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It Can't Happen, It's a Bad Idea, It Won't Last: U.S. Economists on the EMU and the Euro, 1989-2002

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ABSTRACT

In 2009, the euro celebrated its first decade. As of January 2009, it was circulating in 16 member states of the European Union (EU).³ This unparalleled experiment in monetary unification is a milestone in European integration.⁴ The euro has emerged as a major currency, even challenging the U.S. dollar as the

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3. In 2002, 12 of the 15 EU member states introduced euro notes and coins. The exceptions were Denmark, Sweden and the United Kingdom. As of 2009 the EU has 27 member states. Slovenia adopted the euro in January 2007, Malta and Cyprus in January 2008, and Slovakia in January 2009. Several other member states wish to adopt the euro as soon as EU criteria permit. The euro is also the official currency of some countries that are not EU members: microstates such as Monaco that formerly used currencies replaced by the euro, and Montenegro and Kosovo.

global reserve currency. In a short period, it has transformed the European economic and political landscape.⁵ Never before have some of the world's largest economies surrendered their national currencies and national monetary sovereignty in favor of a common currency and a common central bank. The euro is one of the most exciting experiments in monetary history.

How did U.S. economists view the plans for a single currency in Europe before the euro was actually put into circulation? What predictions did they make about European monetary unification? Which theoretical frameworks did they use to evaluate the single currency? How did their views evolve in response to European monetary events? The purpose of this paper is to answer these questions.

We adopt the publication of the Delors Report in 1989 as the starting date for our survey, and the introduction of euro notes and coins in 2002 as the end date. The Delors Report, named after Jacques Delors, then president of the European Community, proposed a three-stage program of Economic and Monetary Union (EMU) to make the European Community into a true single market. A single currency was one component of the program. The report led to the 1992 Maastricht Treaty, which transformed the European Community into the more tightly knit European Union, in part by establishing a single currency as one of the EU's objectives and specifying the institutional framework for achieving it.

We examine the views of economists at the U.S. Federal Reserve System and at U.S. universities, as expressed primarily in journal articles and in contributions to books, though we also cover interviews, speeches and short articles in the media. We concentrate on U.S. economists for two reasons. First, they dominated research and policy debate about the euro. Their views were widely disseminated on both sides of the Atlantic, impacting the work of European economists. Thanks to the size and intellectual dominance of the U.S. academic profession, U.S. economists set the parameters of the academic discussion. Second, U.S. economists, in contrast to European economists of the time, lived in a large monetary union, experiencing its benefits and costs. Hence we expect them to have used the U.S. monetary record to interpret and evaluate the European move towards monetary unification.

We deal only with U.S. economists who were living in the United States in the 1990s, observing European monetary integration from an American per-

4. American economists have described the single currency in similar terms, for example "a remarkable and unprecedented event in economic and political history" (Feldstein 2000a), "an economic and political phenomenon" (Eichengreen 1994) and "the grand project of Europe" (Krugman 2000).

5. Almost every "birthday" for the euro has inspired evaluations of its lifetime accomplishments. See among others European Economy (2008) and Mongelli and Wyplosz (2008) for surveys of the euro on its tenth birthday.

spective. We include a few foreign-born economists who have spent their careers mainly in the United States, but we exclude U.S. economists working with international organisations, such as the International Monetary Fund. The constraints that shape our research possibility frontier induced us to exclude European economists, whether working in Europe or in the United States.⁶

Our research is based on an extensive search of the literature. With regard to Federal Reserve economists, we have tried to cover all Federal Reserve banks, their publications and associated conferences. For academic economists, we have searched established academic journals, conference proceedings, working paper series and personal webpages. Of course, we are aware that we have not found all publications on the issues we deal with. Still, we believe we cover all major contributions and thus are able to summarize the main issues of debate in a representative way.

Although the EMU project attracted considerable interest in the United States, U.S. economists continued to regard European monetary integration as a minor field of research. A few economists dominated the area, and most of these had their origins in international economics and finance. Some, like Barry Eichengreen (University of California-Berkeley), Martin Feldstein (Harvard), Jeffrey Frankel (Harvard) and Peter Kenen (Princeton), followed and commented on EMU throughout the 1990s.

During the entire period under consideration, most of the discussion in the United States was driven by developments in Europe. We divide the period 1989-2002 into two phases.

The first phase starts with the publication of the Delors Report and ends with the Madrid Summit of December 1995, which set the starting date of January 1999 as the launch of the euro and for irrevocably fixing the exchange rates of the currencies of the initial member states seeking to introduce the euro. At this summit, the single currency was given its new name—the “euro” (replacing the European Currency Unit or the ECU). Soon after the Madrid Summit the character of the debate in the United States changed, as much of the uncertainty concerning the single currency receded.

The second phase runs from the aftermath of the Madrid Summit until January 2002, when euro notes and coins entered circulation, replacing national currencies in euro area countries. Table 1 summarizes the major political decisions from 1989-2002 leading to the creation of the euro.

