policies than future sound policy strategies. The 60 % ratio was chosen (MATTHES, 1992) because this was the average EC ratio prevailing during the period of the government conference leading to the Maastricht Treaty; and the 3 % deficit-GNP ratio is a corrolary of the 60 % debt-GNP ratio because only with that upper limit on national defict-GNP ratios can those countries which currently strongly exceed the 60 % debt limit expect to achieve that ratio in the long term. Given the fact that Italy, Belgium and Greece strongly exceed the 100 % margin with respect to the debt-GDP ratio (Tab. 2) - reflecting partly past political mismanagement - it is clear that massive surpluses would have to be reached in the 1990s if these countries were to at least strongly move towards the 60 % debt figure.

Tab. 2: Fulfillment or Nonfulfillment of EMU Convergence Criteria (reference values are for 1992, hypothetical scenario)

	%-change of consumer prices	public debt in % of GDP	budget de-deficit in % of GDP	interest rate on bonds(%)	[real in-terest rate]#
Reference	3.3	60	-3	10.0	6.7
FR	2.6	50.1	-2.8	9.0	6.4
FRG*	4.0	43.3	-3.2	8.0	3.2
B	2.4	132.2	-6.7	8.7	5.3
NL	3.1	79.8	-3.5	8.2	5.1
DK	2.1	74.0	-2.3	8.9	6.8
LX	3.4	6.8	-0.4	7.9	4.5
IR	2.9	99.0	-2.5	9.1	6.2
UK	5.1	45.9	-6.1	9.1	4.0
SP	6.0	47.4	-4.6	12.2	6.2
P	9.1	66.2	-5.6	11.7	2.6
IT	5.3	106.8	-10.5	12.4	7.1
GR**	16.0	106.7	-13.4	19.0	3.0

* 1992 inflation rate for Western Germany; ** discount rate (no long term interest rate available since maturities are short).
# interest rate minus inflation rate

Source: Deutsche Bundesbank, Monatsbericht, 1994; EC Commission

The Netherlands, Denmark and Ireland face less dramatic problems in this respect, although they also exceeded the critical limit in 1992. A more generous debt-GNP limit in combination with a relatively strict deficit-GNP medium term limit would have been more adequate if at the same time the crucial indicator unemployment rate had been additionally taken into account. In

order to establish policy credibility and reputation it would be of paramount importance that an EC central bank is not facing serious conflict-prone trade-offs between inflation and unemployment. If major EC countries have high unemployment rates in the beginning of the ESCB the looming policy conflict will undermine anti-inflation policy credibility so that actual anti-inflation measures will have to be more drastic than otherwise; moreover, if price stability can be only achieved at the price of mass unemployment in the EC after 2000 - similar to the British case of the 1920s when pre-World War I parity could be only achieved via deflationary policy and mass unemployment - the political acceptance of the ESCB is bound to suffer; indeed the whole EC integration could unravel in such a situation.

Are debt limits necessary at all? The answer for countries embedded in an institution as big as the EC is yes unless one would think that the no-bailout clause contained in the Maastricht Treaty (and in other countries in constitutional rules) is credible ex post and ex ante; if, however, a country would face bankruptcy and politico-economic disruptions the other EC member countries could certainly not simply watch the unfolding of serious negative spillovers of debt default. In the 1970s the city of New York went bankrupt despite provisions that the city of New York must have a balanced budget over the medium run, and the federal government bailed out the city. A similar inconsistency between ex ante bail out and ex post bail out is likely with respect to the relations between the EC layer and EC countries (LANE, 1993).

Since markets discriminate only very weakly among sovereign borrowers a limit on deficit GNP ratios seems to be adequate because with the switch to monetary union the disciplinary force of potential devaluation can no longer check excessive borrowing by individual EC countries; the alternative to check government borrowing via the political process lets one expect poor results in an EC monetary union because borrowing in some EC countries (Italy, Belgium, Greece, and possibly others, too) has been excessive during certain periods. Judging by the low debt-GNP ratio of Switzerland only small countries with strong requirements on state and central government to get explicit voters' support on tax and debt issues are able to avoid excessive public debt. The latter may be defined by a situation in which the social rate of return of expenditures financed through government borrowing are lower than the real interest rate. Given the many problems to ensure efficient government programs the social return on investment of many government programs is probably close to zero and rarely can one expect a competitive return on investment. This is not to say that government borrowing for fighting recessions could not be justified on economic grounds, but the poor track record of governments actually repaying debt during boom situations raises doubts about the ability of political systems to adopt prudent intertemporal financing and expenditure schemes.

2. The Single Market Program and EC Monetary Integration

Many arguments for a complementary of the single market and of EC monetary integration were presented by EC representatives (EC COMMISSION, 1990; MATTHES und ITALIANER, 1991). E.g., price transparency will increase in the case of monetary union and this could reinforce the benefits of the single market and intensified competition, respectively; and the existence of a single market will reinforce the global position of a fully convertible ECU in world currency markets such that the demand for ECU-denominated assets outside the EC will increase. Subsequently, we will take a closer look at possible links between the single market and EMU.

2.1 The Single Market and Monetary Union

Significance of the Single Market from a Monetary Perspective

As of January 1, 1993 a single market has been established in the EC (disregarding some still valid exceptions). The free movement of goods, services, labor and capital is shaping a new competitive environment in the EC. For a system of fixed exchange rates full capital account mobility is, of course, critical. Since political risk plays no role in EC countries one may assume that financial assets denominated in different EC countries are very close substitutes, and this implies in the context of full capital mobility that nominal interest rates differentials across EC countries adhering to the ERM will have to reduce further. The nominal interest rate differential for countries in the narrow parity band cannot exceed 2.5 percentage points if nominal interest parity holds; this margin can be exceeded if there is speculation on parity changes and if capital mobility or asset substitutatibility is effectively impaired by government regulations concerning requirements for insurance companies or pensions funds to hold a minimum share of domestic assets; or if state banks - as in the case of France - are not characterized by the pursuit of profits only, but have to consider the wishes of the Ministry of Finance. The single market implies that public procurement will no longer discrimate against firms from other EC countries and in general intensified competition after the removal of non-tariff barriers implies that the share of tradable goods and tradable services in GNP should increase and arbitrage intensify.

