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Adalbert Winkler*

The EMS Crisis and the Prospects for European Monetary Union

Interpretations of the causes and implications of the EMS crisis of mid-1993 vary considerably. The following article offers a critical analysis of the most common arguments and draws conclusions for future policy.

Six months before entering stage two of European Monetary Union (EMU) the European Monetary System (EMS) faced the greatest challenge since its foundation in 1979. It was met by widening the bands for mandatory interventions to plus or minus 15 percent from the central parities. Because this decision could hardly be interpreted as a rescue of the EMS, but rather as a de facto suspension in favour of flexible exchange rates, the implications for Maastricht and the planned EMU moved immediately to the centre of public discussion.

Three strains of arguments can broadly be distinguished (cf. Table 1):

□ The first strain of argument interprets the crisis as a –late – signal from financial markets to European policy-makers that because of fundamental divergences – nominal and real – a European currency area does not exist, that EMU is not feasible.¹

□ A somewhat different perspective is expressed by argument number two. Due to convergence of nominal variables, like interest and inflation rates, a European currency area has gradually evolved since the 1980s. This currency area, however, was hit by an asymmetric shock, German unification, which called for the exchange rate instrument to prevent the development of fundamental divergences. Recent events on the European exchange markets should be interpreted as a warning that the results of empirical studies,² showing that the potential for asymmetric shocks in Europe is quite high, should be taken seriously. EMU could be associated with rather large costs.

□ The third interpretation argues that the current problems of the European currency area were not caused

by the shock itself, German unification, but by the policy response to this shock. Under the given institutional setting of macroeconomic policy, this response had to have asymmetrical effects. Monetary union would change this setting and is therefore not only feasible, but desirable. Hence, there is no evidence that the EMS crisis tells us anything about the maturity of the European economies to form a monetary union.³

At first the development at the European exchange markets seemed to be in line with arguments I and II (cf. Figure 1). The EMS currencies of the former narrow band reached historical lows versus the Deutsche Mark. They recovered, however, after the Bundesbank cut interest rates twice in September and October. At the end of the year they crossed the former lower band limit, restoring somewhat the status quo. At the forward market (three months) only the Danish Krone did not pass the former lower band limit (cf. Figure 2).⁴ Obviously, the empirical record does not favour anyone of the three interpretations mentioned. A deeper analysis is indispensable.

Causes of the EMS Crisis

When the Italian Lira and the Pound Sterling left the exchange rate mechanism in the autumn of 1992, and the Spanish Peseta was devalued three times in succession and had to be supported by the introduction of temporary

¹ Cf., for example, G. Moritz: Ein Jahr EWS-Krise, in: Deutsche Bundesbank: Auszüge aus Presseartikeln, No. 62, September 14th, 1993, pp. 7-8.

² Cf., for example, T. Bayoumi, B. Eichengreen: Shocking Aspects of European Monetary Unification, NBER Working Paper, No. 3949, Cambridge, Mass. 1992.

³ Cf. O. Sievert: Deutsche Geldpolitik zwischen nationalem Interesse und europäischer Rücksichtnahme?, in: Deutsche Bundesbank: Auszüge aus Presseartikeln, No. 91, December 21th, 1993, pp. 5-11.

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capital controls, one explanation for the EMS crisis was easily found: to restore competitiveness, the real appreciation of the currencies mentioned, caused by remaining inflation differentials vis-à-vis Germany and nominal exchange rate stability from 1987(90) to 1992, had to be corrected. Since the authorities were not able to agree on an orderly realignment, the markets had to force them to change the central parities.

There is no point arguing over facts, such as the real appreciation of the currencies mentioned vis-à-vis the Deutsche Mark⁵. A glance at the current account balances confirms that there was a need to adjust nominal and real exchange rates, even if, with respect to Germany due to the unification boom, Italy has been reporting a surplus and the deficit of the United Kingdom has been declining significantly.