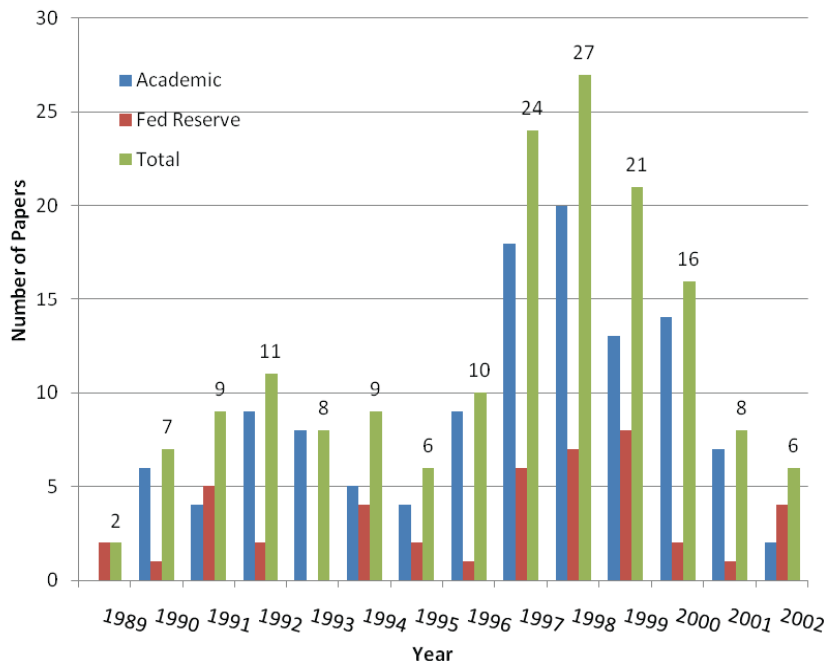
6. For a discussion of the vast literature on the strength and weakness of the euro project, including European contributions, see among others Jonung (2002).

Table 1: Major Steps Toward the Euro, 1989-2002

February 1986	Signing of the Single European Act, advancing economic and political integration within the European Community.
April 1989	The Delors Report calls for Economic and Monetary Union (EMU) leading to a single European currency through three stages.
June 1989	The Madrid Summit of the European Council agrees that Stage 1 of EMU will start July 1, 1990. Stage 1 includes completing the internal market and removing all obstacles to financial integration.
October 1990	The Rome Summit of the European Council agrees that Stage 2 of EMU will begin January 1, 1994.
December 1990	The Dublin Summit of the European Council marks the beginning of intergovernmental conferences on EMU and political union.
February 1992	Signing of the Maastricht Treaty to establish the European Union, the successor to the European Community.
June 1992	Danish voters narrowly reject the Maastricht Treaty.
September 1992	Currency crises force Britain and Italy to abandon the Exchange Rate Mechanism (ERM).
July 1993	Member states agree to widen the “narrow” band in the ERM from 2.25% to 15% around the central rates.
January 1994	Stage 2 of EMU starts. The European Monetary Institute comes into operation and begins the transition from co-ordination of national monetary policies to a common monetary policy. Economic convergence is strengthened through adherence to “convergence criteria” set out in the Maastricht Treaty.
May 1995	The European Commission adopts a Green Paper “On the Practical Arrangements for the Introduction of the Single Currency.” (A green paper is a document intended to stimulate discussion and start a process of consultation).
December 1995	The Madrid Summit of the European Council reaffirms January 1, 1999 as the date for the irrevocable locking of exchange rates, thus for the introduction of the euro. The “euro” is officially adopted as the name for the new single currency.
May 1998	Special meeting of the European Council decides that 11 member states satisfy the conditions for adopting the single currency.
June 1998	The European Central Bank and the Eurosystem are set up.
January 1999	Stage 3 of EMU begins. The exchange rates of the 11 initial participating nations are irrevocably fixed and the euro begins to trade on financial markets.
January 2001	Greece adopts the euro.
January 2002	Euro notes and coins enter into circulation in all participating member states.

Our conclusions are based on about 170 publications—more than 130 by academic economists and about 40 by economists working for the Federal Reserve System. As Figure 1 demonstrates, there are two peaks of publications about the single currency: the first around 1992, in connection with the Maastricht Treaty and the currency crises of the time, and the second around 1998 during the run-up to the introduction of the euro in January 1999.

Figure 1: Frequency of Publications on the EMU, 1989-2002



To conclude this introduction, the title of our paper comes from the late Rudiger Dornbusch's (2001a) classification of U.S. commentators on the euro as falling into three camps: "It can't happen"; "It's a bad idea"; and "It can't last." We find this a catching taxonomy although—as seen from our study—Dornbusch's sorting does not give full justice to the spectrum of opinions expressed by U.S. economists on the EMU.

Laying the Foundations of the Single Currency, 1989-1996

As stated above, the views and comments of U.S. economists were driven by the process of monetary unification in Europe. The Single European Act, signed in 1986, marked the biggest advance in European economic integration in a generation. The act aimed at completing the European Community's internal market by December 31, 1992 by removing all barriers to the free movement of capital, labor, goods and services among member states. This decision represented an important step toward monetary unification because it involved the end of exchange controls. The Delors Report of 1989 recommended Economic and Monetary Union. The Madrid Summit of the European Council in 1989 agreed to begin Stage 1 of EMU on July 1, 1990.