Stronger Interest Rate Convergence in the EC

A stricter nominal interest parity - assuming reduced devaluation risk on the way to state III of EMU - and the stricter validity of the law of one price imply that real interest rates at home (r) and abroad (r*; abroad means here in a different EC country) will show a stronger convergence than before. Since real capital also has become more mobile in the 1980s and the early 1990s - that is there is a rising role of foreign direct investments FDI in the EC - one may conclude that real interest rate convergence should indeed be reinforced in the single

market: Rising FDI flows will reinforce the long term tendency of the marginal product of capital at home Y_K and abroad Y_{K*} to become equal. Not only intra-FDI flows are important for the equalization of marginal products within the EC. Extra-FDI inflows - mainly from the US and Japan - could play a role for the equalization of the marginal product of capital across EC countries, too, where one would expect in the case of an ECU revaluation vis-à-vis the dollar (following the move to EMU III) extra-FDI inflows into the EC will reduce - this will hold if one follows, *mutatis mutandis*, the imperfect capital market view of FROOT and STEIN (1991) who argued that a devaluation of the dollar stimulates in a world of imperfect capital markets US FDI inflows. Increasing capital mobility in EC financial markets and the intensified inflation rate convergence imply a stricter convergence of real interest rates on finanical assets (r, r*), while at the same time profit maximization of investors implies $r=Y_K$ and $r^*=Y_K^*$. The implication is that long term real interest rates should converge in EC countries, so that divergent long term interest rates can reflect only different inflationary expectations and diverging degrees of policy credibility. Germany with its independent and credible central bank should therefore enjoy the advantage of lower long term nominal inflation rates - compared to EC countries with a politically dependent central bank.[2]

A faster nominal interest rate convergence in the EC implies that one major determinant of the demand for money in EC countries is converging. This should facilitate monetary policy, although different income elasticities in the demand for money are likely to persists across EC countries. In Europe money demand functions differ with respect to income elasticity, where e.g. Belgium and Germany had an income elasticity close to 1 and 1.2, respectively, while the U.K. recorded an elasticity of 1.89 (BUTTER and FASE, 1981). A parallel recession in the U.K. and Germany would therefore reduce the demand for money in the U.K. much more than in Germany which would imply pressure on the pound sterling; even if inflation rates in the U.K. and Germany were the same. Moreover, the British economy's share in trade with the US is much higher than in any other EC country so that the US business cycle drives a wedge between the UK and the continental EC countries.

Trade, Investment and Exchange Rate Volatiliy

Exchange rate stability will not in itself strongly support the creation of intra-EC trade and intra-EC investment if one is to follow standard empirical analysis (BAILEY and TAVLAS, 1988; 1991; GOTUR, 1985; DE GRAUWE, 1981). However, exchange rate instability in the EC cannot be seen as an isolated political issue; high exchange rate instability could lead to a collapse of the EMS and this could be the start to full EC disintegration.

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2 Germany also enjoys the advantage that the DM is a major international reserve asset, so that interest rates can be lower than in other EC countries. The DM's share in world reserves rose from 1 % in 1974 to almost 15 % in 1993. German unification offers new opportunities to reinforce the share of DM invoicing in Germany's imports and exports. Moreover, some multinational companies favor the DM as a means of account and transaction in Europe: DOW chemicals declared in late 1992 that they would switch to a DM-based invoicing throughout the EC.

Tab. 3: Foreign Direct Investment (FDI) and Portfolio Capiatal Flows in Undistural Countries, 1975-91

(bill. $, annual averages; outflows/inflows divergence due to divergent statistical coverage)

	1975-79	1980-84	1985-89	1990	1991
FDI outflows total	34.7	41.0	128.4	209.5	165.3
EC	14.1	20.9	59.4	97.5	80.5
FDI inflows total(a_1)	19.9	36.2	98.1	148.7	115.2
EC (a_2)	11.4	14.2	38.4	85.9	67.7
a_2/a_1 in %	*57.3%*	*39.2%*	*39.1%*	*57.8%*	*58.8%*
portfolio capital outflows total	12.4	41.8	176.8	151.6	277.6
EC	3.8	18.9	62.6	79.8	144.0
portfolio capital inflows total	**25.0**	**57.8**	**186.0**	**159.1**	**388.7**
EC	8.5	17.7	70.4	94.4	173.7
equity capital inflows, total (b_1)	3.7	10.8	31.4	-16.0	90.1
b_1 in % of a_1:	*18.6%*	*29.8%*	*26.7%*	-	*57.1%*
EC (b_2)	2.2	2.1	22.7	11.5	32.1
b_2 in % of a_2:	*19.3%*	*14.8%*	*59.1%*	*13.4%*	*47.4%*

Note: Total EC FDI stock (inward) in 1988: Bill. $ 399, of which 160 bill. as intra-EC FDI; average anual flows in 1985-89: $ 20 bill.; stock of EC FDI (outward) in 1988: $ 492 bill. of which $ 160 bill. as intra-EC stock. About 50 % of EC FDI inward flows were from extra-EC sources in the second half of the 1980s, down from a much higher share in the late 1970s and the first half of the 1980s.

Source: BIS (1992) Annual Report, Basel; EUROSTAT (1990), Provisional Report, Luxembourg, August 1990; YANOPOULOS (1992); own calculation

Trade and FDI go together in the EC, but trade links were typically established before major FDI links (MOLLE and MORSINK, 1991). In the single market intensified FDI flows could in turn stimulate the expansion of intra-EC trade. One must not overlook that portfolio capital flows have significantly contributed to EC equity capital in the 1980s (see Tab. 3). In the second half of the 1980s portfolio capital flows sharply increased as a source of equity capital, compared to EC inflows of foreign direct investment; in some years portfolio capital inflows reached about 50 % of FDI inflows. Therefore - and taking into account that full capital mobility will characterize the EC in the 1990s - reduced exchange rate volatility in the ERM could indeed stimulate an optimum capital allocation in the EC market; there is no doubt that portfolio capital flows are strongly influenced by exchange rate changes and exchange rate expectations. Misalignment and overshooting effects in foreign exchange markets could distort capital allocation in the single EC market which then would translate into lower positive growth effects than would have been recorded otherwise.

