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Central Europe and European Monetary Integration - A Strategy for Catching Up

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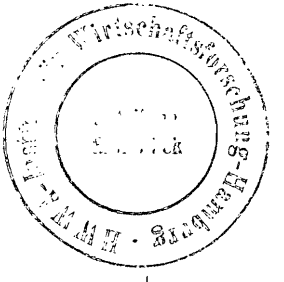

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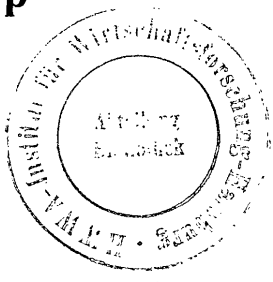

by

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Abstract

The Maastricht Treaty has augmented the preconditions that have to be fulfilled by EU applicants before a full membership can be achieved. Candidates have to prove that a participation in the European Monetary Union is a realistic possibility at least in the medium term. This paper explores the difficulties of the Visegrád countries to fulfill this monetary precondition. Apart from the convergence criteria, the cyclical correlation both within Central Europa and between Central and Western Europe is analysed. Based on that evidence, an early membership in the European Monetary System is proposed as an element of a promising EU membership strategy. Besides that, the potential role of a stabilization fund is discussed that could cushion asymmetric shocks hitting the Visegrád countries.

Acknowledgements

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1. Introduction

After a difficult period the train towards monetary union seems to be on a stable track again. In November 1993 the Maastricht Treaty went into effect and the European Union (EU) was created. The Treaty precisely defines the way to the introduction of a European currency at the latest by the end of the decade. The transition to the second stage of the Economic and Monetary Union in January 1994 has led to the setting up of the European Monetary Institute that is responsible for preparing the introduction of the ECU as a common currency. Even if many policy-makers and a large part of the European population do not seem to believe in the final realization of the project, an automatism has been started that - with a high probability - will result in the introduction of a European currency.

The momentum of monetary integration in Western Europe could aggravate the problems for the Central European reform countries to get access to the EU. The options for full membership for Poland, Hungary, the Czech Republic, the Slovak Republic, Rumania and Bulgaria are clearly stated in the Europe Agreements. In April 1994 Poland and Hungary have officially applied for EU membership. However, there are serious barriers on the way to full membership.

These barriers do not result exclusively from the different economic and social structure between West and Central Europe. On the contrary, at least as serious are the obstacles resulting from an inadequate institutional structure of the European Union. In its present shape, this structure is not appropriate for managing a community of 20 or more member states. The expected extension of the EU to the North (Finland, Norway, Sweden and Austria) in 1995 will increase the pressure for reforming the political institutions and decision mechanisms. In this regard reforms can be expected that will make a further EU extension easier.

On the budgetary field, the North extension will not lead to any reform pressure that could pave the way for Central Europe. Austria and the Scandinavian countries will pay more into the EU budget than they can expect to receive from agricultural and structural policy. So the extension will rather alleviate the budgetary problems of the EU than intensifying the need for reforms.

In contrast to that, an East extension seems to pose insurmountable budgetary difficulties (CEPR, 1992). The relatively low income in the Central European countries would - according to the existing EU rules - lead to substantial receipts from the structural funds and a low contribution from these countries into Brussels' budget. Therefore, a CEPR report comes to the conclusion: "budgetary reasons make

it very unlikely that any CEEC will be admitted in the foreseeable future" (CEPR, 1992, p. 58). Of course, this conclusion holds only true if the existing rules are applied to new member countries from Central Europe. Two solutions are possible. Either the budgetary rules are changed for the whole EU or there will be a differential treatment of the newcomers. The first solution seems to be politically unfeasable as it would be rejected by the traditional net recipients among EU member states. Only the differential treatment of the Central European states and a less ambitious structural funding there seems to make an early EU membership possible.

Even if these predominantly political problems could be overcome, the monetary ambitions of the EU have now added to the difficulties. With the Maastricht Treaty a new precondition for membership is the ability to enter the train towards a single currency. Under these circumstances, only those countries can be admitted to the EU for which membership in the monetary union is a realistic possibility within the foreseeable future. Because the introduction of a single money is not without risks that probably increase with the size and diversity of the currency area, new applicants will be assessed very cautiously. Membership can only be realized if the West can be convinced there will be no negative effects on the quality of the single European currency. As a consequence, for a successful EU membership strategy today the monetary perspective must be taken into account much more seriously than before the Maastricht Treaty.

This paper is to provide some ideas to that monetary perspective. It starts by looking at the situation of the Visegrád countries in the light of the Maastricht criteria (section 2). After that some results from optimum currency empirics are presented (section 3). In the succeeding section 4 the potential role of the EMS as an intermediate form of monetary integration before full EU membership is discussed. Finally a stabilization fund is proposed that could at low costs provide a substantial help for a successful EMS membership and the further monetary integration of Central Europe (section 5).

2. The Convergence Criteria

A sufficient extent of economic convergence is necessary for forming a succesfull monetary union. The Maastricht Treaty has defined criteria and critical values in order to decide whether there is a sufficient degree of convergence:

- Price Stability: A candidate must not have an inflation rate (measured by the consumer price index) which exceeds the average figure of the three countries with the lowest inflation rate by more than 1.5 per cent.

- Public Finances: The public deficit (all federal levels plus the systems of social security) must not exceed 3 per cent of GDP and the accumulated public debt must not exceed 60 per cent of GDP. Instead of that, it may be sufficient if these indicators are declining fast enough.

- Exchange Rates: In the preceeding two years the exchange rate of the candidate must have evolved without "strong tensions" within the normal fluctuation bands of the Exchange Rate Mechanism. Furthermore the bilateral parities of the ERM must not have been changed unilaterally by a candidate.

- Interest Rates: The long-run nominal interest rate of a candidate must not exceed the interest rate of the three countries with the lowest inflation rate by more than two per cent.