In comparison to the past, however, the recent EMS crisis exhibits two unique phenomena, which severely weaken the explanatory power of the real appreciation argument:

- Real appreciation and a loss of competitiveness were more or less the cause of each EMS crisis since 1979. All the more does an explanation have to be found for why, for the first time in EMS history, the authorities did not resort to the realignment instrument to solve the crisis, or failed in doing so.
- From September 1992 to July 1993 – for the first time in EMS history – all EMS currencies, with the exception of the Dutch Guilder, came under pressure vis-à-vis the Deutsche Mark. None of them were burdened by a real appreciation, and a need to devalue could not be recognized.

Stressing these special circumstances of the recent

EMS crisis should not imply that inflation differentials, swings in real exchange rates and changes in price and cost competitiveness are of no concern to the functioning of an exchange rate system like the EMS. It is difficult to claim, however, that these problems triggered the EMS crisis in 1992, because the EMS had learned to live with them by changing central parities. This leads to the conclusion that, if at all, the real appreciation problem influenced the sequence of currencies which came under pressure, and the willingness of the Bundesbank to support a currency by intervening in the exchange market.

Internal vs. External Stability

The necessity of widening the bands for mandatory intervention had its roots in the growing dilemma which several EMS countries faced: the choice between external and internal stability. This is technically correct: most EMS economies were in need of lower interest rates to assure internal stability, to prevent recession turning into depression.⁶ The Bundesbank lowered interest rates only carefully because internal stability considerations in Germany were mostly directed towards price stability. Under these macroeconomic conditions, the parity grid with narrow bands was not sustainable as long as expectations of a devaluation of the Deutsche Mark were absent. If external stability is equated with exchange rate stability, there was indeed a dilemma.

Usually, however, external stability is not defined as exchange rate stability. Exchange rate changes are seen, rather, as an instrument for restoring external equilibrium, measured by the current account balance. This is in particular the case when an expansionary policy, aimed at internal stability, leads to growing current account deficits. The current account balances of France, Denmark, the Benelux-countries and Ireland, however, are either in surplus or show declining deficits. In contrast to that, the German current account has swung from a large surplus to a deficit, due to the unification boom. Accordingly, there was no need for a change in central parities to restore

Table 1
European Currency Area and
European Monetary Union

Explaining the recent EMS crisis

Variable	Argument I	II	III
Fundamental Divergences	yes (real appreciation, external vs. internal stability)	yes (asymmetric shock)	nominal, core-EMS: no, nominal, periphery: yes, real: yes
European Currency Area	does not exist	exists	exists
European Monetary Union	not feasible	not feasible	feasible, for core-countries desirable

⁴ Before August 1st the development on the forward market was of great importance, because it signalled whether market participants expected a realignment or not. For details cf. W. Filc, S. Bredemeier: EWS and US-Dollar: Analyse und Prognose der Wechselkursentwicklung, Stuttgart 1989, pp. 83 ff.

⁵ The Bank of England, however, presents evidence that, taking effective exchange rates deflated by normalised (i.e. cycle-adjusted) unit labour costs, the Deutsche Mark has experienced the most marked appreciation over the last decade. Spain's real exchange rate also rose sharply, while the appreciation of the Lira and Pound Sterling was rather modest. Cf. Anon.: Exchange rate developments in the European monetary system, in: Bank of England Quarterly Bulletin, Vol. 33, No. 4, November 1993, pp. 456 f.

⁶ Cf. O. Blanchard, R. Dornbusch, S. Fischer, F. Modigliani, P. A. Samuelson, R. Solow: Why the EMS deserves an early burial, in: Financial Times, July 29th, 1993.

external stability in the core countries of the EMS. The situation is not comparable to the one at the beginning of the 1980s. At that time, the French Franc had to be devalued three times in eighteen months in order to cope with external disequilibrium caused by the expansionary policies of the first socialist government to fight the 1982 recession. At present, the role of the exchange rate is different: the widening of the bands has actually offered the EMS countries the possibility of aiming at internal stability by reducing interest rates.