Reforming the EMS?

It is doubtful that a tightening of margins could improve the functioning of the EMS and the ERM because increased capital mobility makes narrower margins more difficult to defend; theoretical arguments also suggest that tighter margins will not be beneficial for the EMS (CANZONERI and DIBA, 1992). Moreover, the ERM has effectively reinforced policy coordination and made policy responses more similar within the EC (BAYOUMI, 1992). Widening margins might reduce the necessity to intervene, but it could also reduce the pressure for stronger monetary cooperation in the EC. More frequent small realignments and a feasible strategy for stage III could be the superior alternative to EMS reforms through changing margins.

Credibility Debate

More stable economic policies and better coordinated policies could be an indirect result of EC monetary integration, and this in turn could translate into higher economic growth as policy-induced fluctuations are reduced. GIAVAZZI and PAGANO (1988) have emphasized the credibility argument of fixed exchange rates, namely that countries which otherwise have a pro-inflationary policy bias could enjoy an enhanced policy credibility if the currency is pegged to a country with a stable monetary policy and a good inflation record. This argument applies some basic ideas of KYDLAND and PRESCOTT (1977) and of BARRO and GORDON (1983) to the question of exchange rate arrangements in Western Europe. Indeed the costs of disinflation seem to be lower when certain EC countries peg their currency to the DM. However, once low inflation rates have been achieved there is no extra gain for economic policy makers. Too strong a reduction of inflation rates - below what nationally would be an optimal inflation rate under fiscal revenue aspects (given tax structures, marginal tax collection costs and options for seigniorage gains) - could create accentuated social conflicts concerning

the income distribution between labor and capital as well as acceptable tax burdens, and such conflicts in turn could weaken economic growth.

Inflation and Growth

There is empirical evidence for a negative correlation between inflation and economic growth (GRIMES, 1991); basic economic theory supports this view as long as the reduction of real interest rates in periods of modest inflation rates and the induced higher investments are not dominating the distortionary effects of inflationary misallocation. The traditional welfare analysis of inflation puts the focus on the impact of changing nominal interest rates on the real demand of money M/P (TATOM, 1976); the welfare costs H of inflation in the traditional analysis are $H = \sigma(m_0/i_0)\pi(\pi/2 + r)$, where π is the inflation rate, σ the interest elasticity of money demand, $m=M/P$ and i (r) the nominal interest rate (real interest rate). A refined approach would have to include the question whether the inflation induced change in real output Y is positive or negative. The welfare loss relative to GNP, h, then is given - with V defined as Y/m - by $h= V_0^{-1}\sigma(1/i_0)\pi(\pi/2 + r) - [(dm/dY)(dY/d\pi)][(Y_0/m_0)(m_0/Y_0]$, where the term in squared brackets simply is used to introduce the income elasticity of the demand for money $E_{m,Y}$ so that we get with Y_π denoting $dY/d\pi$:

$h= V_0^{-1}\sigma(1/i_0)\pi(\pi/2 + r) - (m_0 Y_\pi E_{m,Y})$

An increase (a fall) of Y shifts in i,M/P space the money demand schedule to the right (left) so that a negative sign of Y_π would imply an additional welfare loss of inflation. The impact of lower inflation rates on real output growth in the EC is unclear because in some EC countries higher inflation rates were a social mollifier in the struggle for income between capital and labor. The removal of barriers for free capital flows and the higher capital mobility resulting from privatization and increased competitive pressure in the EC single market already has aggravated conflicts between capital and labor - within labor between insiders with relatively protected workplaces in the firm and outsiders with their uncertain job positions.

Gains from EMU

The Report of the EC Commission (1990) has argued that static and dynamic gains from the economic and monetary union could reach between 3.6% and 16.3% of EC GNP. The lower estimate for static efficiency gains is 2.9%, the higher estimate is 6.9% so that there obviously is quite a range of uncertainty. Clearly, there will be some permanent gains from reduced transaction costs in a united currency area and there might be also some gains from increased competition via improving price transparency in a monetary union. However, higher price transparency could also imply higher wage transparency which in turn could create in a North-South context of the EC problems akin to those encountered in a West-East context after German unification. Greater wage transparency could create intensified upward wage pressure in low income EC countries where wage claims might outpace productivity growth. The dynamic gains from monetary union are assumed to accrue via reduced EC real interest rates,

the elimination of intra-EC exchange rate uncertainty and gains from a greater (reduced) role of the ECU (dollar) in international financial markets and in central banks' international reserve management worldwide. The Cecchini Report had argued that static efficiency gains from the single market program would amount to 2.5-6.5% of EC GDP so that the EC Commission's analysis of monetary union effects implies that monetary union would have greater positive effects than the removal of non-tariff barriers in the EC.