The Maastricht Treaty, signed in February 1992, laid down "convergence criteria" for the transition to monetary union. The criteria were based on the rate of inflation, long-term interest rates, membership in the Exchange Rate Mechanism (ERM) of the European Monetary System (EMS) for at least two years before entry into the monetary union, the ratio of the government budget deficit to GDP, and the ratio of government debt to GDP.⁷ The ERM had margins of 2.25 percent above or below a central rate for most member currencies, with exceptional wider margins of 6 percent for a few others. The Maastricht Treaty aimed for a gradual convergence of nominal prices, interest rates, and exchange rates among the future members of the monetary union.

The Maastricht Treaty was facilitated by the demise of the Soviet Union, German reunification and growing nominal exchange rate stability within Western Europe. These events contributed to a unique window of opportunity to move towards a single currency.⁸

Danish voters narrowly rejected the Maastricht Treaty in a referendum in June 1992, out of concern that the treaty would impose certain EU-wide rules that Danes did not want. The referendum heightened concern that voters did not want

7. The convergence criteria stated that (1) annual inflation of a member state must not exceed by more than 1.5 percentage points the average inflation rate of the three lowest-inflation member states; (2) the nominal long-term interest rate on government bonds of a member state must not exceed by more than 2 percentage points the average nominal long-term interest rate of the three best-performing states; (3) the budget deficit must not exceed 3 percent of GDP, and net government debt must not exceed 60 percent of GDP; and (4) the exchange rate of the member state must have been held within the Exchange Rate Mechanism of the European Monetary System for two years without serious pressure.

8. For accounts of these developments, see for example Gros and Thygesen (1998) and Maes (2007).

a closer union and contributed to a wave of speculative attacks on currency pegs in Europe, known as the ERM crisis.⁹ Table 2 summarizes this set of events.

Table 2: The Crisis in the European Monetary System, 1991-1993

November 14, 1991	Finland, which had maintained a peg to the European Currency Unit (ECU), devalues the markka by 12% due to the collapse of its Soviet trade and a domestic banking crisis.
June 2, 1992	Danish voters narrowly reject the Maastricht Treaty.
August 26, 1992	The pound sterling falls to its Exchange Rate Mechanism (ERM) lower limit.
September 8, 1992	Finland severs the markka's ECU link.
September 13, 1992	Italy devalues the lira by 7% against other ERM currencies.
September 16, 1992	Britain suspends ERM membership. Italy suspends foreign exchange market interventions and allows the lira to float. Spain devalues the peseta by 5%.
September 20, 1992	French voters narrowly approve the Maastricht Treaty.
November 19, 1992	Sweden abandons its ECU peg.
December 10, 1992	Norway abandons its unilateral ECU peg.
January 30, 1993	Ireland devalues the punt by 10% within the ERM.
May 14, 1993	Spain devalues the peseta by 8%; Portugal devalues the escudo by 6.5%.
July 30, 1993	European governments opt to widen the ERM's "narrow band" from 2.25% to 15%.

Source: Eichengreen (1994, 96-101).

Widespread exchange rate speculation and currency crises lasted into the summer of 1993. European leaders agreed to widen the "narrow" ERM band to 15 percent above or below the central rates, so that currencies would test the edges of the band less often. In May 1993, Danish voters approved a slightly modified version of the Maastricht Treaty, and the treaty entered into force on November 1, 1993.

Many observers viewed the ERM crisis as undermining the plans for a single currency. However, the political commitment to monetary union remained in force. The process continued according to the initial plan. The 1995 Madrid Summit of the European Council decided on the final timetable for the introduction of the single currency, now officially called the euro, and set the start of Stage 3 of EMU for January 1, 1999. On that date, as planned, the exchange

9. Ratification of the Maastricht Treaty was also delayed by a legal challenge mounted in the German constitutional court (the Brunner case).

rates of the currencies of the initial members of the monetary union were irrevocably locked together. Three years later, again as planned, euro notes and coins were put into circulation in all participating member states.

We first summarize work on European monetary integration by Federal Reserve economists, and then work by U.S. academic economists from 1989-1996 and afterwards from 1996-2002.

Views of Federal Reserve Economists, 1989-1996

The events summarized in Tables 1 and 2 had strong impacts on Federal Reserve economists. Their discussion covered two broad areas: the move toward a single market and monetary union and, after the ratification of the Maastricht Treaty, the likelihood of the single currency actually being established, which Patricia Pollard (1995) expressed as “EMU: Will It fly?” Table 3 summarizes the views of Federal Reserve economists. In what follows, we focus on important or representative writings by Federal Reserve and academic economists, rather than covering every piece of writing listed in the tables or the references.

The move toward a single market and a single currency. Federal Reserve economists provided a number of factual accounts of the march towards the single market and the single currency, primarily focusing on institutional details. Their aim was to describe what was going on in Europe to an American audience, sometimes considering the impact of European economic integration on the U.S. economy and on U.S. firms. Economic analysis in their writings was generally limited.

