

International Finance Discussion Papers

Number 364

October 1989

EUROPEAN INTEGRATION, EXCHANGE RATE MANAGEMENT, AND  
MONETARY REFORM: A REVIEW OF THE MAJOR ISSUES

Garry J. Schinasi

NOTE: International Finance Discussion Papers are preliminary materials circulated to stimulate discussion and critical comment. References in publications to International Finance Discussion Papers (other than an acknowledgment that the writer has had access to unpublished material) should be cleared with the author or authors.

## ABSTRACT

Since the adoption of the Single European Act in 1986, doubts have been expressed about the ability of the European Monetary System as presently structured to ensure an efficient and effective monetary system for the single European market. The further adoption by the European Council (June 1989) of the Report on Economic and Monetary Union (the Delors report) moves the European Community towards even greater monetary integration.

Policy discussions have focussed on perceived problems with the current institutional and political structure of the European Monetary System and its exchange rate mechanism. Some have stressed that the current system is inherently asymmetric in the sense that it places greater burdens of adjustment on countries whose currencies are in less demand. Others have stressed that the objectives of fixed exchange rates, free capital mobility, and the autonomy of national monetary policies cannot simultaneously be achieved. Others emphasize that not only is closer monetary policy coordination required but so is greater coordination in other policies including budgetary, tax, and trade policies. This paper reviews these and other issues relating to monetary integration in Europe. While the discussion attempts to highlight important aspects and implications of these issues, and attempts to present the many points of view, it does not attempt to resolve these issues.

## TABLE OF CONTENTS

I.	Introduction .....	1
II.	Historical Background .....	3
	A. Early Plans for Economic and Monetary Union ...	4
	B. The European Monetary System: Its Design and Performance .....	6
	C. The Need for Closer Monetary Coordination .....	9
	D. Key Issues for Monetary Reform in Europe .....	13
III.	The Need for an Anchor and the Burden of Adjustment ...	14
	A. Historical Examples of Nominal Anchors .....	14
	B. The DM as an Anchor and the Question of Symmetry .....	17
	C. Asymmetry and the Transition to the Single European Market .....	19
	D. An Uncertain Future .....	21
IV.	Institutional Reform for Monetary Integration .....	22
	A. An Extended EMS .....	23
	B. A Multicurrency Nominal Anchor .....	24
	C. A European Central Bank .....	25
	D. Unresolved Institutional Decisions .....	29
V.	The Changing Role of Fiscal Policy .....	30
	A. Deficit Financing and Financial Instability ...	31
	B. Tax Policy Considerations .....	34
VI.	Potential Implications for Monetary Policy in the United States .....	35
VII.	Looking to the Future: Unresolved Issues .....	36
	Appendix .....	40
	References .....	48

European Integration, Exchange Rate Management,  
and Monetary Reform: A Review of the Major Issues

Garry J. Schinasi<sup>1</sup>

I. Introduction

The European Community (EC) has taken steps towards complete liberalization of the flow of goods, services, and resources within the member states. The "Single European Act" adopted in 1986 called for the elimination of all remaining trade and capital restrictions in the Community by 1992.<sup>2</sup> Since the adoption of the Single European Act, doubts have been expressed in both policy and academic forums about the ability of the European Monetary System (EMS), as presently structured, to ensure an efficient and effective monetary system for the single European market. As a result, there is a renewed interest in European monetary integration and the necessary monetary reforms to achieve it.

To address some of these concerns, further steps towards European integration were taken at the EC Summit in Hanover (June 24-26, 1988) where the European Council established the Delors Committee "to study and propose concrete stages for progress towards economic and

---

1. The author is Senior Economist in the International Finance Division of the Board of Governors of the Federal Reserve System. The author would like to thank Peter Flanagan for preparing the appendix. The author would like to thank Sean Craig, David Howard, Doug Irwin, Karen Johnson, Linda Kole, Ross Levine, Larry Promisel, and Charles Siegman for comments on various drafts of this paper. All views expressed in this paper are those of the author and do not necessarily reflect the views of the Board of Governors of the Federal Reserve System or other members of its staff.

2. Further steps were taken at the EC Summit in Hanover (June 1988) with the adoption of a new directive calling for the full liberalization of all short-term capital transactions within the Community by 1990, not only for EC residents but for nonresidents as well. See Key (1989) for further details about steps taken to liberalize financial services in the European Community.

monetary union." In April 1989, the Delors Committee submitted its report to the EC Council of Finance Ministers and proposed a three-stage process to achieve economic and monetary union. The first stage of the Delors Committee report -- calling for full participation in the exchange rate mechanism and closer coordination of economic and monetary policies -- was adopted by the European Council at the EC Summit in Madrid (on June 26-27, 1989); several official bodies were asked to adopt the necessary provisions to initiate the first stage (effective July 1, 1990) and to organize an intergovernmental conference to initiate preparatory work required to "lay down the subsequent stages."

Policy discussions have focussed on perceived problems with the current institutional and political structure of the European Monetary System and its exchange rate mechanism. Some have stressed that the current system is inherently asymmetric in the sense that it places greater burdens of adjustment on countries whose currencies are in less demand. Others have stressed that the objectives of fixed exchange rates, free capital mobility, and the autonomy of national monetary policies cannot simultaneously be achieved. Others emphasize that not only is closer monetary policy coordination required but so is greater coordination in other policies including budgetary, tax, and trade policies.

The objective of this paper is to review these and other issues relating to monetary integration in Europe. While the discussion attempts to highlight important aspects and implications of these issues, and attempts to present the many points of view, it does not attempt to resolve these issues.

Section II provides a brief and selective overview of historical and institutional developments leading up to present initiatives in Europe, including a brief description of the performance of the European Monetary System. The final part of this section looks ahead to the process of monetary integration and raises a number of issues that will be addressed in the coming debate in Europe. The remaining sections of the paper take up these issues. Section III addresses the need for a nominal anchor and how this is related to macroeconomic adjustment in the European Community. Section IV discusses the possible institutional and monetary reforms that have been discussed and that may be required to achieve the objectives of the single European market. Section V discusses the changing role of fiscal policy in a Europe that has more capital mobility and perhaps less national monetary policy autonomy. Section VI briefly discusses possible implications of EC monetary integration for U.S. monetary policy. Finally, section VII summarizes the paper and raises some unresolved issues regarding exchange rate management and monetary integration. Appendix I provides a detailed chronology of European integration since the foundation of the Common Market.

## II. Historical Background

Before reviewing historical and institutional developments within the European Community it would be useful to distinguish between three different meanings or forms of monetary integration, all of which

are options facing the Community.<sup>3</sup> The first form of monetary integration involves the fixing of exchange rates and most likely involves financing facilities to ease monetary and trade adjustments. In the literature this form has been called a currency union. The second form of monetary integration involves the freedom of capital movements and the unification of financial institutions and markets to foster that freedom. In the the recent policy discussions surrounding "1992" this form of monetary integration has been called financial integration. This is what the European Council had in mind when it enacted the Single European Act. This second form of integration does not require the first form of integration. In fact the two can be considered as independent policy choices.<sup>4</sup> The third form of monetary integration involves unification at the policy level, and may or may not go beyond monetary policy. This form of integration has been called monetary union. In recent policy discussions this form has meant the coexistence of a currency union and the complete integration of financial markets.

A. Early Plans for Economic and Monetary Union

The Treaty of Rome, signed in 1957, established the European Economic Community effective January 1, 1958. The objective of the treaty was to eliminate all trade barriers between the six original

---

3. These forms have been widely discussed in the policy and academic literature. The particular taxonomy used here is from B.J. Cohen's comments on a paper during a conference at the Brookings Institution in 1973. For the original source see Corden.

4. Independent in the sense that one can imagine worlds in which there are fixed exchange rates and free capital mobility and worlds in which there are completely flexible exchange rates and no capital mobility, and of course worlds in which there is some degree of exchange rate flexibility and capital mobility.

member nations by 1970.<sup>5</sup> The ultimate goal was a completely integrated market. By July 1968, all customs barriers on intra-Community trade had been eliminated and a common external tariff had been established, eighteen months ahead of the target date in the Treaty of Rome. Although tariffs were abolished, other obstacles remained, including physical barriers (such as checkpoints at borders), technical barriers (such as product standards), and fiscal barriers (such as different tax rates and excise duties).

With the partial elimination of trade barriers, financial flows exerted greater influence than previously in exchange markets and on financial policies within member countries. At the December 1969 EC summit, heads of state called for a new plan, based on the Barre Report, to establish concrete stages for economic integration. The following year, an EC committee, organized to study further the plan for economic integration, completed its report. The so-called Werner report established a program for the creation by 1980 of an economic and monetary union. The program called for a single Community (de facto) currency (i.e., the elimination of exchange rate margins); the complete liberalization of capital movements within the Community; a common central banking system, modeled after the Federal Reserve System, involving common management of internal and external monetary policies; and, a centralized economic policymaking body accountable to the European

---

5. The Treaty of Rome, which formally established the European Economic Community, was signed by Germany, France, Italy, Belgium, the Netherlands, and Luxembourg. These six countries established the European Coal and Steel Community in 1951. There are currently twelve members in the European Community, with the addition of the United Kingdom, Denmark, and Ireland in 1973, Greece in 1981, and Portugal and Spain in 1986.

Parliament. In addition, the program called for the creation of the European Fund for Monetary Cooperation (established in April 1973), to provide short- and medium-term financial assistance.

B. The European Monetary System: Its Design and Performance

During the 1970s, economic circumstances created exchange rate pressures and external imbalances in the Community, which led to a more national orientation in economic policymaking. Early in 1971, the EC adopted a resolution on the gradual achievement of economic and monetary union. Shortly thereafter, President Nixon suspended the U.S. policy of selling gold to foreign monetary authorities (August 15, 1971), and in so doing, took the first step towards floating exchange rates. The breakdown of Bretton Woods led to the Smithsonian agreement (December 1971) which established a 4-1/2 percent margin (the "tunnel") for member-countries currencies against the dollar. Shortly thereafter, the Basle Agreement became effective (April 1972) in which EC central banks entered a "common margins arrangement" (the "snake"), allowing a maximum margin between member currencies of 2-1/2 percent. The combination of the two agreements became known as "the snake in the tunnel."