One caveat with respect to gains from a changing global reserve composition concerns the fact that a reduced number of EC currencies will induce non-EC countries to cut the amout of overall EC currency holdings (KENEN, 1992). In addition to this one may raise the question how external exchange rate volatility and the level of the real ECU exchange rate will be affected by EC monetary union. The new type of global currency competition in an oligopolistic setting will affect volatility - with uncertain a priori effects. The real income effect of monetary union and the change in the average EC interest elasticity in the demand for money will affect the level of the real ECU exchange rate vis-à-vis the dollar and the yen. A real depreciation of the ECU is likely to attract higher FDI inflows from the USA and Japan so that Western Europe would benefit from heavy FDI inflows in a similar way as the US in the second half of the 1980s. Implicitly the Froot Stein argument of imperfect capital markets is used here. If the ECU would face a real appreciation which is the view consistent with the report of the EC Commission the real depreciation of the dollar would stimulate EC FDI outflows to the US and reduce US outflow to the EC where economic growth would then be lower than otherwise. As regards EMU benefits there are three final caveats from a global perspective: EC currency unification could mean a lower intensity in global currency competition and could therefore bring higher inflation worldwide; the degree of competition will depend, among other things, on G-7 collaboration. Second, on the way to EC monetary union rising intra-EC policy conflicts and higher EC unemployment could reduce effective demand in the EC which in turn would reduce the export potential of the US and other countries so that global output could be negatively affected; under such circumstances the benefits from improved G-7 coordination might also be worse than before monetary union. Finally, and this seems to be the biggest risk of EMU, prudential supervision in the EC could become weaker under the impact of competitive deregulation and the principle of home country supervision. Internal or external shocks could then destabilize the financial and real sphere of EC countries (and the whole OECD area) more than when EC financial markets, separated by national currencies, would have allowed to mitigate shocks by different national schock absorbers and economic policies.

2.2 Problems with the Kenen Criterion

A critically important question refers to the impact of the EC single market and the ongoing integration for adequate monetary integration in the Community. If the unfolding of the single EC market reinforces the case for monetary union the EC 1992 program would indeed suggest

that this program and monetary union are complementary elements (as suggested by the EC COMMISSION). However, from the perspective of the optimum currency literature there is one basic reservation, namely the question whether or not the Kenen criterion (KENEN, 1969) will be violated by the dynamics of the single market. The Kenen criterion argues that an highly diversified production and export structure reduces the significance of the exchange rate as a policy instrument because a high degree of diversification makes it likely that random external shocks will tend to cancel out at the aggregate export or import level. The developments in industrial diversifaction in both "old" EC members and in Spain, Portugal and Greece as EC latecomers does suggest that integration might go along as much with increasing national specialization in some cases, but in other cases with increasing diversification (Tab. 4). To the extent that the single market program means creating huge EC markets with a greater emphasis on economies of scale one would indeed expect that intra-EC specialization should play a considerable role in the 1990s.

The Tab. shows in the first column that the degree of economic openness supports the case of monetary integration in the EC. However, export-GNP shares are still surprisingly low in France, Italy and Spain, where state-ownership of firms (in Italy also nontariff protection through kickbacks/"tangenti") has restricted import competition and discouraged firms' drive for exporting. One may note that the share of intra-EC trade is lowest in the U.K. and Danmark, where the resistance against EC deepening is particularly strong - although as regards social policies the U.K. and Danmark are opposed to Maastricht for opposite reasons: Denmark wants to keep high standards in social policies, the U.K. would like to prevent its low level of social policies and the apparent advantage of low unit labor costs. The degree of specialization in industry has not increased in all EC countries in the 1980s, and the same is true with respect to export concentration. The single EC market could indeed reinforce in some countries the degree of specialization since improved opportunities for exploiting economies of scale by concentration production in a few countries will be exploited by multinational companies facing fierce competition in the EC. At the same time increasing intra-industry trade could mitigate tendencies towards increasing specialization.

Tab. 4: Industrial Specialization Degree h and Intensity of Structural Change (ß: moving 5-year average in degrees) in Selected Countries

Degree of Specialization is defined as $h = 100\left(1 + \frac{\Sigma s_i \ln s_i}{h_{max}}\right)$

where s_i is the share of value-added of industry i and h_{max} is the number of industries existing (h=0, if all industry shares are equal, h=100 if there is only one industry).

degree of structural change: $\cos ß = \frac{\Sigma s_i(t) s_i(t-1)}{[(\Sigma s_i(t)^2)(\Sigma s_i(t-1)^2]^{0.5}}$

COUNTRY x [manuf. indu.,%]	1980	1985	1989	89/80 change	1989 ratio exports/GNP [intra EC#]	1981 1989 export concentration index(0≥k≤1)		change 89/81
	degree of specialization of industry (structrual change)							
FRG 38.5 [31.1]	12.1 (2.7)	14.5 (3.5)	15.4 (1.9)	+	26 [55/52]	.062	.085	+
F 22.7 [21.3]	10.4 (3.7)	11.1 (2.8)	11.4 (2.6)	+	19 [63/60]	.054	.059	+
I 18.5 [23.2]	10.1 (2.8)	10.9 (6.1)	10.8 (2.1)	+	17 [59/58]	.063	.056	-
NL 56.1 [20.2]	15.4 (2.8)	16.0 (3.4)	15.2 (2.3)	-	47 [77/64]	.124	.066	-
B 71.5 [23.3]	12.5 (2.6)	14.0 (2.8)	13.8 (2.2)	+	61## [75/73]##	##.096	.104	+
L 72.2 [28.4]	37.0 (3.1)	34.0 (3.0)	24.3 (5.8)	-	n.a. n.a.	n.a.	n.a.	
UK 23.6 [20.4]	11.1 (3.8)	11.9 (2.6)	12.1 (2.0)	+	21 [53/52]	.083	.060	-
DK 37.9 [15.8]	14.4 (3.0)	14.9 (3.0)	14.6 (2.2)	+	26 [52/52]	.075	.074	-
IR 69.6 [25.6]	14.9 (4.5)	18.8 (4.5)	21.0 (4.1)	+	57 [75/67]	.121	.132	+
SP 17.4 [25.8]	*8.4 (5.5)*	*8.5 (3.4)*	*9.8 (4.9)*	+	*15 [70/60]*	*.079*	*.104*	+
P 36.6 [26.7]	*11.2 (5.3)*	*10.4 (7.0)*	*10.5 (5.2)*	-	*35 [61/70]*	*.094*	*.103*	+
GR 21.9 [15.3]	*10.5 (3.6)*	*11.8 (4.4)*	*12.1 (4.1)*	+	*22 [64/64]*	*.167*	*.144*	-
USA [19.4]	**11.9 (2.9)**	**13.5 (3.4)**	**12.4 (3.1)**	**+**	**8**	**.064**	**.088**	**+**

share of intra-EC exports/intra-EC imports in 1990; openness= exports X plus imports X*/GNP, 1989; k = normalized Hirschmann index scaled to fall in the interval 0, 1(maximum concentration) on the basis of 3digit SITC/2(i=1-239 groups); ##=B+Lux.