The criteria are not binding, they have merely to be "appropriately taken into consideration" (Art. 109j(3)). However, it can be expected that these criteria will play an important role. The German constitutional court has emphasized their relevance in its decision of October 1993 on the Maastricht Treaty. The court's judgement has given Germany a kind of opt-out possibility on constitutional grounds in the event that the European partners will try to force Germany into a monetary union against a parliamentary majority. If one supposes that Germany (i.e. the Bundestag) will stick to a strict interpretation of the criteria as declared by both major parties, this emphasizes the criteria's relevance.

Especially the fiscal criteria are open for criticism on economic grounds. While some authors deny the necessity of any debt limits (Buiter, Corsetti and Roubini, 1993), others (Heinemann, 1993) do not criticize so much the necessity but rather the actual form of the debt limits. There is the danger that with an insolvent country the Community could be forced to bail-out this country in order to prevent damage on the financial system. Although the Treaty contains an explicit no-bail-

out-clause (Art. 104b), this clause could lack credibility. An appropriate debt limit should therefore avoid an unsustainable accumulation of national debt. The level of "sustainable" debt, however, depends on the individual characteristics of an economy, i.e. the real growth rate, the real interest rate or the supply of capital. For the economies in transition for example, where capital markets are not yet fully developed, a 60-per cent public debt level would be more serious than for an economy with a rich capital supply from domestic savings.

The other criteria are less controversial. Exchange rate stability over a certain period is a proof that an economy is able to do the necessary economic adjustment without adjusting its nominal exchange rate.

A low rate of inflation of a candidate is essential for the confidence into the price stability of the European monetary union. Although the statute of the European System of Central Banks (ESCB) resembles in many regards the German Bundesbank, some risks concerning the actual degree of central bank independence remain (Kenen, 1992, p. 51; Neuman, 1992). Exchange rate policy is not under control of the ESCB. The personal independence of the heads of the national central banks is not convincingly protected. Because of these institutional shortcomings it is important that potential members of the monetary union prove their preference for price stability by a history of low inflation rates.

Convergence of long run interest rates is inherently connected to the inflation and exchange rate criteria. If markets are convinced that exchange rate stability is permanent because of a lasting convergence of inflation rates, interest rate convergence will follow.

How do the Visegrád countries perform today in the light of two central Maastricht criteria, i.e. deficit ratios and inflation rates? Table 1 and 2 present some of the relevant data. In the light of the deficit criterium the Visegrád countries do not perform any worse than the West. In 1993 the average deficit ratio of the public sector in the EU-12 countries is 6 per cent (European Commission, 1994, table 62). On the contrary, in 1993 apart from Luxemburg no other EU country had such a favourable budgetary position as the Czech Republic.

On the monetary field the Visegrad countries still perform significantly worse than Western Europe. The EU economies have proceeded far on the way towards inflationary convergence on a low level (average CPI inflation in the EU economies 1993 is 3.9 per cent, European Commission, 1994, table 27). The reform states are still clearly above this average inflation rate level. From the point of view of optimum taxation the inflationary performance of the reform countries might be effi-

cient. It could be the case that in the reform process collecting seigniorage is associated with less distortions for the economic process than additional taxation. However, only with a further reduction in the coming years well into the single digit region, the reform states could be seen as serious candidates for European monetary integration. The fear is large that a high rate of inflation in the Central and Eastern European countries is a sign for underlying structural deficiencies, such as an inefficient tax system, excessive public expenditures or an immature capital market (CEPR, 1992, p. 92) and that these deficiencies would lead to inflationary pressure in a European monetary union including these countries.

The further process of inflation reduction will not be easy. The OECD (1994a, p. 134) expects the further reduction of the inflationary trend to be more slowly than in the past. An adequate monetary strategy should imply an approach to assist further inflation reduction.

Table 1: Inflation
(Percentage Change CPI over Previous Year)

	1992	1993	1994	1995
Czech Republic	11	21	11	10
Hungary	23	22	19	17
Poland	43	37	30	25
Slovak Republic	10	23	16	15

Table 2: General Government Deficits
(Percentage of GDP)

	1992	1993	1994	1995
Czech Republic	0.0	0.0	0.0	-2,0
Hungary	-7.0	-6.0	-8	-6
Poland	-6.0	-2,8	-4	-4
Slovak Republic	-3.0	-6.8	-5	-5

Source: OECD (1994a)

3. Optimum Currency Area Empirics

3.1. The Theory of Optimum Currency Areas

Although the Maastricht criteria have to be taken seriously because they will be central within the political qualification process, additional information can be sought from the theory of optimum currency areas (TOCA) and its empirical application. The criteria do not tell whether a monetary union is an advisable project for those countries that fulfill the criteria. The TOCA methodology can be used to analyze whether, apart from the political arguments for an EMU participation of the reform countries, there is an economic case for it. It is the merit of the TOCA (the seminal paper is Mundell, 1961) to have led away from the generalizing debate about fixed versus flexible exchange rates. This debate used to argue for or against fixed exchange rates without taking into account the individual characteristics of different countries. Instead of this, TOCA tries to identify indicators which give information about the chance that a given group of countries will be able to form a successful currency union.

The basic concept of TOCA is cost-benefit-analysis. If a group of countries decides to give up the instrument of an adjustable nominal exchange rate this step leads first of all to saved transaction costs. Resources which are used in the whole process of managing foreign exchanges in the private and the enterprise sector can be used otherwise. It is estimated that for EMU these savings will amount to 0.3-0.4 per cent of the European GDP (Commission of the European Communities, 1990). If previously there was excess volatility of the nominal exchange rate between the countries considering monetary union there is another benefit by wiping out this burden for trade among those countries.