Janice Boucher (1991) argued that the establishment of the internal market by December 1992 and of a European monetary union were complementary. A common currency would benefit the common market. She considered monetary unification to be a process distinct from the single market. Her discussion was based on a straightforward cost-benefit calculus, which focused on potential benefits. Similarly, Linda Hunter (1991) examined the effects of the elimination of regulatory barriers in Europe and the implications of this for the United States. Overall, she concluded that the internal market would benefit European consumers and U.S. firms operating in Europe.¹⁰

During this period, Federal Reserve economists generally regarded the relationship between the single market and monetary unification as positive. Lee Hoskins (1989), Michael Chriszt (1991, 1992) and Reuven Glick (1991) all concluded that the completion of the internal market and the move towards EMU

10. She quoted the findings of Emerson et al. (1988) that the completion of the single market would result in a decrease in imports from outside Europe of 7.9-10.3 percent. See also Rolnick and Weber (1990) for a broader, historically based analysis of the rationale for fixed exchange rates.

would confer significant economic benefits on EU countries in the long run. Glick (1991) highlighted Europe's lack of a federal system of taxation as a problem, as factor mobility in Europe was low.¹¹

The Maastricht Treaty laid the foundation for a discussion of the future institutional organization of the EMU. Usually, this discourse reported on the different steps towards monetary union. Paula Hildebrandt (1991) identified the possibility of a two-speed approach to EMU being applied because of differences across countries. Adopting a political economy approach, Carl Walsh (1992) was skeptical of the ability of the future European Central Bank to operate as a wholly independent monetary authority. After inspecting the historical record of monetary unions, Robert Graboyles (1990) concluded with regard to EMU that "A successful monetary union requires that the countries involved gain from the union agreement and it requires institutions which enforce the agreement once it is reached"—a rather general conclusion, lacking specific recommendations on how EMU should be organized.

EMU: Will it fly? As the planning for the single currency continued after the ERM crisis in 1992-93, Federal Reserve economists turned their attention to the likelihood of establishing the single currency. Gradually they acknowledged that a European single currency would also have implications for the dollar and the global monetary system.

Patricia Pollard (1995) evaluated the convergence criteria set out in the Maastricht Treaty. As only Germany and Luxembourg satisfied all the criteria in 1994, she considered the prospects of EMU becoming fully operational before the end of the 1990s to be remote: "based on the five convergence criteria, it is almost certain that a majority of the EU countries will not be ready for monetary union when the inter-governmental conference is held in 1996." The introduction of the single currency in 1997 was impossible to achieve. The most likely scenario was that EMU would be postponed by at least two years. She concluded that unless the convergence criteria were interpreted more flexibly, the entire EMU project would be significantly delayed.¹²

Even after the Madrid Summit in December 1995, Michel Aglietta and Merih Uctum (1996) considered a multispeed transition to monetary union as an option; they held that such a transition would involve a small group of countries forming the initial core of the monetary union, with other countries joining over

11. Glick (1991, 2) stated that "factor mobility is now and is likely to remain much lower than in the U.S. because of Europe's greater social, linguistic and cultural diversity."

12. On this account, the U.S. debate likely mirrored the discussion in Europe about delaying the introduction of the single currency.

time. Sean Craig (1994) developed a model supporting the idea of a multi-speed transition to EMU.

The implications for the global position of the dollar as a result of the introduction of single European currency were discussed at this early stage by Karen Johnson (1994), Michael Leahy (1994) and Hali Edison and Linda Kole (1994). They held that the single currency would not present a challenge to the dollar in the “foreseeable” future. Similarly, the earlier work of Gary Schinasi (1989) concluded that a single European currency of whatever kind could only compete with the dollar for reserve currency status if crucial issues were resolved.¹³

Overall, Federal Reserve economists concentrated on describing the process of economic and monetary integration in Europe, typically in briefs a few pages long. They maintained a positive attitude to EMU and the single currency, even though they felt that a European monetary union was likely to be delayed.¹⁴

Table 3: Federal Reserve Economists on EMU

1989-1996		1996-2002			
Topics	Authors	Topics	Authors	Topics	Authors
1992 and the move towards monetary union	Hoskins (1989)	Architecture of the ESCB	Little (1998)	Impact of the euro on the dollar	Gould and Signalla (1997)
	Graboyes (1990)		Bertaut and Iyigun (1999)		McDonough (1997)
	Hunter (1991)		Goodfriend (1999)		Volcker (1997)
	Boucher (1991)		Wrase (1999)		Marion (1998)
	Hildebrandt (1991)		Wynne (1999a-b)		Summers (1997)
	Glick (1991)		Bertaut (2002)		Zaretsky (1998)
Walsh (1992)	Meade and Sheets (2002)	Guyenn (1998)			
Chriszt (1991, 1992)		Meyer (1999)			
EMU: Will it fly? (likelihood of a single currency)	Schinasi (1989) Craig (1994) Leahy (1994) Johnson (1994) Edison and Kole (1994) Pollard (1995) Estrella and Mishkin (1995) Aglietta and Uctum (1996)	Costs and benefits of EMU	Spiegel (1997) Jordon (1997) Eudey (1998) Klein (1998) Carlino (1998) Whitt (1997) Stevens (1999) Gramlich and Wood (2000)		Wynne (2000, 2002) Pollard (2001) Dwyer and Lothian (2002)

13. Schinasi (1989) discussed the determinants of the demand of and supply for the potential reserve currency, the predictability of such determinants, and the implications of a unified European monetary policy for U.S. monetary policy.