$k_j = \frac{[\sqrt{\Sigma(x_i/X)^2}] - \sqrt{1/239}}{1-\sqrt{1/239}}$ where $X = \sum_{i=1}^{239} x_i$; x= exports; j= countries

* 1989, ** including Luxembourg; Noteg: x= exports of goods and services/GNP (B,L,P,GR,IR: 1990, otherwise 1991) X=merchanides exportes X* = merchandise imports; *[share of manufacturing industry in GNP Y in %]; Source: UNIDO (1992), GATT (1992) and OECD, Directions of Trade, own calculations.*

3. Transition Problems towards EMU

In the single market intensified price arbitrage and reduced scope for intra-EC price discrimination (along traditional political border lines) will reinforce for ERM countries the tendency to exhibit a common tradables inflation rate. With a given relative price of tradables to nontradables this implies a common inflation rate or at least a faster convergence towards common inflation rates. The price of nontradables will rise relative to tradables in the course of economic catching-up in southern EC countries (Spain and Portugal). BALASSA (1961) and KRAVIS and LIPSEY (1988) provide arguments and empirical evidence that the ratio of the price of nontradables to tradables is a positive function of per capita income. Relative prices shifts significantly affect the ratio of nontradables prices to tradable prices also in the case of the US (TOOTELL, 1992). One may add the hypothesis that relative wealth positions in the EC influence relative prices in the same direction as relative income positions: In EC regions with a quasi-current account surplus the prices of immobile assets will increase as their owners - with a preference to live in a prospering region - build up a net creditor position vis-à-vis people in regions with a current account deficit. One should therefore not be surprised that some inflation differential will persist among EC countries even in the long term.

Tradables vs. Nontradables: Divergent Sectoral Inflation Rates

The consumer price inflation rate for tradables in the EC reached 3.2% in 1992, while that for nontradables goods and services was more than twice as high (6.6%; see Tab. 5). This difference might transitorily even widen if the single market program brings about closer integrated market for tradables such that major firms in these markets would all have lower market shares than in the more segmented pre-1992 markets in the EC. The EC central bank governor's report for 1992 has drawn attention on the divergence between the development of prices of tradables and nontradables amd has argued that strengthening competition policies and less protection for traditionally sheltered industries could reduce not only the differential between the dynamics of tradables and nontradables, but might indeed contribute to reducing the overall inflation rates in some EC countries and thus indirectly support a downward convergence process. In some countries with high tradables-nontradables differentials - such as Italy, Spain and Portugal (probably also the U.K. and France) - competition policies and accelerated structural adjustment could be more effective at the margin than restrictive monetary policy.

Tab. 5: Consumer Price Inflation for Tradables and Nontradables in EC Countries, 1992

(Year-on-year changes in %; countries are ordered in accordance to the sectoral price differential)

	(A) Nontradables and Services	(B) Traded Goods	(A)-(B) Difference
Ireland	3.9	2.5	1.4
Belgium	4.2	2.4	1.8
Netherl.	4.1	2.6	1.5
Germany (W.)	5.5	2.7	2.8
France	4.5	1.6	2.9
Denmark	3.5	0.2	3.3
U.K.	7.3	3.8	3.5
Portugal	11.2	7.4	3.8
Spain	8.8	4.5	4.3
Greece	19.2	14.7	4.5
Italy	7.5	2.8	4.7

Source: EC Central Banks' Report, Basel, 1993

Industrial economics suggests that mark-up rates are a positive function of market shares so that falling market shares would imply reduced mark up rates - as soon as intra-EC mergers and acquisitions raise market shares the prices of tradables could transitorily increase faster or at least almost as fast as that of nontradable goods and services. Privatization of industry in EC countries with high shares of state-owned industry in industrial output could indeed be one key to more competition in the supply of industrial services from national markets. Moreover, the privatization of state-owned firms in the services industry (telecom, insurance companies, utilities) as well as the increased competition from the single market program and the greater mobility of the users of services could reduce nontradables inflation rates. In this respect developments in Italy, France, Spain and Portugal which all have envisaged broader privatization plans in 1992/93 will be interesting to watch in the 1990s.

3. Transition Problems towards EMU and an EC Central Bank

While the three stage approach towards the ESCB is in the Maastricht Treaty it is unclear how the transition stage can finally be organized in a way which would not only lead to a functional ESCB but to an EC central bank which would be viable in the long term and be a valuable partner for the central bank of the US, Japan, Russia and other countries. In a period of high dynamics in international financial markets and great political uncertainties throughout Europe EC monetary integration would be wise to create a reliable and functional ESCB, not an additional source of uncertainty and political conflict which - in a stage of rising European nationalism - could lead to destabilization of the whole EC integration process.

3.1 Conflicts of Interest and Asymmetric Adjustment Capability

On the way to monetary union there remain potential conflicts of interests within the EC12 group. In 1991 - prior to the recession 1992/93 - unemployment rates strongly differed among EC countries, where the figures for the five big economies was in the range of 4.5 % (Germany) to 17.5 % in Spain; France , Italy and the U.K. recorded all around 10 % and thus were close to the EC average. A 10 % average unemployment rate in the EC points to serious labor market clearing problems, while the divergent national figures of the big economies suggest that national perceptions of the desirability to exploit short term inflation unemployment trade-offs might differ among EC members strongly. Since stage III of EMU would imply to give up the exchange rate instrument - within the EC - unsufficient labor market clearing could become an even more serious problem for the EC in the future. An even more important field of interest could be the sensitivity of public budgets to interest rate changes. The ratio of interest expenditures to government outlays exceeded 10 % in Portugal, Ireland, Italy, Belgium and Greece, while in the U.K., Germany and France it was in the range of 4-5 %. Interest rate shocks as well as high interest rate policies are not too difficult to absorb in the latter countries. Indeed real interest rates in the 1990s could remain high not only because of an increased global savings shortage (as compared to the 1970s and the early 1980s), but also because high marginal products of capital in the single market as well as in North America and some Asian NICs create upward pressure on real bond interest rates. High real interest rates would make compliance with deficit and debt convergence indicators impossibel to achieve for Ireland, Italy, Belgium and Greece - possibly also Portugal which, however, can still improve its position through a massive privatization program.