There are costs in giving up an adjustable exchange rate, which could exceed the moderate benefits from lower transaction costs by far. The exchange rate can be a helpful adjustment instrument between countries which are hit by asymmetric demand or supply shocks. An adjustable nominal exchange rate will be of particular importance if it can change international relative prices with a higher speed than this could be done by a reaction of prices and wages. Therefore, asymmetric shocks combined with wage and price rigidities strongly suggest the usefulness of an adjustable exchange rate in order to avoid internal (i.e. unemployment) and external (unsustainable current account deficits) disequilibria. However, there could be alternative adjustment instruments which may offer a substitute for an adjustable

exchange rate. In his classical paper Mundell (1961) focuses in this context on labour mobility: "Regions", between which labour mobility is perfect, can form a monetary union even with price rigidities and the occurence of asymmetric disturbances. In this case migration will do the job of avoiding unemployment. Other alternative adjustment instruments have been discussed: Ingram (1959) discusses the importance of capital mobility. Kenen (1969) mentions the stabilizing function of fiscal integration: fiscal mechanisms of interregional distribution can help to alleviate the consequences of shocks with asymmetric regional impact.

Figure 1: The TOCA Concept

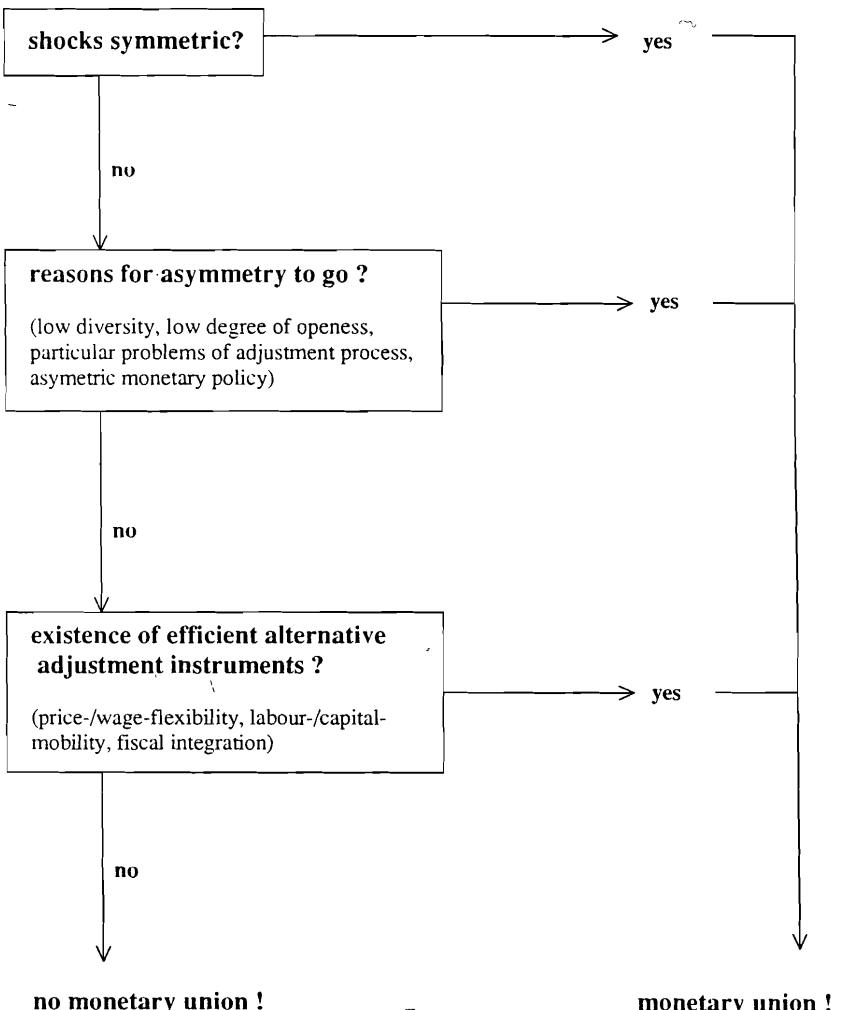

Figure 1 serves to summarize these ideas. If two countries think about forming a currency union they should pose the following questions:

- First, are the shocks, which hit both economies, of a symmetric nature? If not there could be a problem in giving up an adjustable nominal exchange rate.

- Second, are the reasons for asymmetry expected to disappear? If the real integration of both economies is to progress, an increasing symmetry of disturbances can be expected. In our context it might be that the specific adjustment problems which characterize the transformation process are responsable for asymmetry; in this case there will be more symmetry when the transformation process is completed.

- Third, are there alternative adjustment instruments which could the job do as well as or even better than an adjustable nominal exchange rate? The most important adjustment mechanism in a market economy is the flexibility of prices on all markets for goods and labour. If there are substantial rigidities even an adjustable nominal exchange rate cannot solve all problems since the nominal exchange rate can only change relative price between two currency areas and can not achieve all the changes of relative prices which are necessary in a dynamic economy (Mélitz, 1991). Other possible alternatives include besides capital and labour mobility the instrument of fiscal integration.

The empirical focus of this study will be on question 1, i.e. the degree of cyclical symmetry among European economies. As an alternative adjustment instrument a specific kind of fiscal integration is suggested in section 5.

3.2. Data and Methodology

In a couple of studies the degree of cyclical symmetry in Western Europe has been analyzed (CEPR, 1992; Cohen and Wyplosz, 1989; Bayoumi and Eichengreen, 1992). The CEPR study and the analysis by Bayoumi and Eichengreen both come to the conclusion that within Western Europe there is a core-periphery-pattern among Western European economies. A core of countries show a high degree of cyclical correlation while there are economies in the periphery with an asynchronous

business cycle relative to that core. It will be interesting to regard the Visegrád countries within that context.

For this analysis, consistent data for an indicator of the business cycle for both West and Central European economies are necessary. For that purpose, it was possible to collect monthly data for an index of industrial production for the EU, EFTA (without Switzerland) and Visegrád countries. The source for the EU and EFTA economies are the IMF International Financial Statistics, the data are generally available from the beginning of 1972 (for exceptions see appendix). For the Visegrád economies, monthly index of industrial production data could be obtained from the OECD Short-Term Economic Indicators starting in the beginning of 1980 (exception is Poland where data start in 1985, see appendix). The OECD data base has the special advantage that it offers separate Czech and Slovak data. Therefore, in the analysis it was possible to treat the Czech and Slovak Republic as separate economies from the starting point of data in 1980.