Other important events later in the 1970s -- such as the advent of flexible exchange rates in 1973, the oil-price increase in 1973-4, and again in 1979, and the increase in global inflation -- created tension within the "snake" throughout this period. Member countries independently oriented their national economic policies to reduce the adverse consequences of these events and economic and monetary union became less of a priority.

Ultimately, economic and political pressures led the Community to withdraw from earlier plans for economic and monetary union. Instead,

the Community adopted as its objective the achievement of a "zone of monetary stability in Europe," an initiative launched by the German and the French governments. This it did through the creation of the European Monetary System (EMS). The main purposes of the EMS were to "consolidate an apparent economic convergence among the participants, and to improve the robustness of any emerging European cohesion in the face of global monetary instability," especially stemming from the instability in the U.S. dollar.<sup>6</sup> The main features of the EMS were set out in a resolution adopted by the European Council in Brussels on December 4-5, 1978. The system was initiated on March 13, 1979, with every EC country joining, although the United Kingdom chose not to participate in the exchange rate mechanism, partly because of the influence of oil price changes on the international value of the pound.

The EMS was established as a policy regime of fixed, but adjustable, exchange rates. The basic features of the EMS include an exchange rate mechanism (ERM) with rules for intervention; the European Currency Unit (ECU), which functions as a numeraire for exchange rate management, as a reference point for interventions (i.e., the divergence indicator), and as a means of settlement and a reserve asset for EC central banks; and, several credit facilities for EMS-participating countries.<sup>7</sup> While the EMS is similar in some aspects to the "snake," it

---

6. This quotation is from the paper by Thygesen.

7. The very short-term financing facility (VSTF) established in 1979 is for the financing of obligatory interventions. Access to this facility is automatic and unlimited, though access is restricted to ERM-participants (all EC countries except the United Kingdom, Greece, Spain, and Portugal). Funds are supplied by the participating central banks under mutual credit lines. The other facilities are open to all EC member countries. The short-term monetary support facility (STMS) established in 1970, is a quasi-automatic short-term facility. It is

(Footnote continues on next page)

differs in other aspects, both technical and especially political.

Performance of the EMS has been measured in terms of exchange rate variability, convergence of economic indicators such as inflation rates, and the extent of policy coordination. Various studies indicate that price levels have converged far more than had been anticipated, that inflation differentials have narrowed, and that nominal and real exchange rate volatility have been reduced dramatically. Other studies conclude, however, that performance outside of the system has been even better in some cases. On the question of reduced exchange rate volatility, studies indicate that volatility in other asset markets declined by the same margin, and in some cases a wider margin.<sup>8</sup>

Regarding policy coordination, exchange rate obligations have been upheld with relatively mild adverse consequences. There have been fewer "realignments" than in previous historical episodes and fewer than had been anticipated. Moreover, most of the fears expressed early in the development of the EMS so far appear to have been unwarranted. For example, it had been feared that exchange rate stability would require large scale transactions in deutsche marks, thereby threatening the

---

(Footnote continued from previous page)  
administered by member central banks and provides short-term financing for balance of payments adjustment or liquidity purposes. The medium-term financial assistance facility (MTFA) established in 1971, and the Community Loan Mechanism established in 1975, are medium-term facilities in which financing is subject to conditionality. In contrast to the other facilities, the Community loan mechanism relies on outside borrowed funds. The European Monetary Cooperation Fund (EMCF) established in April 1973, administers the VSTF and the STMS.

8. De Grauwe (1986) has argued that inflation fell more sharply in non-EMS countries and at lower cost in terms of foregone growth and investment, while Collins (1987) rejects the hypothesis that the EMS contributed to the reduction of inflation of member countries. See Ungerer, et al (1983, 1986) for details and references.

stability and independence of German monetary policy. In contrast, interventions have been mostly intramarginal (before the limit of the band was reached), and have utilized deutsche marks held at other central banks.<sup>9</sup> It had also been feared that the system would degenerate into a crawling peg, or that the system would impart a deflationary bias in domestic financial policies.

Overall, the EMS has been widely viewed as a success in terms of quantifiable objectives such as exchange rate variability and economic convergence among the larger countries within the Community. Nevertheless, there have been strong expressions of dissatisfaction with the alleged asymmetrical nature of the operation of the system and with the supposed dominance of Germany in the formulation and implementation of macroeconomic policies within Europe.

C. The Need for Closer Monetary Coordination

Economic events in the early 1980s -- including the global process of disinflation, the dramatic appreciation and then depreciation of the dollar, the parallel evolution of external imbalances, and the growing perception that Europe as a market lacked the cohesiveness extant in the United States and Japan -- increased the desire for continued and closer coordination within the European Community. These developments, and others, led to the Commission's publication of a White Paper in June 1985, establishing a legislative program for completion of the internal market, and to the adoption of the "Single European Act" in 1986. Formally, the Act was a supplement to the original Treaty of Rome,

---

9. See Russo (1988).

calling for the creation of a single internal European market by 1992.<sup>10</sup>

Institutional change fostering closer coordination was almost immediately initiated. In September 1987, an agreement at meetings in Basle and Nyborg made the "very short-term financing facility" available for the financing of intramarginal interventions (i.e., before obligatory interventions become necessary). The facility was used for intramarginal interventions in late 1987 by the Bank of France and the Bundesbank, along with other domestic monetary policy measures, in a coordinated effort to defend the value of the franc.

Further steps towards European integration were taken at the EC Summit in Hanover (June 24-26, 1988) where the European Council established the Delors Committee "to study and propose concrete stages for progress towards economic and monetary union."<sup>11</sup> (The European Council also adopted a new directive calling for the liberalization of capital movements within the Community by 1990.) In April 1989, the Delors Committee submitted its report to the Council.

The Delors report (officially the Report on Economic and Monetary Union in the European Community, April 1989) did not recommend a specific timetable, but did propose a three-stage process for transforming the European Community as it now exists into a complete economic and monetary union. The first stage of the process, starting July 1, 1990, calls for greater economic convergence within the existing

---

10. Article 13 of the "Single European Act" states the following: "The Community shall adopt measures with the aim of progressively establishing the internal market over a period expiring on 31 December 1992... The internal market shall comprise an area without internal frontiers in which the free movement of goods, persons, services and capital is ensured..." The Act became effective in July 1987.

11. See the Foreword, page i, to the Delors report.

institutional framework, calls for the full participation by all members of the Community in the Exchange Rate Mechanism of the EMS, retains the possibility of exchange rate realignments but advocates the reliance on other adjustment mechanisms, and grants the EC central bank governors committee the right of proposal to the European Council (thereby allowing for the closer coordination of economic and monetary policies within the Community). The second stage would establish a European System of Central Banks, requiring a revision to the original Treaty of Rome, would relegate exchange rate realignments to a last resort adjustment mechanism, and would set rules for national budgets and their financing. The final stage would fix exchange rates irrevocably, grant sole authority to the European system of central banks for the conduct of monetary policy, and would possibly grant to the Council the authority to limit national fiscal policies to the extent that they threatened monetary stability. It is in this final stage that a "change-over to the single currency would take place" (see page 36, paragraph 60 of the Delors report).

While there was some opposition to the Delors report, the European Council in its meeting at the EC summit in Madrid (June 26-27, 1989) considered the work of the Delors Commission completed. The European Council also adopted the first stage of the Delors Committee report -- calling for full participation in the exchange rate mechanism and closer coordination of economic and monetary policies -- and requested that several official bodies adopt the necessary provisions to initiate the first stage (effective July 1, 1990) and organize an intergovernmental conference to initiate preparatory work required to "lay down the subsequent stages."

The following paragraphs reproduce the relevant sections (Part I, Section B. titled, "Economic and Monetary Union") of the Conclusions of the Presidency of the European Council pertaining to economic and monetary union.

1. The European Council restated its determination progressively to achieve Economic and Monetary union as provided for in the Single Act and confirmed at the European Council meeting in Hanover. Economic and Monetary Union must be seen in the perspective of the completion of the internal Market and in the context of economic and social cohesion.
2. The European Council considered that the report by the committee chaired by Jacques DELORS, which defines a process designed to lead by stages to Economic and Monetary Union, fulfilled the mandate given in Hanover. The European Council felt that its realization would have to take account of the parallelism between economic and monetary aspects, respect the principle of "subsidiarity" and allow for the diversity of specific situations.
3. The European Council decided that the first stage of the realization of Economic and Monetary Union would begin on 1 July 1990.
4. The European Council asked the competent bodies (the ECOFIN and General Affairs Councils, the Commission, the Committee of Central Bank Governors and the Monetary Committee):
  - (a) to adopt the provisions necessary for the launch of the first stage on 1 July 1990;
  - (b) to carry out the preparatory work for the organization of an intergovernmental conference to lay down the subsequent stages; that conference would meet once the first stage had begun and would be preceded by full and adequate preparation.

D. Key Issues for Monetary Reform in Europe

Further integration and liberalization of financial markets in the EC will pose interesting challenges to European policymakers and there are likely to be changes in present financial arrangements and institutions. Questions have been raised about the adequacy of the EMS to operate effectively in a completely integrated Europe. The role of the deutsche mark in the EMS has also been discussed. Related to the role of the deutsche mark is the perceived lack of symmetry in policy formulation and in the sharing of the burden of macroeconomic adjustment. The question of symmetry has been linked with the operation of the current exchange rate mechanism and the necessity for closer coordination of national monetary policies. The focus has been on the financial aspects of integration but it has also been recognized that greater discipline and perhaps closer coordination in other economic policy areas, such as fiscal policies may also be required.