A small monetary union that would be comprised of only five or six countries at first - Germany, France, the Benelux countries, and possibly Italy (to start with the old group that formed the EC in 1957) could be a feasible and sustained EMU club. NEUMANN and VON

HAGEN (1992) found that Germany and the Benelux countries - with a caveat also France - showed a similar degree of real exchange rate flexibility (which could come from nominal exchange rate changes as well as from national price level changes) as the West German Länder showed "real exchange rate flexibility" within Germany's common currency area: The real exchange rate is the price index of a country relative to the price index of the rest of the world, and within a country it is the regional price index relative to the national price index. High real exchange rate flexibility is necessary to absorb shocks and shifts, and if the ERM members France, Benelex, Germany (plus Austria) show as high a real exchange flexibility via changing prices as Germany's regions show one may assume that giving up the exchange rate instrument does not significantly worsen real exchange rate flexibility.

However, for a small union comprised of 5-7 member countries it is quite difficult to see how the club members could fulfill the convergence criteria. Discretionary decision-making by the EC council could finally solve this contradiction, but EC countries left behind could feel excluded on arbitrary grounds. Hence as regards the crucial debt and deficit criteria a market-oriented escape clause could be useful which would stipulate that all countries whose government debt has been rated for at least the two consecutive years - prior to the ECOFIN reporting - at least AA (or AA+) can be considered as having passed the debt convergence test. A paradox improvement of national debt rating's could occur immediately after full EMU membership becomes apparent because markets might anticipate an effective future EC bailout behavior; in contrast to all declared ex ante no-bail out clauses.

If a small EC monetary union were to exert a dominant impact on monetary policy in the single market the union must not be too small in the sense that only if at least half of monetary growth in the EC is directly controlled would one expect that other EC countries which have pegged their parities to the UNION will be dominated by the union's stability-oriented monetary policy. Non-union members would have to bear the burden of adjustment if there were tensions in the rest-EMS.

Overambitious goals for creating an EC monetary union with all member states at the outset bear in it the seed of future disintegration. It is not the intra-EC divergence of national per capita income which makes monetary union of all EC members a problem (one may recall that German monetary union of 1871 was compatible with considerable intra-German divergences, ranging from a per capita income of about 65 in East Prussia and West Prussia to 186 in Hamburg in 1913; BORCHARDT, 1968). The problem is the divergence of policy preferences and desired policy strategies. If political unification is preceeding monetary union divergent preferences and strategies of regions/nations boil down as the new federal governance structure is set up. This was the case with Eastern Germany (the five new states) in the context of German unification in 1990 and this happened in a historical context in the 19th century in several countries.

The lack of an EC public that would serve as a clearing mechanism for opposing national policy preferences can be considered as a crucial problem for achieving a viable monetary union in the EC. In critical situations in which the West German government clearly would have desired a more lose monetary policy than that actually realized the German public was the supporter of last resort for the stability-oriented Bundesbank which may be assumed to have a more long term policy orientation than the federal government with its typical focus on the next election campaign. As long as a genuine EC public is not existing, EMU might not be able to weather political storms or EC external ecomic shocks.

Some observers (e.g. SEIDEL, 1992) argue that as long as political union has not made considerable progress - say with EC based political parties - an EC central bank faces the risk of coming under political fire from all sides: From those governments which would like to see a more accomodative monetary policy, but also from those which consider the EC central bank's commitment to anti-inflationary policy as insufficient. A functional system of cross-national interest clearing in the EC is indeed necessary for a viable monetary union. One might argue that the formation of Euronationals (KLEIN and WELFENS, 1991) in the context of the unfolding of the single EC market and the increasing mobility of a least skilled labor in the EC could support such a process. However, one cannot overlook that with the collapse of the USSR and the WTO an external catalyst of EC political consensus building is no longer existant.

Tab. 6: Selected Divergence Indicators for EC Countries, 1991/1992
(figures are in %, except for the population which is in Mill.; real unit labor cost index 1980=100; 1990 per capita income based on World Bank, at purchasing power rates)

	##Unemployment Rate '91 (Real Unit Labor Costs)	Public Interest Ratio*	M3**-Growth 1992	$M3/M^{EC}$ Shares (ECU-Weights)	Inflation 1992	Population (Per c. Income)
FRG**	4.5	4.7	8.8	22.9	4.0	79.1
	(92.0)			(30.1)		(100)
F	10.3	5.1	4.7	16.7	2.6	58.2
	(90.0)			(19.0)		(93)
B	7.7	20.2	6.2	3.0*#	2.4	10.3*#
	(88.2)			(7.6)		(79)
NL	6.3	9.7	4.9	5.5	3.1	14.8
	(86.9)			(9.4)		(90)
DK	11.1	6.5	3.3	1.8	2.1	5.1
	(89.0)			(2.45)		(94)
I	9.9	17.8	7.8	16.7	5.3	57.5
	(97.0)			(10.15)		(89)
UK	10.5	3.7	5.5	22.4	5.1	57.2
	(99.7)			(13.0)		(92)
IR	16.8	13.5	3.7	0.4	2.9	3.5
	(83.5)			(1.1)		(52)
SP	17.5	6.0	5.9	7.6	6.0	38.9
	(83.4)			(5.3)		(66)
P	3.8	10.0#*	25.3	1.0	9.1	10.5
	(85.7)			(0.8)		(49)
GR	4.6	25.1	-	0.9	16.1	10.0
	(96.0)			(0.8)		(45)
EC	9.4	-	6.7#	100.0		343.1

$M3/M^{EG}$ indicates for 1991 tje shares of national monetary aggregates in EC total M3; weights in ECU basket according to revision of July 19, 1989.
* interest expenditures in % of general government expenditures; growth rates for broad monetary aggregate; *# including Luxembourg (share of 1 % in $M3/M^{EC}$);
#* own estimate; ** West Germany, except for population figure; # without Greece;
OECD standardized unemployment rates for 1992.II (Italy, Portugal and Greece: I. quarter); real unit labor costs from unit labor costs//GNP deflator; index 1980=100.