Since seasonal effects have to be eliminated before performing a trend-cycle-decomposition, seasonally adjusted time series are used for the analysis. OECD Visegrád data from the 1980s do not in every case conform to the conventions that can be relied upon when working with similar data for developed market economies (OECD, 1994b). A problem of a volume indicator as it is used here is that in socialist times it was derived by dividing value data by possibly distorted price indices. For example, under-stated prices lead to an over-statement of volume. Ex post adjustment for such a mismeasurement is not possible because no quantification of the distortion is available. This quality limitation has to be kept in mind in the analysis of data from the period before the introduction of a market-oriented price system.

The methodological problem of a business cycle analysis is the decomposition of the relevant time series into a permanent and a cyclical component. Popular ways of detrending include the calculation of a moving average or the regression on time. The latter approach was criticized by Nelson and Plosser (1982). They found out that for many macroeconomic time series which are difference stationary this approach leads to a misspecification. With difference stationary time series, a decomposition technique as proposed by Beveridge and Nelson (1981) is more adequate.

Following Cohen and Wyplosz (1989), a pragmatic approach is applied here. Detrending the data set by the Beveridge-Nelson-procedure leads to very implausible results contradicting strongly the core-periphery-pattern in Western Europe as found

in the studies cited above. Conventional decomposition methods (moving average and regression on time) produce results more in line with these studies. Because of this plausibility test, the analysis is based on a conventional decomposition. In the following, the cyclical component is calculated as the deviation from a 36-months-moving-average. The analysis was also performed by regressing the series on a second-order-polynomial in time. The results are qualitatively similar and are not presented.

After calculating the cyclical component of the index of industrial production as the deviation from a 36-months-moving-average, correlation coefficients as a measure of cyclical closeness between European economies can be derived. In addition, it is interesting to compare the extent of cyclical fluctuations between West and Central Europe as measured by the standard deviation of the cyclical component. Even if economies are hit by shocks at the same time, there is a problem if the size of the disturbance is different. In a monetary union there is one common monetary policy which might appropriately be used as an instrument against homogenous disturbances that have similar effects everywhere. If the shock, although it is symmetric, leads to fluctuations of income of a very different size, a single monetary policy can not be tailored according to the national needs. If monetary policy reacts on the average size of the fluctuation this leads to an excessive monetary stance in those countries where the shock has a lower than average effect and vice versa in those where the shock has a higher than average effect (CEPR, 1992, p. 44).

3.3. The Western Perspective

For a successful European monetary union, it is helpful if potential members of the common currency area have a high degree of cyclical correlation. For the analysis it seems appropriate to take Germany as the reference economy. A monetary union without Germany does not make much sense both on economic and on political grounds. Benefits from saved transaction costs would be small excluding the largest European economy. More important is a political consideration: A central motivation for the drive towards monetary union is the desire of France and other states to break the dominance of the Bundesbank for monetary policy in Europe (De Grauwe, 1993). Therefore, monetary union without Germany would be pointless.

The following tables present the EU-20-economies (EU members, member

candidates of EFTA and the Visegrád countries) ordered by the cylical closeness towards Germany as measured by the coefficient of correlation. The standard deviation of the cyclical component relative to the German standard deviation serves to compare the extent of fluctuations.

For the construction of table 3 all available data were included, i.e. starting for most EU and EFTA states in 1972 and for the Central European states in the 80s (see appendix). These results - not surprisingly - identify a core of economies around Germany: France, Austria, Belgium and the Netherlands, of which Austria and Belgium do not only appear cyclically close to Germany but have also a similar order of magnitude of cyclical fluctuation. From this analysis, these economies seem to be ideal candidates for forming a monetary union.

The EFTA economies together with the UK, Ireland, Greece and Portugal appear more distant from the core. The position of the Czech and Slovak Republic is within that EFTA field, while Hungary and Poland show a clearly negative correlation to the German cycle. All four Visegrád economies are characterized by a standard deviation of the cyclical component that is above the average of Western Europe.

In addition to regarding the whole period since the 1970s, subperiods are analysed. This seems of particular interest taking into account the structural break in Central Europe with the start of the transition process. It is important to see whether after the beginning of reforms and the opening of the Central European economies to the West their cyclical fluctuations become more related to the European core. The following both tables present the results separately for the 80s and the 90s. The calculations for the 90s generally include data until about the end of 1993 (see appendix).

Comparing the 80s and the early 90s leads to following conclusions for EU and EFTA states: The cyclical core is quite stable in both periods. Particularly in the 90s, Italy and Spain seem to belong to that core. In the 90s, EFTA countries have a cycle negatively correlated to the core.

The bottom ranking of the Visegrád countries in the 80s reflects the isolation of Central Europe from Western Europe and the world economy in the socialist past. It is not surprising that fluctuations in industrial production in that time do not parallel the German cyle. What is more surprising is the fact that the standard deviation of the cylical component in the old system is not significantly below Western European levels. Judging from the index of industrial production there seemed to be something similar to a business cycle in socialist times as well. In the

years since 1990 Poland and Hungary are still far away from the Western cyle. This result is plausible since this period has been a time of adjustment with strongly falling incomes and production in the reform countries while Germany on the other hand experienced the "unification boom". With this background the medium ranking of the Czech and Slovak Republics seems to be remarkable. Nevertheless, this analysis indicates that an early monetary union including the Viségrad countries would pose serious problems because of incomplete real integration. Even if a country such as the Czech Republic managed to keep the exchange rate to European currencies relatively stable, the asynchronous cyclical performance hints on problems at the latest when restrictions on the capital account are given up.