The major issues surrounding monetary integration can be categorized into three related areas: (1) the need for an effective nominal anchor and the sharing of the burdens of adjustment; (2) the need for institutional reform of the existing monetary policy apparatus; and, (3) the changing role of fiscal policy.<sup>12</sup>

These issues will be discussed in the next three sections of the paper.

---

12. Also important are unresolved issues regarding EC trade in goods and services (particularly financial services) with the rest of the world. This issue is particularly important in view of the large external balances between Europe, Japan, and the United States. The same incentives that are driving European integration may also tend to drive the European Community to take protectionist measures against foreign competition.

### III. The Need for an Anchor and the Burden of Adjustment

A major challenge facing European policymakers involves the choice of a nominal anchor and a "leader" in the EMS once market liberalization is completed within the Community.<sup>13</sup> Such a choice cannot be divorced from the establishment of institutions to manage exchange rates, a set of intervention rules to maintain exchange rate agreements, and adjustment policies to maintain economic and financial stability.

Germany's role in European macroeconomic policymaking has been controversial throughout the seventies and eighties and is a major focal point in discussions about the future. A major question in this regard is if the deutsche mark cannot provide an economically efficient and politically acceptable anchor for the single European financial market, then what will (can) and at the same time provide incentives for both the lower inflation and higher inflation economies to maintain membership and relative economic stability in the Community?

#### A. Historical Examples of Nominal Anchors

An historical perspective suggests that international monetary systems have been most successful when they have had a well-defined and

---

13. A related, though secondary issue involves the distribution within the system of the seigniorage from money creation. Some have argued that a number of countries in the European Community rely heavily on revenue from seigniorage for financing government expenditures, sometimes exceeding 10 percent of GDP. Typically seigniorage has averaged less than one percent of GDP, however. Nevertheless, the establishment of fixed exchange rates and free capital mobility will tend to remove this financing tool from the discretion of member governments. It has been argued, however, that while such seigniorage will be lost to specific countries within the Community, it may be more than recaptured by the Community as a whole as the common currency or basket of currencies plays a larger role in international financial markets. See Cohen and Wyplosz (1989) for more on this point and see Gros (1989) for a general discussion of the issue and further estimates of seigniorage within the European Community.

well-managed nominal anchor. For example, from 1876 to 1913 all of the major industrial countries including the United States were operating under the rules of a Gold Standard. Even though capital flows were large under the Gold Standard, they were generally of an equilibrating nature, partly because of the widely held belief that exchange rates would remain fixed. The actual flow of gold to finance current accounts was relatively limited and domestic and external adjustment were perceived to be symmetric. A key feature of the Gold Standard, not present in either Bretton Woods or the EMS, was that the world price level was independent of the monetary and fiscal policies of the key currency country (the pound sterling). A fundamental problem with the Gold Standard was that the supply of liquidity was subject to frequent, and at times dramatic, changes in the production of gold.

Another example is the Bretton Woods system. Under the Bretton Woods system the U.S. dollar served as an anchor and reserve currency and U.S. monetary policy was thought of as determining international liquidity. Though the Bretton Woods system allowed for more exchange rate flexibility and fostered asymmetric adjustment compared to the Gold Standard, the system is widely perceived to have worked well as long as liquidity was managed to maintain relatively low and stable inflation.<sup>14</sup>

As discussed earlier, the decade of experience in the EMS is a third example. Monetary policies and inflation rates in the EMS have converged to a large extent over the last decade. There is evidence to suggest that Germany provided a monetary standard -- a nominal anchor -- and, as time progressed, also provided the system with the intervention

---

14. See Triffin (1978) and more recently Russo and Tullio (1987) for a discussion of these systems and their performance.

and reserve currency. Other countries (voluntarily) followed the German leadership by using the constraints of the Exchange Rate Mechanism as a standard for disciplining macroeconomic policy and at the same time maintaining some policy flexibility by relying on capital controls and realignments.<sup>15</sup> In effect, other countries in the Exchange Rate Mechanism adopted the deutsche-mark as a de facto reserve currency, which allowed German macroeconomic policy to export stability to the rest of the system.

The importance of an anchor and a leader can be challenged, however.<sup>16</sup> It has been suggested that while there have been periods in which an anchor and a leader played a stabilizing role in international financial matters, there were other incentives for countries to pursue stabilizing policies such as common international objectives or mutually consistent domestic objectives that de facto fostered international stability as well. Following this line of reasoning, it is an open question whether the EMS would have operated as well as it did were countries to have had different policy objectives (i.e., different from the objective of lower inflation). Another example might be the current surveillance exercise among the G-7 countries. Such an exercise can be viewed as the formation of a coalition to internalize perceived positive externalities that could not otherwise be captured through the implementation of national policies in pursuit of domestic objectives. To some extent, whether anchors and leaders are a necessary feature of a monetary system is a semantic issue. In the G-7 surveillance example,

---

15. The question of leadership and asymmetric adjustment will be discussed more fully in the next section of the paper.

16. See Frenkel and Goldstein for a discussion of this line of reasoning.

the coalition acts as the leader and the national policies provide the anchor.

B. The DM as an Anchor and the Question of Symmetry

As highlighted above, the role of the deutsche-mark within the exchange rate mechanism and in the broader dimensions of European economic performance has been a focal point for policy discussions. On the one hand, member countries have acknowledged the stabilizing influence of the Bundesbank on financial and monetary policies in Europe and the subsequent reduction in inflation in the 1980s. On the other hand, high unemployment has persisted in Europe. Although growth has been relatively strong recently, on average it has been quite low since the early 1980s. Some have attributed this relatively low growth in Europe to the Bundesbank's reluctance to "reflate." That is, it is suggested that the continued dominance of German macroeconomic policy within the EC has led to a "deflationary" bias in macroeconomic developments within Europe.<sup>17</sup> Through international trade this bias may extend beyond the European Community. It is striking to note that while there have been 12 realignments within the EMS none of these realignments have been revaluations relative to the deutsche mark. This suggests that German macroeconomic policies have consistently had a stabilizing influence within the EMS.

The dominance of German macroeconomic policy within the EC has often been characterized as an inherent lack of symmetry in the current exchange rate mechanism. For smaller countries (with weaker currencies)

---

<sup>17</sup> The empirical literature does not uniformly support the view that German macroeconomic policy played a dominant role within the EMS. See the paper by Fratianni and von Hagen.

within the EMS there is little recourse but to follow the macroeconomic policies (in particular the monetary policies) of the countries with the stronger currencies, even when such policies are inconsistent with their national short- or long-term objectives. As a result, the argument goes, the burden of exchange rate, interest rate, and trade adjustment is asymmetric and falls more heavily on the countries with weaker currencies.

There is strong evidence to support the view that adjustment has been asymmetric, but it is also debatable whether such asymmetry is an inherent feature of the EMS or any exchange rate agreement.<sup>18</sup> Important in determining the degree of asymmetry, at least in part, are the rules for intervention which are established and used for the maintenance of the exchange rate agreement. EMS statutes actually forbid the accumulation of reserves in the currencies of other member countries except for working balances. If this feature of the EMS was enforced, interventions at the margins by a "weak" country to forestall depreciation would require borrowing from the "strong" country. Such interventions would be symmetric in the sense that they would reduce liquidity in the banking system of the "weak" country and increase liquidity in the banking system of the "strong" country. If this intervention rule was adhered to, the adjustment in exchange rates, interest rates, and/or trade flows would be shared or symmetric.

Such symmetry is lost, however, if members of the union accumulate reserves of currencies of other member countries and use them

---

18. See Russo and Tullio for further development of these arguments and Giavazzi and Giovannini (1988) and (1989) and Matropasqua, Micossi, and Rinaldi (1987) for empirical comparisons of interventions and adjustments in Germany, France, Italy and other countries.

for unilateral compulsory interventions when the upper or lower margins are reached. Such symmetry is also lost if at least one country adheres to a monetary rule (i.e., sterilizes interventions). Both France and Italy have accumulated large stocks of reserves of deutsche-marks and have used these reserves to maintain parity with the deutsche-mark. Furthermore, the Bundesbank has adhered to a monetary rule. One would expect the burden of adjustment to fall on those countries that do not adhere to a monetary rule when one other country adheres to such a rule.

Some have argued that the EMS was created to foster convergence in economic policy and economic performance; that such convergence has occurred to a large extent; and that such convergence was the result of discipline in monetary and financial policies in some countries operating through the structure of the EMS. In short, the exchange rate mechanism has provided discipline where policies have been lax (i.e., inflationary). Following this reasoning, if more symmetry is desired there needs to be more agreement about an inflation objective and more complete subordination of monetary and fiscal policies to the agreed objective.<sup>19</sup>

C. Asymmetry and the Transition to the Single European Market

It has been suggested that during the transition to a fully integrated market, the continuation of asymmetries in the exchange rate mechanism will result in costly and perhaps destabilizing financial market pressure. First, in the transitional period a large share of the cost of exchange rate and trade adjustment will be borne by the countries

---

19. Gleske (1988) has argued that asymmetry, if it exists at all, results from market behavior; the deutsche-mark has been voluntarily adopted as a reserve currency by market participants and governments alike, particularly in times of economic tensions.

with the weaker currencies, who can least afford the economic and political costs of such adjustments. Second, under the present exchange rate mechanism, as capital restrictions are lifted, and as trade in financial services is liberalized, large capital flows within the EC may arise thus creating the potential for destabilizing financial pressures. In anticipation of increased capital flows, speculative behavior may arise creating spillover effects elsewhere in the system. Third, even if destabilizing speculative behavior does not arise, large changes in capital flows may exert pressure in financial markets and pose serious difficulties in the implementation of financial and monetary policies. 20

A likely scenario accompanying the elimination of capital controls is at least a temporary widening of interest rate differentials within the EC and greater variability in interest rates. In addition, with exchange rate flexibility limited (and ultimately removed) interest rates are more likely to respond to unanticipated shocks. For example, if nominal exchange rates are fixed and changes in oil prices have different effects on inflation in different countries, then nominal interest rates will reflect these differences in inflation rates. Because nominal exchange rates are fixed, capital flows will operate more

---

20. There may be nonfinancial dislocations as well. For example, with the removal of capital controls, other structural rigidities in other markets may become more noticeable. Such rigidities may create greater and costlier distortions in the way resources are utilized. These costlier distortions may require a policy response that creates spillovers. Wage rigidity and the immobility of labor within the European Community are notable factors to consider. Once capital is completely free to flow, wage differentials will work as an allocative mechanism. If wages are not flexible to respond to resource flows an efficient mix of capital and labor will not be achieved. The efficiency gains achieved through capital liberalization may be offset to some extent by the additional efficiency losses associated with wage rigidity. Even if wage rates were to become completely flexible, labor mobility in the European Community is limited by cultural and language barriers.

forcefully as the equilibrating mechanism. Another example would be changes in perceptions about the credibility of fiscal policy in one member country compared with other countries within the EC. Such changes may lead to changes in the perception about the riskiness of debt issued by such governments, particularly if the exchange rate agreement is viewed as iron-clad.<sup>21</sup>

Because capital flows will play a greater role in the equilibrating process, adjustments may occur elsewhere in financial arrangements. Pressures to realign exchange rates may occur more frequently than in the past, and perhaps with greater force and wider implications. Countries have the flexibility to reimpose capital controls on a temporary basis, however, when financial or exchange market stability is threatened.<sup>22</sup> This may occur if capital flows within the EC become volatile and extreme and interest differentials widen significantly. In that event, the burden of such adjustment may arise in costly and undesirable changes in the economic and geographic allocation of resources.