14. At an early stage, Estrella and Mishkin (1995) discussed monetary policy issues facing the European Central Bank, comparing it with the Federal Reserve.

Views of U.S. Academic Economists, 1989-1996

U.S. academic economists focused on weaknesses and problems in the monetary integration process, usually in long papers involving models and econometric tests. They were strongly inspired by the theory of optimum currency areas developed by Robert Mundell (1961). They expended great effort to bring the theory to bear on the feasibility and desirability of a single currency, and attempted to measure how close EU countries, or a subset of them, were to an optimal monetary union in the sense of meeting the various criteria of the theory.

U.S. academic debate in this period dealt with four main, often overlapping issues: the Maastricht Treaty; the theory of optimum currency areas; fiscal federalism and other lessons from the U.S. fiscal and monetary experience; and the political economy of EMU.

The Maastricht Treaty. The Maastricht Treaty inspired much discussion. A key component of the debate in the early 1990s concerned the variable-speed approach to EMU, reflecting the view that if EMU was going to happen, then the most likely viable strategy to achieve monetary integration was to allow EU countries into the monetary union at different times. Rudiger Dornbusch (1990), Peter Kenen (1992), Tamim Bayoumi and Barry Eichengreen (1993) and John Letiche (1992), among others, concluded that a multispeed approach was to be expected, albeit with slightly differing combinations of countries. Letiche (1992) concluded that the most likely scenario would be the establishment of a single currency based on two or three country groups according to their abilities to fulfil the convergence criteria, with each group implementing a different timetable for entry into the monetary union.¹⁵

Many academic economists questioned the economic rationale behind the convergence criteria of the Maastricht Treaty.¹⁶ Kenen (1992) was critical of the convergence criterion for exchange rate stability, fearing that it might cause some countries to devalue prior to entering the monetary union. (In fact, no such devaluations occurred.) Another source of controversy was the fiscal convergence criteria and the Maastricht Treaty provisions for policy coordination through surveillance over national policies rather than collective, EU-wide policy formulation.¹⁷

15. See among others Giovannini, Cooper and Hall (1990), Arndt and Willet (1991) and Eichengreen (1993) for broad examinations of the prospects for EMU.

16. See for example Frankel (1992) and Froot and Rogoff (1991).

17. See Kenen (1992) for an overview of the fiscal policy debate and Hutchison and Kletzer (1995) on the use of fiscal convergence criteria.

Evaluating the provision of the Maastricht Treaty designed to discourage excessive budget deficits, Jeffrey Frankel (1993, 6) suggested that “EMU membership, even if not intrinsically connected to fiscal deficits, might be intended as a reward or an incentive for good fiscal behavior.” He viewed the fiscal provisions of the Maastricht Treaty as a “test of will” designed to allow EU countries to express how strongly they wanted to become members of the EMU.

Denmark’s rejection of the Maastricht Treaty in June 1992 and the ERM crisis in 1992-93 contributed to a pessimistic view of the Maastricht timetable.¹⁸ William Branson (1993) and Rudiger Dornbusch (1993) viewed the crisis as the outcome of incomplete harmonization of national economic policies, while Barry Eichengreen and his European coauthor Charles Wyplosz (1993) analyzed it as illustrating the vulnerability of pegged exchange rates to self-fulfilling speculative attacks.

Eichengreen (1992b), while acknowledging the gains from EMU, suggested a set of modifications to the treaty to ensure that the benefits of monetary union would outweigh the costs. Eichengreen (1994) stressed that the failure of the Maastricht Treaty to include any provisions regarding an EU-wide federal fiscal system posed serious problems. Eichengreen and Jürgen von Hagen (1996) challenged the view that borrowing restrictions were an appropriate means for preventing member states from borrowing too much.¹⁹

Considering scenarios for EMU after the ERM crisis, Eichengreen and Jeffrey Frieden (1994) held that an EMU embracing all twelve EU member states by 1999 was unlikely. Eichengreen (1993) further viewed the ERM crisis as highlighting the need to accelerate the schedule set out in the Maastricht Treaty for movement to full monetary union. To Eichengreen and Frieden, the most likely scenario would be the establishment of a “mini-EMU” outside the scope of the Maastricht Treaty, comprising France, Germany and some of their smaller northern European neighbors. They acknowledged the perilous political viability of such a scenario.²⁰

The theory of optimum currency areas. Most of the research on the single currency was inspired by the theory of optimum currency areas developed by Robert Mundell and other economists in the 1960s and 1970s.²¹ The original optimum

18. See Meltzer (1990) and Folkerts-Landau and Garber (1992) for a pre-ERM crisis assessment of the EMS and the EMU project, and Eichengreen (2000b), Kenen (1995) and Wachtel (1996) on the Maastricht Treaty after the ERM crisis.

19. Hutchison and Kletzer (1995) argued that economic efficiency considerations would lead to fiscal federalism under EMU. See also Wildasin (1990) and Frankel (1993).

20. Salvatore (1996) believed EMU by the end of the 1990s was possible, but far from certain, due to the overarching danger of asymmetric economic shocks and associated political problems.