German Unification

Both arguments mentioned above, real appreciation and the external vs. internal stability dilemma, are applicable to explain problems in any fixed exchange rate system. They do not reflect the fact that the EMS was increasingly seen as a platform for European monetary integration, culminating in European Monetary Union. This is done by a third argument, which states that during the 1980s a European currency area evolved. This currency area, however, was hit by an asymmetric shock, German unification.

The difficulties caused by an asymmetric shock are obvious if a common currency area, consisting of two different regions, is assumed. Suddenly, a demand shift occurs from the (only) good which is produced in one

region, to the (only) good which is produced in the other region. If price level and nominal wages are inflexible downward and labour is completely immobile between the two regions, the asymmetric shock causes unemployment in the region which faces a reduction in demand, and inflation in the other region. Adjusting the exchange rate could prevent this by raising the price of the good produced in the boom region, and vice versa.⁷

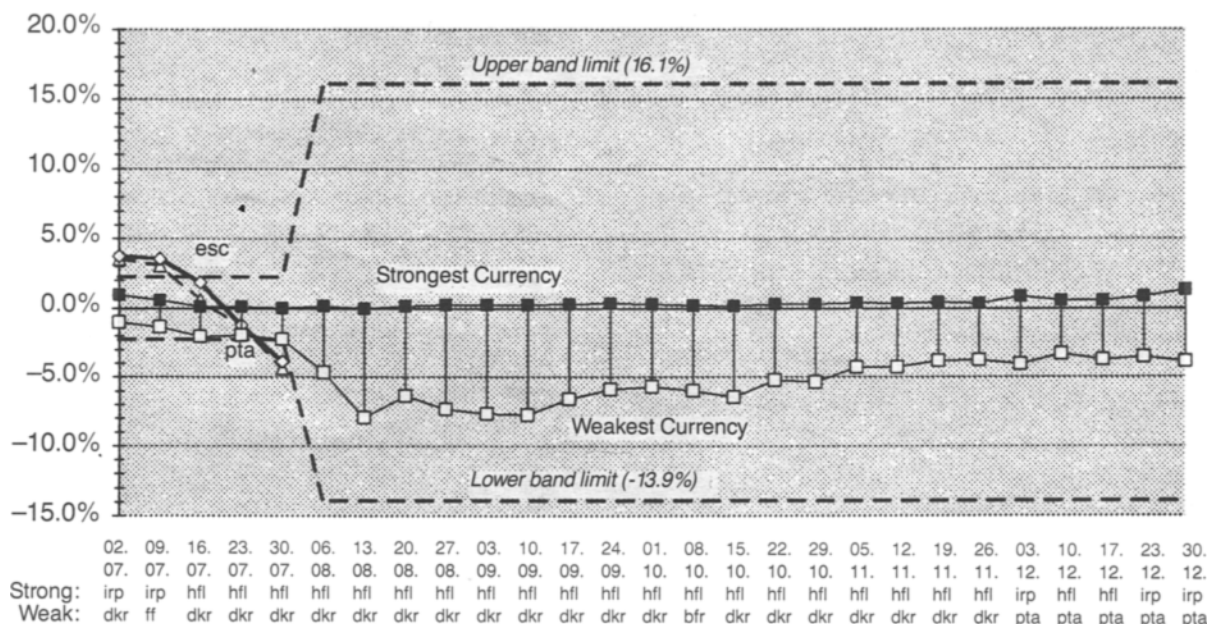
Events (German unification), economic performance (inflation in Germany, recession in the rest of Europe) and exchange market reaction (EMS crisis) are in accordance with these theoretical considerations. Financial markets came to the conclusion that currently European Monetary Union is not feasible, although a European currency area has evolved since the 1980s.