#### D. An Uncertain Future

The need for a nominal anchor in a financially integrated Europe seems to be part of the conventional wisdom in the European Community. What that anchor will be and how it will be implemented is less clear. Even though the Delors Report recommends that the final stage of EC integration entails the creation of a single European currency, only the first stage of the Report has been adopted. Many questions remain

---

21. The changing role of fiscal policy is discussed more fully in section V.

22. See Rogoff for an analysis of the potential role of capital controls in reducing pressures for realignments in the EMS.

unresolved. If a new nominal anchor is adopted in the Community, are the existing institutions, adjustment mechanisms, and policy mechanisms flexible enough for the effective management of exchange rates in the new single market? If new institutions are required what will be the new rules for intervention and other adjustment mechanisms? Can such adaptations at the same time ensure sovereignty over other national economic policies?

#### IV. Institutional Reform for Monetary Integration

There has been growing sentiment that the EMS as presently structured may be incapable of ensuring financial and monetary stability in a fully integrated European market. A wide range of views exists regarding institutional change. At one end of the spectrum is a call for leaving institutional arrangements as they are with the exception of enhancing the capability of countries to access financing facilities to defend currency values. Others have called for greater coordination of monetary policies. Such greater coordination can be achieved to varying degrees, the extreme being the creation of a European Central Bank and a common European currency.

Decisions regarding these important elements of economic and monetary systems involve decisions about the degree to which currencies are convertible (or substitutable), specific rules for intervention to defend currency agreements, and the adjustment of macroeconomic policies. For example, if the Community credibly adopts a system of completely fixed exchange rates, then currency conversion involves no currency risk, whereas if it maintains a currency grid, currency conversions will be subject to currency risk. Such judgements assume that the institutions

and policies to establish and irrevocably maintain the exchange rate agreements are in place and credibly managed. This section examines these and other issues.<sup>23</sup>

A. An Extended EMS

There have been suggestions to retain the basic structure of the EMS, to strengthen it by slightly altering the present adjustment mechanisms with its various financing facilities, and by widening its membership to include all members of the European Community. Some favor a widening of existing exchange rate limits to a common 3 percent (currently 2-1/4 percent except for Italy's 6 percent), while others favor a narrowing of the bands to ensure the greater convergence required in a fully integrated market.

It has been suggested that retaining the basic features of the the present exchange rate mechanism, (a grid of bilateral central rates with margins of fluctuations and rules for intervention) while increasing capital mobility, if not achieving completely free capital movements, is problematic. With the complete liberalization of capital movements, current institutional arrangements might lead to a system with all the undesirable properties normally attributed to a "crawling peg:" more frequent realignments; greater exchange rate risk; a higher probability

---

23. Such discussions about the evolution of monetary and financial institutions in an integrated market can be thought of as a discussion about the degree of substitutability between European currencies and, more generally, the degree of substitutability between financial assets denominated in various European currencies. Once this conceptual link is made, the costs and benefits of a common European currency become less ambiguous. The ultimate question in this regard may be whether the EC (or the EMS) is an optimal currency area. See Mundell for the seminal work. It was his judgement that optimal currency areas, in practice, would be composed of a small number of countries.

of destabilizing speculative attacks; and greater potential for more frequent exchange rate crises.

Because of the potential for destabilizing influences, others have suggested that more extensive measures are required. At a minimum greater monetary policy coordination (and even harmonization) is required, it is argued. Such coordination can take on various forms within existing political and economic forums within Europe.

B. A Multicurrency Nominal Anchor

Some have argued for the rigorous adoption of a multi-currency anchor and reserve currency (such as the ECU), which was part of the original plan for a European monetary system. As originally envisaged, the EMS would ultimately evolve into a system in which the anchor would be a basket of currencies, such as the ECU. As such, there would be full participation in the exchange rate mechanism and inherently more symmetry. Such symmetry would be present not only in the process of adjustment, but also in the process of policy formulation and implementation.

An advantage of a multi-currency anchor is that a greater degree of asset substitutability would prevail. But there are also disadvantages in that greater asset substitutability may complicate the conduct of national monetary policies. Coupled with imminent changes in the financial services area (banking, securities, and insurance industries), a greater degree of currency and asset substitutability provides increased incentives for currency substitution in each member country (i.e., increases the extent to which residents hold foreign currencies and assets denominated in foreign currencies).

Until now currency substitution has played only a minor role (if any role at all) in German monetary policy and within the EMS. With a multi-currency anchor, currency substitution may become a greater factor in the management of German domestic monetary policies and may have implications for international financial policies. For example, extensive currency substitution may lead to instability in both the demand and supply of targeted monetary aggregates (within Germany). Such instability might require alterations in targets and operating procedures, and such changes may entail broader implications for international economic developments.

For a multicurrency anchor to operate effectively, the authority to determine the supply of the basket of currencies may have to be delegated to some higher authority; at least there must be a mechanism to equitably distribute monetary policy authority to national policy institutions. As such, greater policy coordination may be required. Such a system may have to provide incentives for the stronger economies to maintain membership in the monetary system and for the weaker economies to adopt and maintain more discipline in demand management.

### C. A European Central Bank

The most extreme form of monetary policy coordination is the adoption of a common European currency and the establishment of a European Central Bank to manage monetary policy. There are essentially two lines of reasoning leading to this extreme form of monetary policy coordination.

The first line of reasoning stresses the feature of symmetry discussed earlier; it takes the strong view that existing asymmetrical adjustments reflect an inherent weakness in the current exchange rate

mechanism. Attention is focussed on the intervention and financing rules of the EMS and on the broader long-term issues related to the formation of a monetary union. Three concrete changes are envisioned: a diversification of reserve holdings by central banks of member countries (away from the deutsche-mark); the use of the ECU as a reserve currency; and greater participation by the countries with strong currencies in financing interventions (or more symmetrical adjustment). The existence of a common currency and a central bank, it is thought, would provide the economic and institutional apparatus for greater and more equitable participation.<sup>24</sup>

The second line of reasoning emphasizes free capital mobility. According to this view the objectives of fixed exchange rates, free capital mobility, and independent monetary policies cannot be simultaneously achieved. If the benefits of full integration are to be achieved, it is argued, there must be free capital mobility and predictability of exchange rates within Europe (i.e., fixed exchange rates). It follows that there must be close, if not complete, coordination of monetary policies within Europe. This view sees monetary union as an evolutionary process involving the gradual centralization of monetary policies and the gradual fixing of exchange rates.<sup>25</sup>

Those who advocate the creation of a common European currency, and a European central bank appear to have done so for political as well as economic reasons. Those who have most strongly advocated a common currency desire to more clearly separate monetary policy decisions from

---

24. See Balladur and Solomon.

25. See Padoa-Schioppa (1988).

other government policies. In moving to a common currency, while monetary policy autonomy will be relinquished, so too will be the influence of governments on monetary policy. Monetary policy will then be guided by some other body with well defined and mutually agreed economic policy objectives.

Another political motive is at variance with this desire for monetary policy independence. Some have implied somewhat circuitously that by adopting a common European currency, governments will have equal participation in macroeconomic policymaking. It is implied that fiscal authorities will benefit greatly in the sense that participating governments will have the luxury of financing budgetary policies in a common currency that will carry the weight of the strongest participant. It is implicitly suggested in these arguments that participating in a monetary union with a common currency will provide greater access to financial markets and provide some credibility to fiscal policy decisions.

This line of reasoning is questionable. A monetary union will provide perfect substitutability between currencies (i.e., currency convertibility). But it does not provide equal access to international financial markets and it does not guarantee equal and equitable participation in macroeconomic policymaking in Europe. For example, perfect substitutability between currencies does not guarantee perfect substitutability between interest-bearing assets denominated in these currencies. If there were imperfect convergence of policies and a divergence in economic performance, there would likely be marked differences in the degree of substitutability between similar assets issued by one country and those issued by another country with less

credible fiscal policy, for example. Hence, there would likely be wide differentials in returns on assets that are identical except for the fact that they are issued by different governments.

Quite aside from whether or not the Community should have a single currency and a central bank responsible for community monetary policy is the process of getting from current institutions to a set of Community institutions. The first line of reasoning discussed above views monetary union as a necessary condition for economic union, or complete financial integration. The second line of reasoning sees integration as an evolutionary process. A third viewpoint maintains that complete monetary union can only be the final stage in the process towards an economic union.