21. Mundell (1961), McKinnon (1963) and Kenen (1969) contributed the key building blocks in this literature.

currency area approach looked at two regions, or countries, facing the choice between a permanently fixed exchange rate (a currency union or a monetary union) and a fully flexible exchange rate. The choice presents itself as a trade-off between the gains from increased efficiency in transactions resulting from the use of a single currency and the loss of monetary policy independence through surrender of the local currency. A cost-benefit calculus determines the preferred exchange rate regime.

The optimum currency area paradigm was used to examine the extent to which European countries were good candidates for monetary union based on trade openness, factor mobility, incidence of asymmetric shocks, and other criteria. A study by Tamim Bayoumi and Barry Eichengreen (1993) developing the approach had a large impact on the debate, inspiring much work. It was also used as a framework for comparing the European economy with the U.S. economy, taken as a benchmark of a successfully functioning monetary union.²²

Eichengreen (1991) found evidence that real exchange rate variability was three to four times higher within the EU than within the United States. He also detected a greater correlation of shocks in North America than in Europe. Using estimates from time series models of regional unemployment, Eichengreen (1990a and 1991) established that labor mobility was greater within the United States than in Europe. He interpreted these results as indications that Europe was further from being an optimum currency area than the United States. Other studies based on the optimum currency area framework generally reached similar conclusions.²³ Table 4 summarizes the views of academic economists.

22. In the introduction to his collection of studies on European monetary unification, Eichengreen (1997, 1) stressed that optimum currency area theory served as the “organizing framework” for his analysis. The same holds for almost all U.S. economists who estimated the costs and benefits of the single currency in the 1990s.

23. See among others Bayoumi and Masson (1995), Sala-i-Martin and Sachs (1991), Eichengreen (1990a, 1991, 1992b), and Bayoumi and Eichengreen (1993).

Table 4: U.S. Academic Economists on EMU

1989-1996		1996-2002	
Topics	Authors	Topics	Authors
Maastricht Treaty (including EMS and ESCB)	Wildasin (1990) Giovanni, Cooper and Hall (1990) Dornbusch (1990, 1993) Meltzer (1990) Arndt and Willet (1991) Froot and Rogoff (1991) Frankel (1992, 1993) Branson (1993) Folkerts-Landau and Graber (1992) Letiche (1992) Kenen (1992, 1995) Bayoumi and Eichengreen (1993) Eichengreen and Wyplosz (1993) Eichengreen and Frieden (1994) Eichengreen (1992b, 1993, 1994) Hutchison and Kletzer (1995) Eichengreen and Von Hagen (1996) Wachtel (1996) Salvatore (1996)	Leadership and political issues in the European Union	Feldstein (1997a-b, 1998, 1999, 2000a-b, 2001) Feldstein and Feldstein (1998) Eichengreen (1996a-b) Eichengreen and Ghironi (1996) Eichengreen and Von Hagen (1996) Bayoumi et al. (1997) Makin (1997) Obstfeld (1997, 1998, 1999) Kenen (1998a-b) Frieden (1998) Krugman (1998a) Calomiris (1998) Willet (1999, 2000) Schwartz (2001)
Optimum currency area theory	Sala i-Martin and Sachs (1991) Eichengreen (1990a, 1991, 1992b) Bayoumi and Masson (1995) Bayoumi and Eichengreen (1993)	European Union as a suboptimal currency area	Eichengreen (1996a-b, 1997) Frankel and Rose (1996, 1997, 2000) Bayoumi et al. (1997) Bayoumi and Eichengreen (1997) Dornbusch (1997) McKinnon (1997) Salvatore (1997, 1998) Kenen (1998a) Tobin (1998) Eichengreen and Wyplosz (1998) Eichengreen and Frieden (1998) Frieden (1998) Salvatore and Fink (1999)
Fiscal federalism and lessons from the United States	Sala i-Martin and Sachs (1991) Eichengreen (1990b, 1992a) Inman and Rubinfeld (1992) Bayoumi and Masson (1995) Eichengreen and Von Hagen (1996) Frankel (1993) McKinnon (1994) Krugman (1993)		
Political economy of EMU	Feldstein (1992a-b) Schwartz (1993) Gabel (1994) Cohen (1994) Eichengreen and Frieden (1994) McKinnon (1995) Dornbusch (1996a-b)	The euro and the dollar	Eichengreen (1998 a-d, 2000a) Eichengreen and Ghironi (1996) Mundell (1997, 1998, 1999) Bergsten (1997a-b, 1999) Prati and Schinasi (1997) Dornbusch et al. (1997) Masson and Turtelboom (1997) Mundell (1997, 1998, 1999) Mussa (1997, 2000) Feldstein (2000a) Scott (1998) Krugman (1998a-b, 1999a-b, 2000) Devereux and Engel (1999) Devereux et al. (1999) Beddoes (1999) Ferson and Harvey (1999) Frankel (2000a-b) Selgin (2000) Salvatore (2000) Cohen (1998, 1999, 2000) Dornbusch (2000, 2001b-c) McKinnon (2001a-b, 2002) Kenen (2002)

Fiscal federalism and lessons from the U.S. experience. Many economists focused on the ability of the U.S. system of fiscal federal redistribution to offset regionally specific shocks and on the absence of such a mechanism within the European Union. Xavier Sala-i-Martin and Jeffrey Sachs (1991) concluded from U.S. data that every \$1 reduction in a region's per capita personal income decreased its federal taxes 34 cents and increased its federal transfers 6 cents. Thus, within the United States, the overall change in federal fiscal receipts and payments offset 40 cents of a \$1 decline in personal income.