There are, however, some differences between theory and facts, which do not rely on a discussion of the rather unrealistic assumptions on which the theory is built. In particular, to associate German unification with an asymmetric shock runs counter to the empirical fact that the current account of most EMS countries with respect to Germany has improved since 1990. From a European

⁷ Cf. P. Bofinger: Is Europe An Optimum Currency Area?, Paper presented at the Pierre Werner Conference, Luxembourg, 18-20 November 1993, pp. 5 ff.

Figure 1

**Band for Mandatory Interventions and Spot Rates of EMS Currencies
(German foreign exchange market, 1993)**



Sources : Handelsblatt; own calculations.

perspective, the shock, German unification, was rather symmetrical, albeit with a regional accent.⁸ The question is: Why were the macroeconomic effects asymmetrical?

In a large currency area regional shocks are usually of no concern to macroeconomic policy-makers. Taking the United States as an example:⁹ a regional boom, such as the one in the oil states due to rising oil prices in the seventies and early eighties, has virtually no effect on monetary and fiscal policy at the federal level. It is regarded as a regional shock and therefore remains a regional shock without any asymmetrical effects.

Asymmetrical effects would develop if, for example, the Federal Reserve Bank of Dallas unilaterally raised interest rates to fight inflationary tendencies in Texas caused by the boom. The other district banks would have to follow this step because capital flows would be redirected to Texas. Assuming that higher interest rates are not compatible with economic fundamentals in the rest of the country, the result would be recession on the national level¹⁰ and some slowing of the inflation rate in the boom states.

This policy reaction is, however, not feasible in the currency union that is the United States. Neither is the Federal Reserve Bank of Dallas able to adjust interest rates with regard to regional developments, nor do other Federal Reserve Banks have to follow in raising interest rates. The reason is simple: each Federal Reserve Bank

issues the same asset, high-powered money, the US-Dollar. Indeed, with free capital mobility, there are only two possible ways of preventing asymmetrical effects of regional shocks:

- a common monetary policy for the currency area, which is merely reacting to shocks showing effects on the national level,
- flexible exchange rates, the break-up of the currency area.¹¹

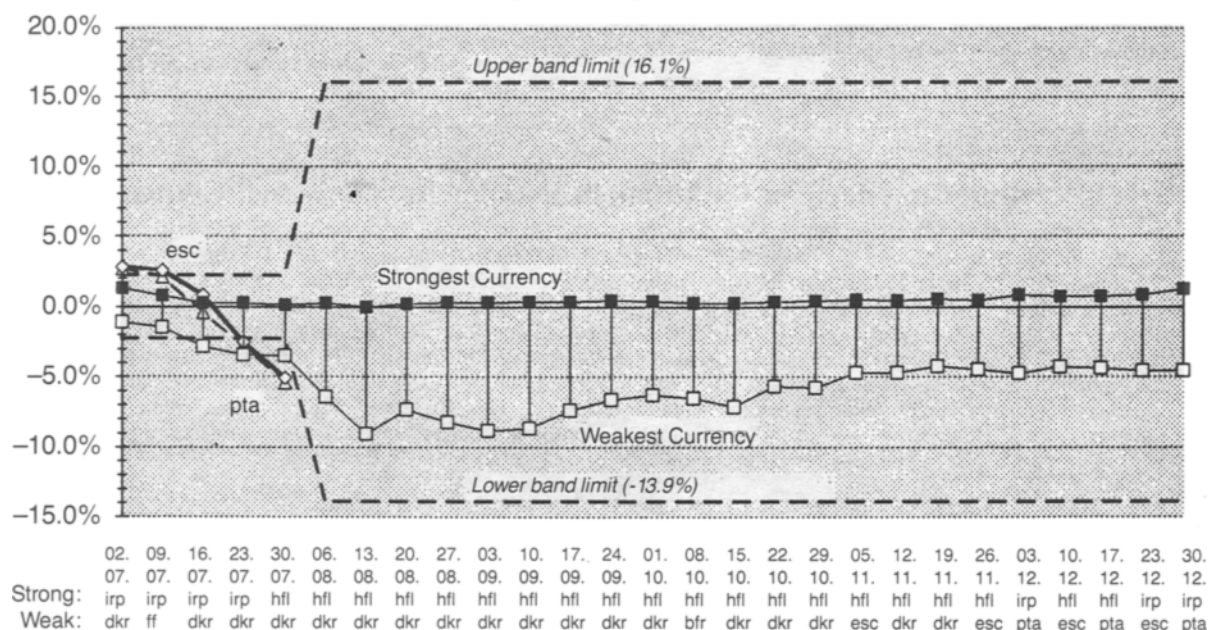
⁸ Bini Smaghi and Vori speak of a shock "restricted to a specific area". Cf. L. Bini Smaghi, S. Vori: Rating the EC as an Optimal Currency Area, in: Banca D'Italia: Temi di discussione del Servizio Studi, No. 187, Rome 1993, p. 12.