According to this third viewpoint a European central bank is a long-term objective and must satisfy three requirements: it must have price stability as its primary goal; it must be fully independent of national governments and European Community bodies; and it should have a federal constitution but with a strong central management. There are a number of intermediate steps required for the "long-term transition process in transferring economic and monetary authority to the European level."<sup>26</sup> This process includes: the full liberalization of capital movements in industrial and less developed countries; greater policy convergence in the Community than currently exists; full participation in the EMS by all EC members, including elimination of the 6 percent band

---

26. For a clear and concise presentation of this viewpoint see Poehl 1988a and 1988b. Also see Klotten for a relatively detailed blueprint for a European Central Bank modeled after the Federal Reserve System in the United States. For other views see Dini, Brittan, and Owen.

for Italy; and greater private use of the ECU.<sup>27</sup>

Once these requirements have been fulfilled, it is argued, political and economic barriers to the creation of a common European currency and a European central bank become less formidable. From this perspective, fundamental economic relationships and market forces will determine the degree of substitutability between currencies, in much the same way that substitutability between other assets is determined. If the market perceives currencies as perfect substitutes then de facto there will be a common European currency.

D. Unresolved Institutional Decisions

Regarding monetary reform there are many unresolved issues. Can a single European market exist and flourish without closer, if not complete, coordination of monetary policy in the Community? Once this decision is made, how will current monetary arrangements be adapted to manage markets that have been completely liberalized? Is the establishment of a common European currency and a European central bank, likely? If established, how should a European central bank be organized and how should authority within the institutions and between the national governments be distributed? Should it fuse existing central banks into one or create a new institution as the central unit of existing national

---

27. President Poehl of the Bundesbank has openly expressed the personal view that monetary union is not possible without the necessary political will among EC member states. He has frequently questioned whether this will exists, emphasizing the need for closer economic cooperation. Regarding closer monetary cooperation and monetary union he has stated: that "the Committee of Governors could be given additional responsibilities for coordinating monetary policy and managing the EMS;" that he is not of the opinion that the European Monetary Cooperation Fund "could form a nucleus for a European central banking system;" and, that monetary union without simultaneous integration in fields like fiscal policy as well as regional and social policy is completely inconceivable."

banks? Should a European central bank be established at once or in stages?

#### V. The Changing Role of Fiscal Policy

One of the main reasons for institutional change, it is argued, is to foster greater discipline in macroeconomic policies within the European Community. It has been suggested that the EMS has not provided discipline in fiscal policy within the European Community. Some have argued that for financial integration to be successful greater discipline in fiscal policy will be required. The Delors Report implied that monetary union would require that limits be placed on the fiscal policies of member countries. Others have suggested that institutional changes should be made that would allow market forces to act as the disciplinary mechanism.<sup>28</sup>

If institutional change is to foster greater fiscal policy discipline, then how institutional arrangements affect fiscal policy behavior must be considered. Of importance in the context of European integration, besides the choice of exchange rate regime, is the degree to which capital is free to move between countries and the degree to which debt instruments issued by member countries are viewed as perfect

---

28. These two arguments are not necessarily exclusive. How far the Community goes in forming a monetary union will to some extent determine the extent to which fiscal policy decisions are disciplined by financial market activity. Any system of fixed exchange rates will require financing facilities. The rules of access to such facilities, and whether or not currency reserves are pooled, will determine to what extent the market acts as a disciplinary force on fiscal policies of individual countries and the union as a whole. For example there do exist institutional arrangements that would penalize (e.g., higher interest rates in the Community) all countries in the union for excessive fiscal expansions in one country.

substitutes.<sup>29</sup> Also important is the redesign of tax policies within the member states of the Community.

A. Deficit Financing and Financial Instability

The complete removal of capital controls in a union of countries with fixed exchange rates reduces the extent to which monetary policy can be used for domestic demand management. In effect, complete capital mobility guarantees that national monetary policies will be focussed on maintaining fixed exchange rates, although the necessary monetary mechanisms and financing facilities must also be in place. Because monetary policy is focussed on external considerations, fiscal policy will probably be focussed on domestic considerations and may thus become the key instrument for macroeconomic stabilization.<sup>30</sup>

Full integration of financial markets coupled with fixed exchange rates does not necessarily provide discipline for fiscal policy, however, and may even encourage fiscal expansion. For example, under conditions of perfect capital mobility and perfect asset substitutability a debt-financed fiscal expansion creates an incipient positive interest rate differential. Given that capital is free to flow between countries and that one debt instrument is as good as another, the higher rate of return will initially attract capital. Associated with this capital inflow will be an overall balance of payments surplus. In this case, the

---

29. The analyses in this section draws heavily on the work of Mundell. While this framework is static, it provides a useful benchmark for analysis of some of these complex issues.

30. The general inflexibility of fiscal policy in most countries suggests that institutional reform is required in the fiscal policy process before it can operate as a stabilization mechanism. This added potential dimension to fiscal policy also raises the issue of a collective European Community fiscal apparatus and the issue of national sovereignty, which are both beyond the scope of this paper.

presence of fixed exchange rates helps to finance the fiscal expansion, at least initially. How long the country can finance its domestic expansion with foreign capital inflows depends on the productivity of the government's expenditures (the rate of return on public investment projects, for example) and the credibility of the government to service such borrowings without resorting to inflationary monetary policies.<sup>31</sup> One can argue that as long as the market finances such expenditure at market rates (without excessive risk premia) then the country's fiscal policy is credible and perhaps sustainable and therefore need not be disciplined.

#### The potential for speculative attacks

The complete liberalization of capital movements within the context of fixed exchange rates (or even a grid) raises the potential for speculative attacks and financial crises, however; in some cases the potential for speculative attacks were the rationale for instituting capital controls. When and if market participants question the credibility of the government's fiscal policies, debt issued by the fiscal authority in question will no longer be viewed as perfect substitutes for other debt instruments. Investors will likely alter their portfolios and shift resources into assets of other currency denominations. By raising interest rates on this government debt, this speculative behavior makes it more costly for the government to continue to finance future fiscal expansions. In some cases this speculative behavior would very quickly produce large capital outflows. The capital

---

31. If capital mobility is less than perfect the effects of fiscal expansion are less clear. Nevertheless, less than perfect capital mobility cannot be said to create disincentives for fiscal expansion.

outflows would require the drawing-down, and possibly the depletion, of reserves to maintain the fixed exchange rate (or the grid). Ultimately if the outflow of capital persists, the policy authorities will have to choose between fiscal policy adjustments and violating the exchange rate agreement. It is in this way that the free flow of capital allows the market to act as a disciplinary force on government fiscal policy.

Possible spillover effects

Depending on the structure of the various financing facilities and the actual rules for intervention for defending the system of exchange rates there may be financial (and real) spillover effects to other participants in the currency union. To the extent that a country draws on a tranche of pooled reserves to finance what is perceived to be excessively expansionary fiscal policy there will probably be spillover effects. Drawing down pooled reserves creates the likelihood that other countries will have fewer resources to defend the system of exchange rates. In the event that a country completely exhausts its supply of reserves it can borrow from other countries within the union. Both possibilities will increase exchange rate risk in portfolios holding the currency of any country within the exchange rate system and therefore increase the general level of interest rates within the union. This may or may not imply changes in capital flows into the union from the rest of the world.

Alternatively, the country financing the expansionary fiscal policy can issue debt denominated in other currencies. While this removes the possibility of direct monetization of such debt, creditors may nevertheless be concerned with the ability of the borrowing government to pay back the debt in the currency of denomination and will

demand a risk premium. While this market mechanism to some extent disciplines fiscal policy, it does so indirectly and may also carry with it the implication that interest rates within the exchange rate system will be higher than they would be under other less rigid exchange rate arrangements.

The operation of the EMS over the past decade has more-or-less produced convergence of monetary policies among member governments. At a minimum, inflation rates have converged and there have been fewer exchange rate realignments than originally anticipated. In contrast, fiscal policy convergence has not occurred within the EC. On balance, financial market stability may require convergence in fiscal policies in a European market in which capital controls have been lifted and where trade in financial services has been fully liberalized.<sup>32</sup>

#### B. Tax Policy Considerations

Aside from complications that arise from deficit financing, tax policy considerations are also important. To the extent that there exist significant differences in tax rates on financial transactions, personal or business incomes, and the purchase of consumption goods, such tax-differentials will create changes in relative prices and incomes. Such changes in the pricing of goods and services and assets will probably create situations in which resources are shifted regionally and sectorally.

Examples abound in the recent experiences of state and local governments in the United States. Tax havens exist within in the United States in which companies locate (and often relocate) to take advantage of low tax rates and generous tax credits. Individuals often move to

---

32. See Frenkel and Goldstein.

states and communities within a given state where there are tax advantages and subsidies. While one can expect such movements within the United States to be greater because of a common language and greater cultural homogeneity, such mobility within Europe will increase with the elimination of economic and financial barriers.

It has been widely feared that differentials in Value Added Taxes (VAT) would pose difficulties once capital controls were completely dismantled; resources would flow to the regions within Europe with the lowest tax rates. The original approach was to allocate VAT through a clearing house system, bring about closer convergence of tax rates, and harmonize excise duties. The EC Commission proposed two VAT tiers, one between 14 and 20 percent and the other between 4 and 9 percent. Current plans call for a VAT floor of 15 percent and a band of 0 to 9 percent for other sensitive items which currently have lower tax rates. The Commission has moved more in the direction of allowing open borders to provide competitive incentives for convergence of tax rates among member countries.

#### VI. Potential Implications for Monetary Policy in the United States

If the EC decides that the current monetary arrangements are suitable, with alterations in existing intervention mechanisms, then it is likely that the deutsche mark will continue to play the role it currently plays within the EMS. To the extent that other member countries' economic policies and economic performance converge, the EC as a block may exert greater influence in global foreign exchange markets, which from a U.S. policy perspective, might be perceived as "intervention shocks." These intervention shocks might require policy responses.

If complete economic and monetary union occurs, and if the common currency (or basket) is successfully managed, the EC might exert even greater influence in global financial markets. How would fully coordinated EC interventions compare with what routinely occurs presently, and how might this alter intervention strategy in the United States?