Similarly, Tamim Bayoumi and Paul Masson (1995) concluded that the U.S. federal fiscal structure offset 28 cents of every \$1 decrease in regional income. Robert Inman and Daniel Rubinfeld (1992), comparing EMU with the United States, found that "with a centralised monetary policy, a substitute fiscal policy to ease the burdens of state specific economic shocks is needed." These studies stressed that fiscal transfers, whatever the precise figure involved, partially offset regional asymmetric shocks in the United States.²⁴

Eichengreen (1990b), in a detailed analysis of the potential lessons for EMU from the U.S. experience, concluded that monetary integration would limit fiscal independence. He argued that the extent of fiscal transfers in the European Union would have to significantly exceed the extent of fiscal transfers in the United States to be successful, as regional shocks were likely to be significantly greater in EMU countries than in the states of the United States.

Ronald McKinnon (1994) considered the U.S. experience by asking the question "A common monetary standard or a common currency for Europe?" He answered that "because it respects the fiscal need to keep national central banks and national currencies in place in highly indebted European countries, a common monetary standard is preferable to a common currency." He concluded that a monetary union was not the preferred option for Europe.

To sum up, U.S. academic economists suggested that in light of the historical experience of U.S. monetary and fiscal union, Europe would face major adjustment problems under a single currency.²⁵

The political economy of EMU. U.S. academic discussion identified at an early stage the inseparability of politics and economics in European monetary unification. For example, Eichengreen and Frieden (1994) stressed "that the decision to create a single currency and central bank is not made by a beneficent

24. Later work by Bent Sorensen and his collaborators emphasized risk-sharing and income-smoothing within the United States via financial markets, an effect not considered in early optimum currency area literature. This mechanism can be regarded as a substitute for fiscal transfers. See for example Sorensen and Yosha (1998).

25. Eichengreen (1992a) and Krugman (1993) are other examples of the use of the U.S. historical record to discuss the future of the EMU.

social planner weighing the cost and benefits to the participating nations. Rather, it is the outcome of a political process of treaty negotiation, parliamentary ratification and popular referenda.”²⁶

This perception of European monetary integration as an inherently political process inspired a move away from a purely economic cost-benefit calculus based on the optimum currency area approach towards consideration of political security and international relationships. Uncertainty and fear about the political effects of European integration led many to question the desirability of EMU. Rudiger Dornbusch (1996b) held that “although approving of the evolution of a European common market, the U.S. is fearful about EMU. The first was seen as contributing to prosperity and thus political stability. The second is seen as carrying a high risk of contributing to a recession and thus political trouble,” although Dornbusch (1996a) did recognize the potential benefits to the United States if EMU generated additional economic growth in member states.

Martin Feldstein (1992a-b) advanced a pessimistic scenario for EMU, and stayed with it throughout the period treated by this paper. He argued that the adverse political effects of a European monetary union would far outweigh any economic net benefits of the single currency. Stressing security aspects, he questioned the proposition that Germany would be “contained” in a broader European government. He believed instead that it was highly unlikely that “Britain, France and the other countries of Europe will want to form a continental government in which Germany has the largest population and the strongest economy as a way of limiting Germany’s future power or the military exercise of that power.” He argued that it was highly improbable that Europe would begin the 21st century with a successful monetary union in place.

Anna Schwartz (1993) expressed a similar view. When asked if she thought EMU would take place, she replied, “[N]othing that has happened in this past year suggests that the great plans for the implementation of a monetary union are likely to be achieved. I just don’t see them meeting the basic conditions for its success. I think if you saw political union happening, then you might see monetary union.”

Benjamin Cohen (1994) considered the historical role of politics in the creation of monetary unions. He identified the two crucial political characteristics common to sustainable currency unions in his sample: the presence of a dominant state “willing and able to use its influence to keep a currency union functioning effectively” and the presence “of a broader constellation of related ties and commitments sufficient to make the loss of monetary autonomy, whatever the magnitude of prospective adjustment costs, seem basically acceptable to each

26. Gabel (1994) and McKinnon (1995) made similar arguments.

partner.” His conclusion was that the sustainability of the single currency depended on the political will of the EU member states.

The debate on the political economy of EMU during this period solidified two sets of views. One group of economists, including Dornbusch and Feldstein, was convinced that the political price necessary for EMU would prove too high to establish a single currency. A second group looked upon EMU as another step in European integration.²⁷ Neither group devoted much thought to the likelihood of establishing a single currency in Europe without further political integration.²⁸

The Road to the Euro, 1996-2002

At the Madrid Summit of December 1995, the European Council decided on the final timetable for the launching of the euro. In May 1998, the European Council selected the countries that would adopt the euro in January 1999—the third and final stage of EMU. With these steps, the plans for the new currency were firmly settled.