Table 3: EU-20 Cyclical Correlation with Germany (All Data, See Appendix)

Rank	Country	Correlation Coefficient	Standard Deviation Relative to Germany
1	France	0,78	0,68
2	Austria	0,73	0,96
3	Belgium	0,69	0,95
4	Netherlands	0,67	0,78
5	Luxemburg	0,59	1,79
6	Denmark	0,57	1,65
7	Spain	0,54	0,83
8	Italy	0,51	1,26
9	United Kingdom	0,39	0,95
10	Norway	0,28	1,18
11	Slovak Republic	0,24	2,38
12	Greece	0,21	1,12
13	Czech Republic	0,15	2,61
14	Ireland	0,10	1,57
15	Sweden	0,06	1,11
16	Finland	0,04	1,10
17	Portugal	-0,04	1,98
18	Hungary	-0,21	1,86
19	Poland	-0,53	3,06

Table 4: EU-20 Cyclical Correlation with Germany, The 80s (See Appendix)

Rank	Country	Correlation Coefficient	Standard Deviation Relative to Germany
1	Austria	0,77	0,96
2	France	0,74	0,67
3	Denmark	0,73	2,10
4	Italy	0,68	1,38
5	Luxemburg	0,67	2,03
6	Belgium	0,66	1,07
7	Netherlands	0,65	0,98
8	Norway	0,62	1,84
9	Spain	0,62	0,90
10	Greece	0,56	1,23
11	United Kingdom	0,53	1,23
12	Sweden	0,53	1,07
13	Portugal	0,30	2,28
14	Finland	0,29	0,91
15	Ireland	0,28	2,17
16	Czech Republic	0,06	0,83
17	Slovak Republic	0,06	1,67
18	Hungary	-0,32	1,06
19	Poland	-0,54	2,00

Table 5: EU-20 Cyclical Correlation with Germany - the 90s (See Appendix)

Rank	Country	Correlation Coefficient	Standard Deviation Relative to Germany
1	Austria	0,89	0,90
2	France	0,85	0,45
3	Spain	0,76	0,70
4	Belgium	0,73	0,82
5	Italy	0,66	0,49
6	Netherlands	0,64	0,63
7	Luxemburg	0,53	0,77
8	Denmark	0,39	0,52
9	Slovak Republic	0,30	1,77
10	Czech Republic	0,15	1,74
11	Ireland	0,09	0,72
12	Portugal	0,08	1,02
13	Greece	-0,00	0,68
14	Sweden	-0,13	0,75
15	United Kingdom	-0,21	0,42
16	Finland	-0,34	0,90
17	Norway	-0,35	0,62
18	Hungary	-0,51	1,11
19	Poland	-0,90	1,95

3.4. Regional Currency Integration in Central Europe?

From the cyclical analysis, the Visegrád countries do not yet appear to be ripe to enter a monetary union together with the EU core. For the medium-term monetary strategy, regional forms of exchange-rate cooperation could be imagined. Such a monetary strategy would parallel recent attempts for a regional trade policy. In April 1994, it was agreed to accelerate the speed towards the completion of the Central European Free Trade Area (CEFTA). Until 1998 all tariffs on industrial products are to be abolished for the internal trade among these countries. Possibly some kind of exchange-rate cooperation could accompany this process of integration. What does the cyclical analysis tell about the chances of some form of Visegrád exchange-rate cooperation, such as a monetary union in Central Europe? To answer that question, as a point of reference the Czech economy is chosen. This seems to be justified by the fact that the exchange rate stability and the relatively low inflation rate qualify the Czech Republic as a fixpoint for a possible Central European exchange rate system.

In the following two tables the same kind of analysis as in the preceding section is presented, separately for the 80s and 90s, this time from the point of view of the Czech Republic. For the relation between Central and Western Europe the results simply mirror the preceding analysis but offer new insights into the internal relations within Central Europe.

In the 80s, the Visegrád countries show a certain degree of cyclical parallelism. However, the correlation coefficient does not reach levels as can be found among the Western European core economies. The relatively low correlation between industrial production in the Czech and Slovak Republic in times of a united country is surprising and may offer some explanation for the fast dissolution of monetary union between both Republics after the split of Czechoslovakia in 1993.

In the 90s, the low correlation between the Czech Republic and Poland is striking. Correlation with Hungary and the Slovak Republic is clearly positive. However, the Czech cycle appears to be equally correlated to some EU and EFTA countries (UK, Finland and Sweden) that are positioned in the European periphery judging from the analysis of the last section.

These results do not lead to a recommendation in favour of a regional system of monetary unification in Central Europe. In the time since the beginning of the reforms there have been no hints on an individual Visegrád cycle that would be an argument for a regional currency unification strategy.

Table 6: EU-20 Cyclical Correlation with the Czech Republic - the 80s (See Appendix)

Rank	Country	Correlation Coefficient	Standard Deviation Relative to Czech Republic
1	Hungary	0,52	1,28
2	Poland	0,46	2,43
3	Belgium	0,42	1,30
4	Slovak Republic	0,28	2,10
5	Greece	0,25	1,49
6	France	0,10	0,81
7	Finland	0,10	1,11
8	Denmark	0,10	2,55
9	Spain	0,07	1,09
10	Germany	0,06	1,21
11	Portugal	0,04	2,77
12	United Kingdom	-0,02	1,49
13	Luxemburg	-0,03	2,47
14	Italy	-0,05	1,67
15	Sweden	-0,07	1,30
16	Norway	-0,08	2,23
17	Netherlands	-0,13	1,19
18	Austria	-0,22	1,17
19	Ireland	-0,31	2,63

Table 7: EU-20 Cyclical Correlation with the Czech Republic - the 90s (See Appendix)