On the surface it appears that EC members acting as one, in a fixed exchange rate union, may not only act with greater influence, but also with greater predictability. Greater predictability is likely if policy objectives of the union (such as price stability) are clearly stated and credible. In this view, the average "intervention shock" from unified European interventions to the U.S. may be larger, but its variability will probably be reduced.

If a common currency is established (or if the twelve currencies act in unison), it may at times compete with the dollar for reserve currency (basket) status, due to its increased supply (relative to the supply of deutsche mark alone), its increased accessibility, and, perhaps its increased liquidity. Crucial unresolved issues in this regard are: (1) the determinants of the demand for this potential reserve currency (basket); (2) the determinants of the supply of this potential reserve currency (basket); (3) the predictability of such determinants; and, (4) the implications of a unified European monetary policy for the implementation of U.S. monetary policy?

#### VII. Looking to the Future: Unresolved Issues

The previous sections suggested there were three fundamental issues underlying the current policy debate regarding monetary

integration in Europe: the choice of an anchor for the management of exchange rates and the implication of this choice for who bears the burden of macroeconomic adjustment; the setting up of institutions to maintain the integrity of the anchor and foster financial stability; and, the changing role of fiscal policy in a fully liberalized European market with greater monetary policy coordination. While the discussion highlighted important aspects and implications of these issues, and attempted to present the various points of view, the discussion did not resolve them. European policymakers are far from agreeing on many of these important issues, even though important steps have been taken towards financial integration and economic union.

In addition to the issues discussed in this paper, there remain many other conceptual and technical issues. High on the list of priorities are questions falling under the category of exchange rate management in Europe, including the issue of full participation by all Community members in the exchange rate mechanism, the choice between irrevocably fixed exchange rates and a crawling peg, the choice among various alternative intervention mechanisms, and the choice of political mechanisms for deciding when and how adjustments should be shared. Other more technical decisions must be made as well. For example, should there be more or less automaticity in intervention mechanisms within the exchange rate mechanism and should there be greater conditionality in obtaining financing for either intramarginal or marginal adjustments?

Apart from decisions regarding the management of exchange rates is the question of whether or not further monetary policy coordination is in fact required. It is conventional wisdom that once the choices are made to allow the free movement of resources and to irrevocably fix

exchange rates national monetary policies become subservient to managing the regime of fixed exchange rates. But it is also widely accepted that capturing the efficiency gains from the free movement of resources does not require a fixed exchange rate regime. Whether fixed or flexible exchange rates are desirable depends in part on whether unanticipated events are more likely to affect member countries equally or unequally. To some extent this is an empirical issue. But there are also policy choices and institutional arrangements that can alter the way in which unanticipated events impinge on these individual member countries.

How far the Community may have to proceed along the path of greater policy coordination obviously depends on the choice of an exchange rate regime. Regardless of this choice, many European policymakers are concerned that current institutional arrangements are not capable of providing financial stability in a world in which capital movements are uninhibited by capital controls and other legal and institutional rigidities. If closer monetary policy coordination is desired how will current institutions be adapted to manage these more open economies? Is the establishment of a common European currency and a European central bank, likely? If so, how should a European central bank be organized and how should authority within the institutions and between the national governments be distributed?

All of these decisions have implications not only for the European Community but also for international financial markets and macroeconomic policymaking in Japan and the United States. Some have suggested that with the creation of a single European market, international economic relations will become tripolar with the integrated EC, Japan, and the United States being the three predominant players in

financial markets and global economic policymaking. Such a vision has far reaching consequences for domestic and international economic policymaking.

APPENDIX

Chronology of EC Integration<sup>33</sup>

May 1950: French Minister of Foreign Affairs Schuman proposes creation of an organization governing European production/consumption of coal and steel. Calls for a "High Authority" to oversee new organization. Goal is to unify France and Germany -- though open to all European countries.

September 19, 1950: Agreement signed establishing the European Payments Union (EPU). The EPU was established to prevent the post-War shortage of dollars from limiting European trade. The EPU was administered by the BIS, and supported in part by a capital fund from the United States to serve as a buffer against defaults or payment delays. The EPU, by its nature, encouraged participants to export to the United States as a means of increasing dollar holdings (which could be used to import from any area), and to import from EPU countries instead of from the U.S. or Latin America.

April 1951: Paris Treaty signed by France, Germany, Italy, Belgium, Netherlands, and Luxembourg establishing European Coal and Steel Community (ECSC). Parliaments endorse the Treaty in Winter 1951 - Spring 1952; the UK declines membership.

May 1952: Treaty signed by the 6 for European Defence Community (EDC), and plans for European Political Community.

August 1954: French National Assembly rejects EDC.

June 1955: Intergovernmental committee, headed by Belgian Paul-Henri Spaak, set up to pursue economic union and union in nuclear energy.

May 1956: Spaak Report approved in Venice -- begin talk of economic union among the 6 and others. As talk of "common" policies increases, UK declines movement and proposes free trade area in October 1956.

March 1957: The 6 sign Treaties of Rome on March 25, 1957 -- establish European Economic Community (EEC); European Atomic Energy Community (Euratom). Together with the ECSC, form the European Community (EC). Parliaments ratify within a few months. Stated objectives: customs union with free movement of goods, ending trade quotas and barriers; free movement of services and capital. Also, provide common policies in agriculture, transport, and social policy. Foreign policy remains under control of Member states.

January 1, 1958: EEC and Euratom treaties take effect. By Spring, respective Councils and Commissions are in place.

March 1958: EEC Council decision drawing up rules governing the Monetary Committee (later amendments). Committee formed to review the monetary and financial situation in the Member states and Community as a whole, and review system of currency payments in the Community.

---

33. Prepared by Peter Flanagan.

1958: West European countries restore convertibility of their currencies under IMF articles of Agreement. End of European Payments Union.

January 1959: First cut in customs duties in trade between Member states. All customs duties -- excluding agricultural products -- to be eliminated in intra-EEC trade by 1969.

June-July 1959: Greece and Turkey apply to become associated states.

1960: Adopt European Social Fund to provide aid/training to workers and firms.

May 1960: EFTA (European Free Trade Association) is formed -- Austria, Denmark, Norway, Portugal, Sweden, Switzerland, United Kingdom.

May 1960: Agreement reached on directive to free certain capital transfers in the Community, and ease capital restrictions.

July 1961: Greece and EC sign association agreement.

July-August 1961: Ireland, Denmark, UK apply for EC membership.

September 1961: First regulation on free movement of workers comes into force.

January 1962: Common Agricultural Policy is started.  
Based on following principles: single market and prices for most products; preservation of comparable living standards for agricultural workers and workers in other sectors; preferences for Community products; financial union via European Agricultural Guidance and Guarantee Fund (EAGGF).

February-May 1962: Spain and Portugal request EC association.

October 1962: Commission submits plan to Council for increasing financial consultation and coordination of monetary/economic policies. Call for finance ministers to periodically meet with central bank governors in an effort to increase coordination. Commission proposes three stages to monetary union by 1971, including the creation of a Council of Governors of Central Banks to intensify monetary cooperation. Germany objects, fearing excess liquidity and interference with transatlantic cooperation.

January 1963: Negotiations on accession of Denmark, Norway, UK break down.

January 1963: France and Germany sign friendship and cooperation agreement.

May 1964: GATT Kennedy Round begins; results in 35-40% cut in EC external tariffs, excluding agricultural products. Signed June 1967.

April-May 1964: Committee of Governors of Central Banks of the EEC is set up -- to review credit policies and confer on monetary measures before implementation. Member states asked to confer before changes in

exchange parities. Budgetary Policy Committee is set up, as well as Medium-Term Economic Policy Committee.

March 1965: EC Commission presents new plan to finance CAP -- to give the Community its "own resources" by allocating to the EEC the levies charged at Community's borders on non-Member imports. France opposes, and political rift forms. Overcome with Luxembourg compromise preserving unanimity rule in Council.

May 1967: UK, Ireland, and Denmark reapply to join the Community.

July 1967: Single Council and single Commission come into force.

July 1, 1968: EC customs union is completed, 18 months ahead of the twelve-year schedule in the EEC Treaty. All customs duties are removed in intra-Community trade, and common external tariff is established.

February 1969: The Barre Report is released -- the Commission's memo on the coordination of economic/monetary policies. It emphasized the need for more realistic and compatible medium-term policies. Establishes a concrete proposal for short-term monetary support and medium-term financial assistance for the Community.

July 1969: The Council supports much of the Barre Report, calling for increased consultations among member states prior to short-term policy shifts likely to considerably affect other members.

December 1-2, 1969: Summit of EC heads of state in The Hague calls for a new plan -- based on the Barre Report -- to established concrete stages for economic/monetary union. Committee is formed, headed by Pierre Werner of Luxembourg.

February 1970: Governors of EEC central banks agree to system of short-term monetary support. Currently available to all EEC central banks, whether or not currencies are in the EMS. (Presently administered by FECON, European Monetary Cooperation Fund.)

April 1970: Further reform of Community's own resources. Community will receive all customs duties on non-Member imports, all levies on agricultural imports, and resources deriving from value-added tax: calculated by a rate of up to 1% of a uniform base.

October 1970: Werner Report establishes a program for the creation in stages of an economic and monetary union by 1980. Envisages a union with the following features: (1) a single Community currency, or de facto single currency, with Member currencies at fixed exchange rates with Community currency; (2) complete liberalization of capital movements within the Community; (3) common central banking system, organized like the Federal Reserve, involving common management of internal and external monetary policy; (4) centralized economic policy-making body, politically responsible to the European Parliament.

March 1971: Policies for medium-term financial assistance are set up. Money is to come from Member states, and to be administered by finance ministers.

March 1971: The Council adopts a resolution on the gradual achievement of economic and monetary union. Outlines steps to be taken in an initial three-year program, including narrowing the margin of fluctuation among EEC currencies, and draws up plans for a European Monetary Cooperation Fund. (The first stage of the Werner Plan is made retroactive from January 1971). Implementation is disrupted by the monetary crisis of 1971. In August 1971, United States suspends convertibility of the dollar into gold, jeopardizing the Bretton Woods system.