⁹ This is one of the most popular research strategies to evaluate the likely effects of Monetary Union on the European economies; cf. O. J. Blanchard, L. F. Katz: Regional Evolutions, Brookings Papers on Economic Activity, 1992, Vol. 22, No. 1, pp. 1-75; T. Bayoumi, B. Eichengreen, P. Krugman: Integration, Specialization, and Regional Growth: Notes on 1992, EMU and Stabilization, Paper presented at the International Conference "The Transition to Economic and Monetary Union in Europe", Banco de Portugal and CEPR, January 1992; M. Feldstein: The case against EMU, in: The Economist, June 13th 1992, pp. 19-22.

¹⁰ The effects of changes in short-term interest rates on real economic activity are well documented; see B. S. Bernanke: On the Predictive Power of Interest Rates and Interest Rate Spreads, in: New England Economic Review, Nov./Dec. 1990, pp. 51-68; B. M. Friedman, K. N. Kuttner: Money, Income, Prices and Interest Rates, in: American Economic Review, 1992, Vol. 82, No. 3, pp. 472-492; B. S. Bernanke, A. S. Blinder: The Federal Funds Rate and the Channels of Monetary Transmission, in: AER, 1992, Vol. 82, No. 4, pp. 901-922; W. Filc: Monetäre Fundierung einer angebotsorientierten Stabilitätspolitik, in: Konjunkturpolitik, Vol. 38, No. 5/6, pp. 316-339.

Figure 2

Band for Mandatory Interventions and Three-month Forward Rates of EMS Currencies (German foreign exchange market, 1993)



Sources: Handelsblatt; own calculations.

Having to choose between these alternatives has characterized European monetary integration since 1991.¹²

Anchor Currency and Currency Area

The institutional setting of monetary policy in Europe is very much like the one stylized in the "Texas-example". In the 1980s, the Deutsche Mark became the anchor currency of the EMS. The term "anchor-currency" implies that this currency has to have an outstanding quality in comparison to the other currencies of the exchange rate system. This special quality is reflected in an economic variable: the rate of interest. Loans and bonds denominated in Deutsche Mark have to have a lower interest rate than loans and bonds denominated in any other EMS currency. This implies that interest rates in other EMS countries cannot fall below interest rates in Germany, as long as the Deutsche Mark is the anchor currency of the EMS.

Why did the anchor currency framework cause no problems in the 1980s, but became associated with a "comparative success of the EMS"?¹³ An anchor currency is necessary if a currency area is to be built by market mechanisms, not by the force of political orders. To stretch the analogy a little further: the anchor Deutsche Mark was required to prevent the other European currencies' being swept away from the island of "price stability" by the second OPEC shock. German monetary policy became European monetary policy, which implied that the other EMS countries had to abolish the monetary policy instrument to deal with regional shocks.¹⁴ Accordingly, participants on the European exchange markets put pressure on currencies if they felt that income, fiscal and/or monetary policy in one or a group of EMS countries did not follow the European monetary policy or was unable to

follow it without devaluation. Realignments were an effective instrument to solve the crises (cf. Table 2).