Rank	Country	Correlation Coefficient	Standard Deviation Relative to the Czech Republic
1	United Kingdom	0,69	0,24
2	Finland	0,68	0,52
3	Hungary	0,64	0,64
4	Sweden	0,62	0,43
5	Portugal	0,53	0,58
6	Belgium	0,53	0,47
7	Italy	0,53	0,28
8	Slovak Republic	0,51	1,02
9	Luxemburg	0,47	0,44
10	Ireland	0,44	0,41
11	Austria	0,38	0,52
12	France	0,31	0,26
13	Norway	0,27	0,36
14	Spain	0,26	0,40
15	Germany	0,15	0,58
16	Netherlands	0,12	0,36
17	Greece	0,05	0,39
18	Poland	-0,04	1,12
19	Denmark	-0,13	0,30

4. Early EMS-Membership?

4.1. Tying One's Hands

The analysis has identified two problems, that have to be overcome before a membership of Central European states in the European Monetary Union can be imagined. Firstly, a further reduction of the inflation rate is essential but not an easy task. Secondly, the degree of integration - as measured by the cyclical correlation - has to be increased. It can be expected that time will work for the solution of the second problem. Once the adjustment process has come to an end and the restructuring of the economies has been completed, the growing volume of trade will produce a narrower relation between Central and Western European cycles. However, in the meantime the fact of an existing cyclical distance has to be taken into account when thinking about a monetary strategy. Therefore, the monetary strategy should on the one hand be helpful in overcoming the inflation problem and on the other hand maintain the possibility of exchange rate changes as an adjustment instrument.

In Western Europe, the European Monetary System (EMS) has been an instrument for the participating economies to import monetary credibility from the German Bundesbank and for "tying one's hands" (Giavazzi and Pagano, 1988). Breaking inflationary expectations can lead to high costs such as mounting unemployment. These costs can be reduced if market participants get convinced that there is a change of the monetary regime towards a more restrictive policy. In Western Europe, the EMS membership has served that purpose for countries with a high inflation tradition.

In the EMS, exchange-rate targets are defined in form of central rates and a fluctuation margin around that rate. The system is formally constructed in a symmetric way, i.e. the central banks of both the strong and the weak currency have to intervene if their bilateral rate reaches the intervention point. Practically, it has worked in an asymmetric way and allowed the German Bundesbank to dominate the system. Countries that were not willing or able to follow the German monetary policy had to devalue. This was often the case in the early stage of the EMS between 1979 and 1983 and again in the course of the EMS crisis of 1992/1993. The EMS is used as an explanation for the success of antiinflation-policy in traditionally high inflation economies.

France as an example after a series of devaluations committed itself in 1983 to a policy of the "Franc Fort" within the EMS framework. By this commitment it

raised the political costs of a lax monetary policy since this would have resulted in pressure on the exchange rate. When France entered the EMS, its inflation rate was above 10 per cent. 1994 the French inflation rate is estimated to be around 2 per cent, the lowest rate in the EU - an indication that the EMS was helpful to increase monetary credibility in EU member states and to realize monetary convergence in Europe.

This experience hints on possible advantages of an early EMS membership of the Central European reform countries, particularly for the further process of inflation reduction. Again, the EMS could export monetary credibility into economies that face the difficult task of breaking inflationary expectations. On the other hand, the EMS with its fluctuation band and the possibility of realignments offers the flexibility that is necessary taking into account the still imcomplete real integration between Central and Western Europe.

4.2. Western Fears

Several authors have discussed an early EMS membership of the reform countries. Generally, there is the fear that a premature membership in the monetary institutions of the industrialized countries could damage the quality of these institutions (Portes, 1994). More specifically, in the context of the EMS there could be the danger of an inflationary impact of early membership on the whole European currency area (Bofinger, 1991; CEPR, 1992 and Fröhlich, 1992). This inflationary danger could result from the EMS intervention obligations. With full membership the Visegrád central banks would have access to unlimited credit from the "Very Short-term Financing Facility" of the EMS. This facility provides the weak currencies at the lower intervention point with central bank deposits denominated in the strong currency. There is a disciplining element within the EMS rules since a central bank has to repay all intervention credits after a certain period. Nevertheless, there is the fear that with a limited credibility of the chosen central rate, the necessary massive interventions would have a liquidity impact on the hard currency monetary aggregate. In the worst case the central bank of the strong currency would lose the effective control over the monetary supply.

The experience of German dominance in the EMS seems to be a counter-argument against these fears. This experience has demonstrated that the stability of the strong currency is not necessarily negatively influenced by a loose monetary

policy in the other member countries. Bofinger (1991), however, doubts whether this experience is valid for an EMS including the transition economies. There is a serious problem if central banks in transition economies do not have an effective control of the asset side of their balance sheet. This would be the case if they are urged to an unlimited financing of government and enterprise deficits.

4.3. The Situation after the EMS Crisis

The EMS crisis between September 1992 and August 1993 has changed the character of the EMS. These changes seem to be very relevant for the question of an early EMS membership of the Visegrád countries.

Between 1987 and 1992 there were no realignments of central EMS parities. This success was attributed to a growing degree of convergence in Europe. With the Maastricht Treaty that was signed in February 1992, the EMS stability seemed to get a further base by the prospect of monetary union. More and more, the EMS was regarded as a de facto monetary union that would smoothly be replaced by a single currency. In June 1992, Denmark voted against the Maastricht Treaty and the confidence into the success of monetary integration was seriously shaken. In September the pressure from foreign exchange markets urged Lira and Pound to leave the Exchange Rate Mechanism and to start floating. The speculative pressure on the other currencies against the DM continued. Realignments in November 1992, February and May 1993 failed to bring back the old stability. In August 1993, the old fluctuation bands (+/- 2,25 per cent) were replaced by bands of +/- 15 per cent. Today the EMS can be characterized as a system of unilateral exchange rate targeting because of its wide fluctuation margins (Neumann, 1994).

The analysis of the EMS crisis has so far produced some insights into its causes (Lesch, 1994). Ex post, the long period of exchange-rate stability seems to have been artificial from the point of view of economic fundamentals. In particular, the German unification may have caused adjustment pressure on real exchange rates. With the eruption of that pressure in the EMS crisis, the overshooting speculation led to pressure even on currencies such as the French Franc or the Danish Crown that did not seem fundamentally justified.