December 1971: Smithsonian Agreement reached in Group of Ten to realign participants' exchange rates, supported by IMF Executive Board action immediately thereafter. Under the IMF decision, the spread between two market rates could be as wide as 4-1/2 percent.

January 1972: Treaties are signed for the accession of Denmark, Norway, Ireland, and the United Kingdom. Rapidly ratified by all except Norway, where Accession Treaty is defeated in referendum. Community of Nine effective on January 1, 1973.

March 1972: "Snake" exchange rate system instituted, a year before the final collapse of Bretton Woods. Involved maintaining narrow margins of exchange rate fluctuations around pegged rates among EEC currencies, while maintaining fixed -- but wider -- margins against the dollar. Exchange rates among snake currencies were to fluctuate in a 2-1/4 percent band (the snake), while the whole group would fluctuate within a 4-1/2 percent band against the dollar (the "tunnel," established by the Smithsonian Agreement of December 1971). When superseded by the EMS in March 1979, the DM, Netherlands guilder, Belgium-Luxembourg franc, and the Danish krone were still in the "snake." At various times, France, Italy, the United Kingdom, Norway, and Sweden participated in, or associated their currencies with, the "snake."

March 1973: With move to floating exchange rates, defined margins for EEC exchange rates against the dollar (the "tunnel") are ended.

April 1973: European Monetary Cooperation Fund is established by the Council of Ministers. Referred to as EMCF or FECOM (the French initials), it administers short-term central bank credit facilities and ultimately issues the ECU.

February 1974: "Convergence Decision" made by the Council of Ministers, calling for increased convergence of economic policy among Member states. Requires the Council to draw up annual policy guidelines for Member states. Pass "Stability Directive" at the same time, requiring Members to adopt necessary legislation to allow authorities to accelerate or slow down government spending, to control debt of governmental agencies, and to modify direct or indirect taxes.

1974: Drive to economic/monetary union is slowed by national concerns over oil crisis.

1975: Introduce EUA ("European Unit of Account") as a means of settlement.

February 1975: Regulation adopted by Council of Ministers authorizing Community itself to borrow funds directly from third countries, from

public/private institutions, or on capital markets -- with the aim of re-lending the money to one or more Members (to help balance of payments problems spurred by the oil price shifts).

December 1975: Leo Tindemans, Belgian Prime Minister, presents his plan for "European Union" to EEC governments. Report is never acted on by European Council.

1976: EUA adopted as unit of account for the European Coal and Steel Community.

1977: Directive adopted harmonizing the VAT base for member states.

1978: EUA first used for EEC budgets.

July 1978: EC heads of state meet in Bremen, West Germany, and reaffirm political commitment to eventual monetary union.

December 1978: European Council adopts resolution on establishment of European Monetary System (EMS).

March 13, 1979: The EMS comes into force. EMS has four main components: a European currency unit (ECU), replacing the EUA; exchange rate mechanism; credit facilities; and transfer arrangements. A very-short-term financing facility is instituted in support of market interventions under the EMS, via the European Monetary Cooperation Fund (FECOM), to maintain exchange rates within set bands ( $\pm 2.25$  percent from bilateral parity grid rates against the ECU). Each EEC central bank in the exchange rate mechanism agrees to contribute 20 percent of gold holdings and gross U.S. dollar reserves to FECOM in exchange for ECUs. The United Kingdom remains outside the exchange rate mechanism (ERM) of the EMS, as do Greece and Portugal. Portugal may join the ERM in 1992. Italy and Spain retain a wider band for exchange rate fluctuations (6 percent). Since the creation of the EMS, there have been 11 realignments; the most recent occurred on January 12, 1987.

May 1979: Greece signs Treaty of Accession; formally becomes the 10th EC member on January 1, 1981.

May 1980: Temporary solution reached to debate over UK budget rebate. The UK's contribution to the Community's budget is viewed as too large a burden, given the benefits the country receives. Budget contribution is reduced for 1980 and 1981.

January 1981: The ECU replaces the EUA (European unit of account) in the Community's general budget. ECU made up of specific, weighted amounts of Member States' currencies.

May 1983: Commission proposes reform of Community finances, calling for an increase in the VAT ceiling to 1.4 percent and VAT contributions by Member states relative to share in agricultural output.

March 1984: Council of Ministers agrees to package of reforms for Common Agricultural Policy (CAP), including a new pricing policy, guarantee thresholds for products in surplus, and other measures to curb structural surpluses.

June 1984: At Fontainebleau Summit agreement reached on amount of compensation to be granted to the UK to reduce its budget contribution. Lump sum of ECU in 1984, and subsequent plan to receive 2/3 of the difference between VAT payment and receipts from Community budget.

1985: Council approves limited EMCF credit for intramarginal intervention.

June 1985: The EC Commission submits a White Paper on Completing the Internal Market, identifying almost 300 decisions needed to eliminate the physical, technical, and fiscal barriers preventing the formation of a complete common market and restricting EC competitiveness with the United States and Japan. Sets a timetable for decisions through the end of 1992.

January 1986: Accession of Spain and Portugal.

1986: Signing of the Single European Act, amending the Treaty of Rome. Act became effective in July 1987, creating a streamlined decision-making process for internal market directives. The Act allows passage of directives by qualified majority rather than requiring unanimity, and increases the role of the European Parliament.

1987: Turkey applies for EEC membership.

September 1987: Basel-Nyborg Agreements. Central bank governors agree to measures further liberalizing intramarginal interventions. Prior to agreement, a strong currency country (usually Germany) was obliged to loan currency to weak country for intervention (sale of DM, for instance) only when the bilateral spread had reached the 2.25 percent intervention limit. With the Basel-Nyborg agreement, the "presumption" exists that the Bundesbank will lend the weak-currency country the DM it needs to defend its rate before the floor is reached. Germany resisted the agreement, because of the possible impact on domestic monetary conditions.

January 1988: French Finance Minister Balladur calls for a strengthening of the EMS and the establishment of a European central bank.

January 1988: Commission proposes Second Banking Directive, which would allow banks to operate in any member state on a single license. Also increases the range of activities banks would be permitted to engage in (including securities activities).

February 1988: At an emergency summit in Brussels, EC heads of state reach agreement on budget reforms. The final package adopted included measures to cap the annual Community budget, restrain the annual rate of agricultural spending growth, scale back agricultural surpluses via overproduction penalties and set-asides, restructure the basis of budget contributions, and bolster the economies of the poorest regions through increased structural assistance. Adds new "fourth resource" based on the level of member states' GNP.

June 13, 1988: Council of Ministers adopts a directive authorizing the complete liberalization of capital movements within the Community by July 1990. Extended transition period granted to Portugal, Spain, Greece, and

Ireland. At French insistence, Commission will review tax implications of the reform before July 1989.

June 27-28, 1988: At Hanover Summit, EC heads of state establish a committee of central bank governors and other experts to examine/propose steps toward a common monetary policy for the EEC. At Prime Minister Thatcher's urging, the scope of the committee is narrowed to avoid any explicit reference to an EC central bank. The committee, chaired by EC Commission President Jacques Delors, is scheduled to report to EC leaders at the June 1989 Madrid summit.

November 1988: Pursuant to the Single European Act, the Commission adopts the half-way report on completion of the internal market for the EC Council. The Commission reports that, in the 3-1/2 years since publication of the White Paper, progress has been concentrated in the area of technical barriers, with limited success in physical and fiscal barriers. By mid-November 1988, the Commission had "tabled" 208 of the 279 proposals in the White Paper (originally 300), with Council adoption reached on 94 directives and regulations.

December 2-3, 1988: At the Rhodes Summit, EC leaders highlight remaining obstacles to completion of the internal market in the areas of indirect tax harmonization and social policy.

April 13, 1989: The EC Commission gives its final approval to an amended version of the proposed Second Banking Directive. In the amended directive, which incorporates a more liberal formulation of reciprocity, banks from third countries providing "genuine national treatment" would not be prevented from entering the EC market. "Genuine national treatment" is defined as including "effective market access" and "competitive opportunities" comparable to those available to domestic banks.

April 17, 1989: The Delors Committee submits final Report on Economic and Monetary Union in the European Community to the EC Council of Finance Ministers. The Report calls for a three-stage transition to monetary union, and a gradual transfer of economic decision-making from member states to the Community. The first step would be increased economic and monetary policy coordination, including the incorporation of all EC currencies into the exchange rate mechanism of the EMS. The second step would be to introduce a European system of central banks and narrow exchange rate fluctuations. The third and final step would transfer major policy decisions to the Community level, lock exchange rate into fixed parities, and adopt a Community currency. Although it did not set a specific timetable, the Report called for the start of stage one before July 1990, when the directive on capital market liberalization comes into force. The Report is scheduled to be discussed at the Madrid Summit on June 26-27. Germany, France, Italy, and Spain have supported measures in the Report, while some in the United Kingdom remain strongly opposed.

May 8, 1989: By early May, the EC Commission had submitted to the Council of Ministers 232 of the 279 pieces of legislation identified in the 1985 White Paper, with final Council agreement reached on just over half of the total.

May 17, 1989: The EC Commission adopts its proposal for a "Community charter of basic social rights," with measures aimed at adding a social dimension to the internal market program. The charter would be adopted by EC heads of state at the December 1989 summit under the French presidency. The charter remains a "preliminary draft" subject to further review by the EC Ministers for Social Affairs.

June 15 and 18, 1989: Direct elections are held for the 518 seats of the European Parliament. Elections held added significance due to the new powers granted the Parliament over the internal market program in the Single European Act. Liberal parties make significant gains in the Parliament, and call for early action on the social charter.