Hence, the success of the EMS in the 1980s was easy to measure by the frequency of realignments and the convergence of nominal variables. Figure 3, showing standard deviations of the inflation rates, short- and long-term interest rates, deficit/GNP and debt/GNP ratios and unemployment rates, presents evidence that, for nominal variables, the level of convergence is quite impressive and actually continues. The EMS fleet came closer to harbour, reached the island. The stability of the EMS, between 1987 and 1992, cannot be seen as having rested on an illusion by market participants, supported by political euphoria for European integration, but was based on economic facts.

Because this success was based on the Deutsche Mark's being the anchor currency of the EMS, it can actually be argued that the Bundesbank's monetary policy since 1991 was necessary to secure European monetary integration. The argument runs as follows: an unstable currency at home cannot survive as the anchor currency of a fixed exchange rate system. The Bretton Woods

¹¹ This is just another way of describing the "impossibility theorem", which holds that policy authorities cannot simultaneously and continuously follow the three objectives of free capital mobility, fixed exchange rates and an independent monetary policy. Cf. A. Crockett: Monetary policy implications of increased capital flows, in: Bank of England Quarterly Review, Vol. 33, No. 4, November 1993, p. 492.

¹² For an early reference cf. W. Filc: Umstrittene Zinsdominanz Deutschlands in Europa, Devisenmarktanalyse für das zweite Vierteljahr 1991, Berlin 1991.

¹³ C. Goodhart: Economists' perspectives on the EMS, in: Journal of Monetary Economics, 1990, Vol. 26, pp. 471-487.

¹⁴ Again, this is just a different description of what is called in the literature "the advantage of tying one's hands"; cf. F. Giavazzi, M. Pagano: The Advantage of Tying One's Hands, EMS Discipline and Central Bank Credibility, in: European Economic Review, Vol. 32, 1988, pp. 1055-1082.

Bettina Nürk

Die Koordinierung der Konjunkturpolitik in der Europäischen Gemeinschaft

In 1992 the EC Member States signed the treaty on the establishment of a European Union. This envisages transition to a common currency in the Member States, with a high level of economic convergence and stability by 1999 at the latest. In the meantime, however, it has become clear that this path is beset by greater difficulties than the partners had expected. There is a history to these difficulties. Even before this, repeated attempts had been made in the European Community at closer coordination of national monetary, fiscal and exchange-rate policies, in order to push forward with European integration in these areas. However, just as repeatedly it was not found possible to implement them as planned. Efforts to achieve monetary union remained without noticeable success. The progress of European economic and monetary integration since 1958 is reviewed in this monograph, and current problems appear in a new light as a result of this work. The work is also a contribution to the current debate on monetary union in Europe.

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(Integration Europas und Ordnung der Weltwirtschaft, Bd., 2)

■ remainder as in German text



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experience clearly points in this direction. Since the EMS was built on the anchor "Deutsche Mark", the Bundesbank's efforts to restore internal stability, meaning price stability, served German as well as European interests.

The argument, however, neglects two important considerations:

- An anchor currency is only required as long as there is "something to anchor". In the countries forming the core of the EMS this is not the case anymore.
- The anchor currency country was hit by a regional shock, German unification. Accordingly, its central bank

had to decide whether to implement a national policy, reacting to the regional shock, or to stick to the European policy option. To return to the stylized example: the Federal Reserve System and the Federal Reserve Bank of Dallas were the same institutions. *De jure*, however, the Bundesbank could not "tie its hands".¹⁵ Because the anchor currency sets the floor for interest rates in Europe, the European currency area lost its European monetary policy. Asymmetric effects of the regional shock were unavoidable. The growing real divergences in Europe—for example documented by the unemployment rate in Figure 3—were the logical consequence of an unstable monetary policy arrangement. The insistence on fighting inflation in Germany by raising interest rates may have protected the anchor currency status of the Deutsche Mark, but it destroyed the currency area built upon the anchor currency.