The EMS crisis has started a reform discussion how to improve the system. A couple of reform suggestions recommend measures to limitate speculative activity (Eichengreen and Wyplosz, 1993). Neumann (1994) suggests to advance exchange-

rate stability by a fast introduction of complete central bank independence in order to make monetary convergence of EMS countries more credible. Until today no institutional consequences were drawn apart from the introduction of the wide fluctuation margins. However, there is a growing consensus (Lesch, 1994) that the EMS should not be understood as an early monetary union. In order to avoid speculative pressure in future, early realignments should be carried out in case of fundamental divergence.

This less ambitious view of the EMS after the crisis makes the system more adequate for an early membership of the Visegrád countries. The advantages of the "new" EMS from that perspective are:

- The wider flucuation margins: These margins offer enough room for exchange-rate adjustments that may be necessary because of the incomplete real integration between Central and Western Europe.

- Increased readiness to realign central rates: In case that the 30-per-cent-band does not give enough room for the necessary adjustment, a realignment can help. This would not be a political problem in the new EMS as it was before when the de facto monetary union was at stake.

- More effective sanctions: Because of both the wider margins and the increased readiness to realign, the system has more effective sanctions. It is clear again that a country with a high inflation will not be able to count on the unlimited patience of the other EMS members in order to avoid devaluation. Finally, the sanction of devaluation will be unavoidable. The danger of moral hazard effects has thus been reduced. This is beneficial for both the disciplining effects of EMS membership and for the dissipation of the above mentioned Western fears. With clear sanctions the likelihood of an inflationary impact of high inflation countries on the other members has clearly been further limited.

4.4. Conditions for an EMS Membership

In principle, the EMS in its present shape seems suitable to integrate Central European currencies and to assist them in their further attempts to reduce inflation rates.

Such an integration could be an element of a monetary strategy of catching up with the West - even long before a full membership of these countries in the EU can be realized. However, the preceding considerations hint on certain minimum requirements that should be fulfilled.

Most important, the central bank of a potential EMS member must in principle be able to control the monetary aggregate. That means that the early stage of transition in which soft budget constraints play a dominant role must have been overcome. Only in that case the attempt to import monetary credibility from the EMS has a chance to be successful. The central banks must be independent from politics. Public deficits must be limited to a size that can be financed on capital markets in order to make central bank independence credible.

The inflation rate should be near the single digit region. A higher rate would make EMS membership pointless since regular devaluations of the high inflation currency were unavoidable. An inflation rate requirement "near ten per cent" may seem lax from the Western point of view. However, the advantage of EMS membership is the idea of breaking inflationary expectations. There is no point in waiting until this has been achieved outside the EMS. Apart from that, high inflation rates were not unusual among the EMS members when the system came into existence in 1979 (Denmark, France, Italy and Ireland had inflation rates above ten per cent in 1979).

Judging from these preconditions the time already seems to be ripe for a Czech membership in the EMS (see tables 1 and 2). The inflation rate is expected to be about 11 per cent in 1994. The good budgetary situation allows the central bank the effective control of monetary policy. In Hungary and the Slovak Republic, inflation rates are coming near to the point that would make an EMS membership possible. However, further progress in reducing public deficits seems necessary in these countries. In Poland, an EMS membership is not recommendable before a further reduction in inflation can be achieved.

4.5. After an EMS entry

If the preconditions are fulfilled, the reform countries should be allowed to enter the EMS at unanimously agreed central rates and wide fluctuation margins of +/- 15 per cent. After an EMS entry, it would be in the responsibility of the governments in Central Europe to use the EMS membership to reduce inflationary expectations. For

that purpose, the governments had publicly to commit themselves to steer the exchange rate near the central rate and to stick to a policy of "Crown Fort", "Zloty Fort" or "Forint Fort". A public commitment would raise the political costs of devaluation. The commitment would be more credible than outside the EMS because of the presence of the EMS intervention mechanisms.

On political grounds, even a soft perfomance in the first time of EMS membership (i.e. some develuating realignments) might be better than outside the EMS. The Central European Countries would have entered an important institution of the European Union. Western public and politicians would get used to the idea of Central European membership in Western institutions.

The start of monetary union according to the Maastricht schedule would not pose any problems. Realistically, this new era is not to be expected before 1999. Not all present EU member states will qualify for a participation from the beginning. The EMS will have to be continued besides the area of a single currency. As such it will be the transition space for those currencies that still have to prove their qualification for monetary union. Probably, the Visegrád currencies would not be alone in that monetary space at least for a couple of years.

5. A Stabilization Fund

The cyclical distance between West and Central Europe is not an obstacle to monetary unification if other adjustment instruments exist that are working quickly and efficiently enough. One of this alternative adjustment instruments is a high degree of fiscal integration (see section 3.1.). In a fiscally integrated area, a region experiencing a recessionary asymmetric shock benefits from a stabilizing inflow of funds via the fiscal system. Within national states, this mechanism works by an increase of transfers into the depressed region (unemployment insurance, fiscal equalization payments) and a decrease of tax payments out of the depressed region. An indicator of regional shock absorption can be defined in the following way (Pisany-Ferry et al., 1993):

$$(1) \quad S = 1 - dRDI/dY$$

RDI is regional disposable income and defined as:

$$(2)\ RDI = Y - TAX_O + TR_O$$

Y denotes the regional *GDP*, TAX_O the tax payments flowing out of the region and TR_O the transfer payments flowing into the region from outwards. *S* is zero without any fiscal integration and one if the shock is completely absorbed without reducing regional disposable income. Pisani-Ferry et al. (1993) estimate *S* of national fiscal systems to be 17,1 per cent in the USA, between 33,5 and 42 per cent in Germany and 37,4 per cent in France.

From the evidence of existing national monetary unions, it could be argued that the European Monetary Union should be accompanied by a similar degree of fiscal integration. This would be particular helpful for those countries whose cylical performance is not yet parallel to the European core.