June 19, 1989: The EC Council of Economic and Finance Ministers reaches agreement on the Second Banking Directive. The Council accepted the revised reciprocity provision proposed by the Commission in April. Once the Council adopts its formal "common position" on the Second Banking Directive, it will be sent to the EC Parliament for a second reading and then back to the Council for final action. It is to become effective at the beginning of 1993.

June 19, 1989: Spain joins exchange rate mechanism of the EMS. The peseta joins the exchange rate mechanism with a 6 percent fluctuation band similar to the Italia lira.

June 26-27, 1989: At EC Summit in Madrid the European Council adopts the first stage of the Delors report and requested that several official bodies adopt the necessary provisions to initiate the first stage and organize an intergovernmental conference to initiate preparatory work required to "lay down the subsequent stages."

REFERENCES

- Balladur, E., "Lost Illusions of the Floating Rate System," The Wall Street Journal, January 20, 1988.
- \_\_\_\_\_, "Rebuilding an International Monetary System," The Wall Street Journal, February 23, 1988.
- Brittan, S., "A single currency for the EC," Financial Times, June 23, 1988.
- Cohen, B.J., "Comments by Benjamin J. Cohen," in a 1972 Conference volume, European Monetary Unification and Its Meaning for the United States, The Brookings Institution, Washington, D.C., 1973.
- Cohen, D. and C. Wyplosz, "The European Monetary Union: An Agnostic Evaluation," presented at the Konstanzer Seminar on Monetary Theory and Monetary Policy, May 23-26, 1989.
- Collins, S., "Inflation and the EMS," in The European Monetary System, edited by F. Giavazzi, S. Micossi, and M. Miller, Cambridge University Press, 1988.
- Corden, W. M., "Monetary Integration," Essays in International Finance, No. 93, Princeton University, April 1972.
- De Grauwe, P., "Fiscal Policies in the EMS: A Strategic Analysis," October 1986, International Economics Research Paper, No. 53, Catholic University of Louvain.
- Dini, L., "Statement before the Committee on Economic and Monetary Affairs and Industrial Policy of the European Parliament," Brussels, July 13, 1988.
- Edwards, Richard W. Jr., International Monetary Collaboration, Transnational Publishers, 1985.
- European Community Official Publications, Steps to European Unity, January 1985.
- Folkerts-Landau, D. and D. Mathieson, The European Monetary System in the Context of the Integration of European Financial Markets, International Monetary Fund Occasional Paper (Forthcoming), Washington, D.C., 1989.
- Fратиanni, M. and J. von Hagen, "German Dominance in the EMS: The Empirical Evidence," mimeo, March 1989.
- Frenkel, J. and M. Goldstein, "International Monetary System: Developments and Prospects," Working Paper (WP/88/45), The International Monetary Fund, Washington, D.C., May 1988.
- Gleske, L., "The Deutsche Bundesbank as Partner in Monetary Policy Cooperation," in The American Banker, reprinted in Auszuge aus: Presseartikeln, Deutsche Bundesbank, Number 50, July 12, 1988.

- Giavazzi, F., and A. Giovannini, "Models of the EMS: Is Europe a Greater Deutsche Mark Area?" chapter 7 in Global Macroeconomics: Policy and Cooperation, ed. by R. C. Bryant and R. Portes, St. Martins Press, 1988.
- Giavazzi, F., and A. Giovannini, Limiting Exchange Rate Flexibility, The MIT Press, 1989.
- Gros, D., "Seigniorage in the EC: The Implications of the EMS and Financial Market Integration," International Monetary Fund, Working Paper, WP/89/7, 1989.
- Hallstein, W., Europe in the Making, W.W. Norton and Company, 1972.
- Key, S., "Financial Integration in the European Community," June 1989, International Finance Discussion Paper #349, the Federal Reserve Board.
- Kloten, N., "Moving towards a European Central Bank System," in Auszuge aus Presseartikeln, Deutsche Bundesbank, Number 46, June 1988.
- Mastropasqua, C., S. Micossi, and R. Rinaldi, "Interventions, Sterilization, and Monetary Policy in EMS Countries, 1979-1987," in The European Monetary System, edited by F. Giavazzi, S. Micossi, and M. Miller, Cambridge University Press, 1988.
- Mundell, R., International Economics, The Macmillan Company, 1968.
- Owen, D., "London, Europe's banker," The Times, London, July 2, 1988, reprinted in Auszuge aus Presseartikeln, Deutsche Bundesbank, Number 49, July 7, 1988.
- Padoa-Schioppa, T., "The European Monetary System: A Long-term View," in The European Monetary System, edited by F. Giavazzi, S. Micossi, and M. Miller, Cambridge University Press, 1988.
- Poehl, K.O., "A Vision of a European Central Bank," The Wall Street Journal, July 15, 1988.
- \_\_\_\_\_, unpublished statement during a press conference after the May 5, 1988 biweekly Deutsche Bundesbank Council Meeting.
- Report on Economic and Monetary Union in the European Community, prepared for the European Council by the Committee for the Study of Economic and Monetary Union, Jacques Delors, Chairman, April 12, 1989.
- Rogoff, K., "Can Exchange Rate Predictability be Achieved Without Monetary Convergence," European Economic Review, 1985.
- Russo, M., "The EMS at the Crossroads," April 20, 1988, presented at the Symposium VII on the International Monetary System and World Economic Development, Malente.
- Russo, M., and Guiseppe Tulio, "Monetary Coordination Within the European Monetary System: Is There a Rule?," part II in, Policy

Coordination in the European Monetary System, International Monetary Fund Occasional Paper #61, Washington, D.C., September 1988.

Solomon, R., "Minister Balladur on International Monetary Reform," March 15, 1988, International Economic Letter, Vol. VIII, No. 3.

Thygesen, N., "Is the Adjustable Peg a Viable Option," chapter VI in Currency Competition and Monetary Union, edited by P. Salin, Martinus Nijhoff Publishers, The Hague, 1984.

Triffin, R., Gold and the Dollar Crises: Yesterday and Tomorrow, Essays in International Finance, No. 132, Princeton University, 1978.

Ungerer, H., O. Evans, and P. Nyberg, The European Monetary System: The Experience, 1979-82, International Monetary Fund Occasional Paper #19, Washington, D.C., May 1983.

Ungerer, H., O. Evans, T. Mayer, and P. Young, The European Monetary System: Recent Developments, International Monetary Fund Occasional Paper #48, Washington, D.C., December 1986.

International Finance Discussion Papers

<u>IFDP NUMBER</u>	<u>TITLES</u> <u>1989</u>	<u>AUTHOR(s)</u>
364	European Integration, Exchange Rate Management, and Monetary Reform: A Review of the Major Issues	Garry J. Schinasi
363	Savings Rates and Output Variability in Industrial Countries	Garry J. Schinasi Joseph E. Gagnon
362	Determinants of Japanese Direct Investment in U.S. Manufacturing Industries	Catherine L. Mann
361	The U.S. and U.K. Activities of Japanese Banks: 1980-1988	Henry S. Terrell Robert S. Dohner Barbara R. Lowrey
360	Policy Rules, Information, and Fiscal Effects in a "Ricardian" Model	Eric M. Leeper
359	A Forward-Looking Multicountry Model: MX3	Joseph E. Gagnon
358	Implications for Future U.S. Net Investment Payments of Growing U.S. Net International Indebtedness	Lois E. Stekler William L. Helkie
357	U.S. Policy on the Problems of International Debt	Edwin M. Truman
356	International Economic Policy: The Role of Exchange Rates	Edwin M. Truman
355	An Econometric Analysis of UK Money Demand in <i>Monetary Trends in the United States and the United Kingdom</i> by Milton Friedman and Anna J. Schwartz	David F. Hendry Neil R. Ericsson
354	Encompassing and Rational Expectations: How Sequential Corroboration Can Imply Refutation	Neil R. Ericsson David F. Hendry
353	The United States as a Heavily Indebted Country	David H. Howard
352	External Debt and Developing Country Growth	Steven B. Kamin Robert B. Kahn Ross Levine
351	An Algorithm to Solve Dynamic Models	Wilbur John Coleman II
350	Implications of the U.S. Current Account Deficit	David H. Howard

---

Please address requests for copies to International Finance Discussion Papers, Division of International Finance, Stop 24, Board of Governors of the Federal Reserve System, Washington, D.C. 20551.

International Finance Discussion Papers

<u>IFDP NUMBER</u>	<u>TITLES</u>	<u>AUTHOR(s)</u>
349	Financial Integration in the European Community	Sydney J. Key
348	Exact and Approximate Multi-Period Mean-Square Forecast Errors for Dynamic Econometric Models	Neil R. Ericsson Jaime R. Marquez
347	Macroeconomic Policies, Competitiveness, and U.S. External Adjustment	Peter Hooper
346	Exchange Rates and U.S. External Adjustment in the Short Run and the Long Run	Peter Hooper
345	U.S. External Adjustment: Progress and Prospects	William L. Helkie Peter Hooper
344	Domestic and Cross-Border Consequences of U.S. Macroeconomic Policies	Ralph C. Bryant John Helliwell Peter Hooper
343	The Profitability of U.S. Intervention	Michael P. Leahy
342	Approaches to Managing External Equilibria: Where We Are, Where We Might Be Headed, and How We Might Get There	Edwin M. Truman
341	A Note on "Transfers"	David B. Gordon Ross Levine
340	A New Interpretation of the Coordination Problem and its Empirical Significance	Matthew B. Canzoneri Hali J. Edison
339	A Long-Run View of the European Monetary System	Hali J. Edison Eric Fisher
<u>1988</u>		
338	The Forward Exchange Rate Bias: A New Explanation	Ross Levine
337	Adequacy of International Transactions and Position Data for Policy Coordination	Lois Stekler
336	Nominal Interest Rate Pegging Under Alternative Expectations Hypotheses	Joseph E. Gagnon Dale W. Henderson
335	The Dynamics of Uncertainty or The Uncertainty of Dynamics: Stochastic J-Curves	Jaime Marquez
334	Devaluation, Exchange Controls, and Black Markets for Foreign Exchange in Developing Countries	Steven B. Kamin