Sources: OECD (1992), Main Economic Indicators; OECD; Economist (1992, Sept. 19 and 26), IMF, International Financial Statistics und Eurostat, Luxembourg; , EC Commission (1992), European Economy, Supplement A, No.5/6 1992; WELCKER, J. und NERGE, C. (1992), Spanien müßte mehr abführen, als es vom Kohäsionsfond erhielte, Handelsblatt, 6.8.91, Nr. 150, 11; WORLD BANK (1992), World Development Report, New York, Tab. 30, Deutsche Bundesbank, Monatsberichte, March 1993, EC Commission.

G-7 Coordination

If the ESCB would not be firmly rooted in the EC institutional fabric and enjoy the support of all major EC countries' governments G-7 coordination in monetary and fical policy could become less effective than it used to be - much in contrast to what US or Japanese central bankers might expect. To the extent that US and Japanese policy makers expect to gain from a stability-oriented EC monetary policy external support for the ESCB could support the position of an EC central bank in the first crucial stage III of EMU. However, at least from a US point of view a strong and stable ECU is not ideal because the ECU would then endanger the still dominant position of the US dollar as a reserve asset and vehicle currency in international fiancial markets. This conflict would not be strong if world trade and world investment would grow quickly so that a convertible ECU's position would build on the increase in international demand for reserves rather than on mainly substituting dollar denominated assets in the stock of international reserves. If an initially stable ECU could be established the dollar would depreciate which could let the US benefit both because of rising exports and because - following the FROOT-STEIN argument - because of higher FDI inflows from the EC. For the EC this could mean suffering from increasing unemployment, especially if Japanese and Chinese export surpluses vis-à-vis the EC would further increase from already high levels at the start of the single EC market. This scenario as well as the economic opening up of Eastern Europe which confront the EC for the first time with proximite low wage competition point to the enormous need for structural adjustment in the EC; a need not really recognized by policymakers.

4.2 Institutional Aspects

A major problem concerning decision-making in the ESCB is related to the fact that the six members of the directorate will be unanimously elected by the EC Council for an 8 year term, while the other members of the central bank council are the presidents of the participating central banks. The directorate is likely to enjoy greater political independence than the presidents of the natinal central banks and therefore the likelihood that the ESCB will adopt inflationary policies under political pressure in EC member countries is the greater the more EC countries join the ESCB in an early stage and the more these countries are interested in inflationary monetary policies. If not more than six countries enter stage III, the members of the directorate could always bloc a pro-inflationary policy course since the central bank council will decide with simple majority; a majority of EC member countries would be 7.

Neglected Problems in the Maastricht Treaty?

As more and more central banks in the EC gain political independence one may wonder whether not two major problems of capitalism should be addressed more explicitly in a revised Maastricht Treaty - in the context of the revision talks scheduled for 1996 in accordance with the Maastricht

Treaty: (i) The risk of deflationary policies might seem to represent a rather opaque danger for the real economy in the EC, but as the US central bank has shown in the Great Depression a deflationary policy course (whether really intendended or not) cannot be ruled out a priori. (ii) The risk of insufficient regulation of highly developed and volatile financial markets cannot be overlooked in the EC. The S&L crisis in the US in the 1980s has shown that poor and uncoordinated financial regulation can create high wealth losses, create widespread uncertainty and transitorily impair economic growth.

Two EC reports on the ERM and a study commissioned by the G-10 group (presented in May 1993) argued that there was no need for a reform of the ERM. The report, however, argues that the high volume of foreign exchange markets - reaching almost $ 900 bill. in daily turnover in the early 1990s - requires attempts by all ERM partners to pursue monetary policies that are consistent with fundamental economic variables and are conducive to price stability.

3.2 Some German Points of View

In Germany the Maastricht Treaty has created a vivid discussion among academics, the banking community and the general public about EC monetary union. Economists from academia were not really involved in the pre-Maastricht decision-making of the German government and hence it is not surprising that after Maastricht the government faces a majorityÂ of critical economists. The banking community has always supported EMU, possibly because they expect profitable opportunities to expand in a common currency area whose functioning would follow the well-known lines of Bundesbank policies. An initially very supportive business community has become more skeptical in Germany in 1992/93 because a stability-oriented ESCB seems to be more difficult to establish than anticipated in 1990 and because German exporters' and importers' advantage of invoicing in the home currency (DM) is not longer a source of comparative advantage if all EC countries are members of an ECU club in the ESCB.