In that perspective, the reluctance of the present EU member states to give Central European countries the same access to the structural funding of the Community as for example the Souther European countries poses not alone a political but also a macroeconomic problem. The EU budget could play a stabilizing role and thus serve as an adjustment instrument for asymmetric shocks that would make a comprehensive monetary union more manageable.[1]

In a recent paper, Italianer and Vanheukelen (1993) have calculated that a fund that is constructed specifically for the purpose of stabilization could work efficiently with very limited resources. For the EU, a degree of stabilization similar to that observed in the USA could be reached at annual costs of only 0.2 per cent of GDP. This efficiency is possible with a high elasticity of such a fund, as can be demonstrated by a transformation of equation (1):

$$(3)\quad S = dTAX_O/dY - dTR_O/dY = \varepsilon_{TAX} * (TAX_O/Y) - \varepsilon_{TR} * (TR_O/Y)$$

ε_{TAX} and ε_{TR} denote the tax-elasticity and the transfer-elasticity of regional GDP respectively. The elasticity depiction of *S* shows that a high degree of stabilization

[1]In any case, this role could only be limited because of the size of the European budget. With 1.2 per cent of EU-GDP this budget has a much lower macroeconomic significance than the central budgets within the national economies.

can be realized either by a high volume of interregional flows (high tax-income or transfer-income ratios) or a high elasticity of these flows with respect to income. In the national states the former way is used and the large macroeconomic weight of central budget produces regional stabilization as a by-product. For stabilization in the European Monetary Union the latter way can help to solve the stabilization problem in the presence of a small central budget.

While this idea seems to be a sensible approach for the EU as a whole, it could particularly well serve the fiscal integration of the Central European countries during the period in which these countries do not yet get access to full structural funding, either because they are not yet EU members or - after an EU entry - they are treated differentially. With the help of a stabilization fund the macroeconomic problems of a denied access to structural funds could be solved.

The major political advantages stem from the low costs of an efficient Central European stabilization fund. In 1991 the GDP of Visegrád countries amounted to about two per cent of EU-12-GDP. Even with higher growth rates in the coming years, the ratio will grow only slowly. From a stabilization fund money would flow into a country only if this country experiences a growth rate below the European average. The volume of transfers into the country affected by a negative shock measured in terms of national GDP percentage points would not need to exceed the growth differential between that country and the European average. For example, with a growth in the Visegrád countries three per cent below the European average, transfers of 0.06 per cent of EU-12-GDP (2 per cent EU-12-GDP x 3 per cent growth differential) would completely neutralise that asymmetric disturbance.[2] For a stabilization effect of a size comparable to that from the German fiscal system, 40 per cent of that volume, i.e. 0.024 per cent of EU-12-GDP would be sufficient.

This high stabilizing efficiency of the scheme stems from the fact of a transfer elasticity approaching infinity when income growth falls below European average. In times of a parallel cycle or a cycle more favourable in Central Europe there would not be any payments out of the fund.

The setting up of a stabilization fund benefitting the Central European countries could be imagined to parallel their EMS entry. This would help to create credibility of the EMS exchange-rate-peg. Market participants would not any longer

[2]This is a cautious calculation since an asymmetric shock affecting specifically the Visegrád countries is rather unlikely given the cyclical analysis from section 3.

expect difficulties from cyclical asymmetries for the stability of the exchange rate. In this respect, a stabilization fund is to be recommended in particular for the transition period until the real integration between Central and Western Europe has further proceeded.

6. Summary

Since the Maastrich Treaty has been signed the aims of European integration include the introduction of a single European currency. Therefore, in an EU membership strategy the monetary perspective has gained importance. A country willing to qualify for EU membership has to prove its ability to participate in the monetary union at least after a transition period.

Obstacles to a monetary integration of Central Europe are presently the inflation rates that are still significantly above Western European levels and the incomplete real integration as measured by the degree of cyclical correlation.

The cyclical analysis does not justify a recommendation for a regional exchange-rate strategy. Instead of that, an early EMS membership is proposed to support the process of inflation reduction in the Visegrád countries. The EMS crisis of 1992/93 has improved the ability of the system for a short-term entry of the Central European currencies. This is due to a less ambitious view of the EMS that is not longer seen as a de facto monetary union.

A stabilization fund of a very limited financial volume could help to assist the monetary integration strategy until the growing trade relations and the completion of economic restructuring lead to a more parallel cyclical situation. That fund would be particular helpful since it is politically improbable that the Visegrád countries could soon benefit from the structural funds of the Community.

The proposed strategy seems politically feasible, since the risks and costs for Western Europe are very limited. At the same time, the outlook for a full membership of Visegrád countries in the European Union under the Maastricht constitution would improve considerably.

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Appendix: Origin and Availability of Data

The following table summarizes the origin and the data availability of indices of industrial production as they were used in the analysis of section 3.

Country	Data Availability	Source
Belgium	72.01 - 93.05	IMF-IFS
Denmark	76.01 - 93.10	IMF-IFS
France	72.01 - 93.10	IMF-IFS
Germany	72.01 - 93.11	IMF-IFS
Greece	72.01 - 92.12	IMF-IFS
Ireland	82.01 - 91.11	IMF-IFS
Italy	72.01 - 93.10	IMF-IFS
Luxemburg	72.01 - 92.12	IMF-IFS
Netherlands	72.01 - 93.09	IMF-IFS
Portugal	79.01 - 91.09	IMF-IFS
Spain	72.01 - 93.09	IMF-IFS
United Kingdom	72.01 - 93.09	IMF-IFS
Austria	79.01 - 93.06	IMF-IFS
Finland	72.01 - 93.10	IMF-IFS
Norway	72.01 - 93.11	IMF-IFS
Sweden	72.01 - 93.07	IMF-IFS
Czech Republic	80.01 - 94.01	OECD
Hungary	80.01 - 93.12	OECD
Poland	85.01 - 93.11	OECD
Slovak Republic	80.01 - 94.01	OECD