Table 2
European Monetary Policy and European Currency Area

Causes of and solutions to EMS crises

Period	Monetary policy in Europe	European currency area	Causes of pressures in the EMS	Crisis management
1979 – 1989	increasingly European (Deutsche Bundesbank)	evolving	some countries did not (could not) follow European monetary policy	realignment
1990 – 1993	increasingly national (Deutsche Bundesbank)	core-EMS: exists; periphery-EMS: evolving	European currency area lost its European monetary policy	return to European monetary policy or break-up of the European currency area

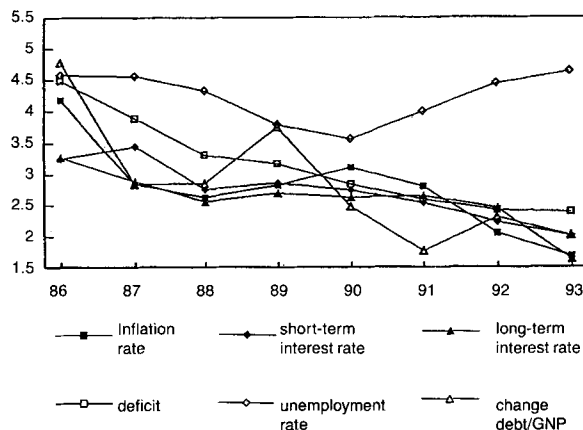
This distinguishes the crisis of 1992/93 from the EMS crises in the 1980s. They were caused by economic policies in EMS countries which were incompatible with the course of European monetary policy, set by the Bundesbank. A simple solution was a realignment to compensate for the policy mistakes, providing a basis for a fresh start. Realignments solved the crises and stabilized the European currency area. If economic policies in the anchor country¹⁶ run counter to European monetary policy, European monetary policy is superseded by national monetary policy. In this case, a crisis cannot be solved within the mechanisms of the "old EMS", because they were based on the identity of national and European monetary policy in the anchor country.

Options for the Future

The main lesson taught by the recent EMS crisis is not that the economic fundamentals for European Monetary Union are missing. The main lesson is that a currency area cannot last very long without a monetary policy taking responsibility for the whole area. The financial markets called for an end to this unstable arrangement, forcing the authorities to decide: re-establishment of a common monetary policy (interest rate reduction in Germany) or a break-up of the currency area (flexible exchange rates). That is why all EMS currencies were in opposition to the

Figure 3
Convergence in the European Union¹

Standard deviation of selected indicators



¹ Without Greece and Luxembourg.

Source: CEPS.

¹⁵ For the sake of the argument, which stresses the instability of the monetary policy arrangements in Europe, it is assumed that the Bundesbank's monetary policy since 1991 can be justified by the economic situation in Germany. A critique of this assumption can be found in: H. Flassbeck: Verfehlte Geldpolitik, in: DIW-Wochenbericht, 1992, Vol. 59, No. 31, pp. 385-389; W. Filc: Bundesbank, Konjunktur und EWS, 1993, in: Wirtschaftsdienst, Vol. 73, No. 9, 1993, pp. 461-468.

¹⁶ In this regard, it is important to note the failure of German fiscal and income policies to support the Bundesbank's efforts to fight inflation.

Deutsche Mark and the realignment solution was not available in the summer of 1993 (cf. Table 2).