Facing the high costs of German unification West Germans are asking more than before what they have to gain if they would surrender the DM - a relatively stable currency with the additional advantage of being international reserve currency - and get an EC currency instead. Moreover, the collapse of the CMEA, the USSR and the Warwa Treaty Organization mean that Germany and the other EC countries have lost an external catalyst for political cooperation in Western Europe, and indeed in all EC countries the political focus is strongly back on the national interest ("where is my net gain?") and sometimes nationalistic perspectives influence politics again. Weakening EC cohesion could indeed result not only from increasing internal political conflicts in the EC12 group but EC widening could furthermore weaken the political cohesion as decision-making becomes more complicated, ineffective and inefficient in an

enlarged Community. If political unification or at least stable and efficient political schemes for achieving intra-community consensus, competition and coordination were a prerequisite for a viable currency union or unification EC widening - whether towards Scandinavia or central and eastern Europe - would be the wrong step. Hence facing a trade-off situation of EC deepening (monetary union) vs. EC widening Germany might find that its politico-economic gains from EC enlargement are considerable, but those from EC deepening quite uncertain. If, however, monetary union would strongly stimulate the growth of EC partner countries Germany could opt for monetary unification first because even a small increase in EC output is quantitatively more important than even a huge increase in the ex-CMEA area with a GNP of about 1/8 of the EC. German EC export interests are indeed likely to dominate over potential gians in the transforming economies of the ex-CMEA countries. Prospects for major political gains from shifting cooperation activities towards that area is also uncertain, although it is clear that Germany is most exposed to political instabilities in central and eastern Europe.

By itself Germany is unlikely to give up the idea of EC monetary union and strongly emphasize potential opportunities in central and eastern Europe, although the ex-CMEA area offers new opportunities not only for exporting goods and acquiring firms, but also of exporting the Bundesbank model to the increasing number of countries plagued by hyperinflation and the desire to establish a stable currency. On balance a united Germany - facing enormous adjustment problems in the context of unification (WELFENS, 1992a) - cannot gain much from central and eastern Europe because in economic terms the region is poor and has limited prospects for a successful economic opening-up. However, transforming economies in the ex-CMEA could reduce EC cohesion and change German policy perspectives indirectly (WELFENS, 1992b, 1993a). If Germany's main EC partner, France, would face serious agricultural and industrial adjustment problems as a consequence of the economic opening up and transformation of former CMEA countries raise pressure on Germany to step up its net contributions to the EC budget - while the contribution of France would reduce; this could sharply intensify the German discussion about the gains from EC membership. From an economic point of view Germany's gains from higher trade through EC membership is clearly overriding the fiscal contributions, but in the political debate the gains from trade are underestimated because they are spread over millions of products and millions of consumers and investors, while the net contributions are clearly visible.

Germany's prospects to impose its monetary policy course on other EC countries has improved after German unification. Germany's firms traditionally faced lower wage pressure than EC rivals in the 1980s and if Germany can restore its lead in price stability in the even more competitive single market in the 1990s the political pressure in other EC countries to match low German inflation rates will be reinforced (see Tab. A2). German firms already account for shares of 20-30 % in EC partners' imports in 1990; exceptions with lower shares are the U.K., Ireland, Spain and Portugal. Moreover, Germany as an export market is crucially important

for all EC countries, and German unification will reinforce this. EC exporters from countries with low inflation rates and low cost pressure will enjoy advantages over firms from countries with high inflation rates - as long as exchange rates do not adjust. The German influence will crucially depend on stable monetary policies in the 1990s.

The 1993 Annual Report of the Bundesbank gives a simple vision of the best monetary policy approach of the ESCB. It is recommended to emulate the Bundesbank policy approach since this is believed to also bring policy credibility to the new EC institution. To the extent that other central banks embrace the Bundesbank policy approach the German central bank might become less critical of EC monetary integration. It remains to be seen whether German central bankers will be able to base their decision-making not only on direct German interests but also on the positive and negative repercussion effects that come from Germany's EC partners. To develop a better understanding in this respect, one might consider the option that the German and the French central bank exchange at least one board member once the French central bank has become independent.

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Appendix:

Tab. A1: Increasing Financial Internationalization: Cross-border Transactions in Bonds and Stock
(Gross purchases and sales of securities between residents and non-residents in % of GNP)

	1970	1975	1980	1985	1990
US	2.8	4.2	9.3	36.4	92.5
Japan	n.a.	1.5	7.0	60.5	118.6
FRG	3.3	5.1	7.5	33.9	57.5
F	n.a.	n.a.	8.4*	21.4	53.3
IT	n.a.	0.9	1.1	4.0	26.7
UK	n.a.	n.a.	n.a.	367.5	690.1
Canada	5.7	3.3	9.6	26.7	63.8

* 1982
Source: BIS (1992), 62nd Annual Report, Basle.

Tab. A2: Germany's Leverage Through Trade: EC Countries and US, 1973-1990

	Germany's Import Pressure (% of Germany in Country's Imp.)				Germany as Export Market (Share of Exports to FRG)					
	1973	1979	1990	79-90 swing	1973	1979	1990	79-90 swing	Germany's** Trade Share Exp.	Germany's** Trade Share Imp.
B+LX	24.9	22.0	24.1	+2.1	23.6	22.5	21.3	-1.2	7.4	7.2
NL	27.1	24.2	25.8	+1.6	32.8	30.5	27.8	-2.7	8.4	10.1
DK	20.4	19.7	22.8	+2.9	13.2	17.5	19.9	+2.4	1.9	2.0
F	22.7	18.0	19.0	+1.0	19.3	17.2	17.4	+0.2	13.0	11.8
IT	20.3	17.2	21.3	+4.1	21.7	18.9	19.1	+0.2	9.3	9.4
GR	19.5	15.9	20.8	+4.9	21.5	19.3	22.2	+2.9	1.0	0.6
P	14.5	12.4	14.4	+2.0	7.5	12.7	16.7	+4.0	0.9	0.9
SP	13.6	9.6	16.5	+6.9	11.7	10.3	13.5	+3.2	3.5	2.4
IR	8.2	7.5	8.4	+0.9	6.2	8.8	11.7	+2.9	0.4	0.9
U.K.	8.5	12.0	15.9	+3.9	6.3	9.9	12.7	+2.8	8.5	6.7
US	7.7	5.4	5.7	+0.3	5.3	4.7	4.8	+0.1	7.3	6.7

** Share in German total merchandise exports and imports, 1991

OECD (1992), Foreign Trade Statistics, Series, A, Paris; Deutsche Bundesbank (1992), Statistische Beihefte zu den Monatsberichten der Deutschen Bundesbank, Reihe 3, Juli, own calculation.