What are the main options for European monetary integration, leaving legal problems aside? One proposal relies on the reintroduction of capital controls, which would allow different levels of interest rates in Europe and may dampen speculation.¹⁷ There are two disadvantages to this line of reasoning. First, it is questionable whether capital controls are an effective instrument to put a brake on capital flows. In particular, in a crisis like those of September 1992 and July 1993, if market expectations are all one way, it is rather unlikely that capital controls would be able to stabilize the system.¹⁸ Second, capital controls would destroy the common European financial market and, therefore, the European currency area. In this respect, the realization of the proposal would have the same negative effect as the problem it is intended to solve.

Another option is the return to the old, narrow bands as early as possible. This was the intention, publicly announced by finance ministers and central bank governors of the European Union, after the decision to widen the bands had been made. Narrow bands are designed to serve as a disciplinary instrument to regulate economic policies. For the core countries of the EMS this instrument is not needed anymore. Accordingly, narrow bands do not contribute to the solution of the current problem. As long as the Bundesbank cannot guarantee a common European monetary policy, the return to narrow bands would, rather, be counterproductive. Market participants would immediately test the willingness of the authorities to defend central parities. This would lead to higher interest rates in Europe, thereby aggravating the problem. The return to narrow bands can only be recommended when the current problem has been solved.

Some progress could be expected with the help of the newly created European Monetary Institute (EMI). According to the Maastricht treaty, it should

- strengthen cooperation among central banks,
- facilitate coordination of monetary policies,
- supervise the functioning of the EMS.

This sounds like a new institution taking some responsibilities for European monetary policy. However,

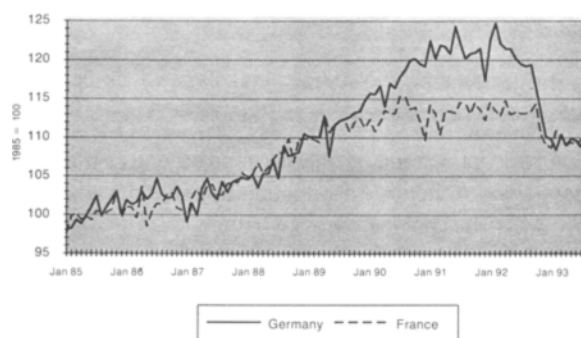
¹⁷ Cf., for example, B. Eichengreen, C. Wyplosz: Mending Europe's currency system, in: *The Economist*, June 5th 1993, p. 77.

¹⁸ Cf. D. Gros: Capital controls and foreign exchange market crises in the EMS, in: *European Economic Review*, Vol. 36, No. 8, December 1992, pp. 1533-1544.

¹⁹ Cf. R. Pohl: Konditionierte Zinssenkung, *Geldpolitische Analyse für den Winter 1993/94*, Hagen 1993.

Figure 4

Industrial Production
France, Germany, 1985.01 - 1993.09



Source: OECD.

this is not the case. Monetary policy will continue to be the responsibility of the national central banks until the third stage of EMU. As before, the course of European monetary policy will be set by the central bank of the anchor currency, if such a policy is formulated at all. The EMI is an institution without any real authority.

Measures to change this slightly have been proposed. For example, it was suggested that each national central bank should have the obligation to report its policy decisions to the EMI. Another proposal argues for a supplementary clause to the German "law on the Bundesbank", taking into account the effect that German monetary policy actually has in Europe.¹⁹ There are no signs, however, neither from the German government nor from the Bundesbank, that these proposals will become reality in the near future.

This means that the future of the European currency area will depend largely on good luck. The hope is that drastic changes in the management of European monetary policy will not be necessary because the level of real economic activity in Germany and Europe will converge and the Bundesbank will respond to these developments by further lowering interest rates. There are some indicators that point in this direction (cf. Figure 4).

However, to prevent the kind of instability the EMS witnessed in the early 1990s in the future, nothing less than monetary union for the core countries of the EMS is required. While the risks of monetary union are pretty small due to a high degree of nominal convergence, the chances of success are rather high, because a common European monetary policy could be of significant importance to overcome the recession, laying the groundwork for recovery. Again, the developments in the "currency area" United States may be taken as a good example of how this can be achieved.