Views of Federal Reserve Economists, 1996-2002

The Madrid Summit’s official adoption of the date for the introduction of the euro created a shift in the analysis by Federal Reserve economists.²⁹ From this point on, the implementation as planned was taken as certain or very likely. Discussion by Federal Reserve economists in the second half of the 1990s centred on the design of the European System of Central Banks; the costs and benefits of EMU; and the impact of the euro on the position of the dollar and its implications for European-American relations.

The architecture of the European System of Central Banks. The European System of Central Banks (ESCB) comprises the European Central Bank (ECB) and the national central banks of all EU member countries, whether they use the euro or not. In countries that have adopted the euro, the national central banks no longer issue currency, but they still perform other tasks, such as financial supervision, economic forecasting, and operation of part of the payments system.

27. Eichengreen and Frieden (1994) is an example of this view.

28. Cooper in Giovannini, Cooper and Hall (1990) is a notable exception. Conversely, Dornbusch (1996b) summed up the whole EMU project as “Euro fantasies.”

29. See for example Whitt (1997, 27) stating “as long as the political leaders in the two largest countries in the EU, Germany and France, are committed to going ahead, the prospects for at least a mini-union beginning in 1999 seem favorable.” See also Wynne (1999b).

Much discussion of the design of the ESCB was based on comparisons with the Federal Reserve System. Mark Wynne (1999a) highlighted differences between the European and the U.S. central banking systems with regard to the policy mandate, the concentration of power and the decision making structures. The ECB's decision-making structure is diffuse when compared to the current Federal Reserve System: the Executive Board is in a permanent minority on the governing council, and all national central bank governors have a vote in all policy decisions of the Governing Council. The power structures of the Federal Reserve is more concentrated: the Board of Governors has a permanent majority on the Federal Open Market Committee, while regional Federal Reserve Banks rotate membership. The Board of Governors also has significant power to supervise the actions of regional reserve banks and their appointments.³⁰ In contrast, Article 11 of the ESCB Statute grants the ECB Governing Council control over the Executive Board.

The legislation setting forth the Federal Reserve's policy mandate lists multiple, potentially conflicting objectives.³¹ In contrast, Article 105 of the Maastricht Treaty states that "the primary objective of the ESCB shall be to maintain price stability." Wynne (1999a) argued that the ECB's clear policy mandate would aid its long-term credibility, but that the broad diffusion of power might prevent it from resolving future conflicts between national interests. Wynne (1999a), Marvin Goodfriend (1999) and Ellen Meade and Nathan Sheets (1999) all identified the ESCB as having a distribution of power equivalent to the Federal Reserve prior to the adoption of the Federal Reserve Acts of the 1930s.³² (Those acts gave more power to the Board of Governors, in response to the perceived failure of the previous structure to respond appropriately during the early years of the Great Depression.)

Whereas the ECB's primary objective is unitary, its method for implementing monetary policy is a "two-pillar" strategy that simultaneously focuses on price stability and on the money stock.³³ The strategy stimulated considerable debate, resulting in mixed conclusions. Carol Bertaut and Murat

30. The Federal Reserve Act, Section 4.20, gives the Board of Governors the authority to supervise the activities of the regional reserve banks, including appointing three of the nine directors of each regional reserve bank, one of whom the other directors select as their chairman.

31. The Federal Reserve Act, Section 2A.1, says, "The Board of Governors of the Federal Reserve System and the Federal Open Market Committee shall maintain long run growth of the monetary and credit aggregate commensurate with the country's long run potential to increase production, so as to promote effectively the goals of maximum employment, stable prices and moderate long term interest rates."

32. Meade and Sheets (1999, 66) concluded that "Europe may do well to heed the Fed's history. Much more decentralized in structure and operational responsibilities than the Fed, the ECSB must avoid any tendency to promote the national economic situation."

Iyigun (1999) held that “the ECB’s choice of a flexible approach to monetary policy making was pragmatic. The need for the ECB to be flexible in the short run makes its policy setting less transparent.” Wynne (1999a) cautioned, however, that the “adoption of a mixed strategy might seem to defeat the purpose of articulating a strategy in the first place.”

Marvin Goodfriend (1999) and Jeff Wrase (1999) found the ECB to be accountable and transparent. However, Jane Little (1998) contended that, although the ECB was required to come before the European Parliament, and notwithstanding the willingness of executive board members to answer to the Parliament on a quarterly basis, the ECB would still suffer from a significant accountability deficit, as no political body has the authority to abolish the ECB.

Ellen Meade and Nathan Sheets (2002) established that Federal Reserve policymakers did take regional unemployment into account when deciding monetary policy. Applying this result to the ECB, they stressed the possibility that central bankers might allow national considerations to influence euro area monetary policy. They concluded that regional biases of all policymakers ought to be considered in any debate on potential reforms of the ECB’s Governing Council.³⁴

There was unanimous agreement that the high degree of political independence the ECB enjoyed was conducive to long-term low inflation performance and long-run credibility.³⁵ Wynne (1999a) and Wrase (1999) alluded to the fact that both the members of the Executive Board (serving nonrenewable eight-year terms) and the Governors of National Central Banks (serving renewable five-year terms) were appointed for relatively long terms, thus strengthening central bank independence. However, some studies viewed the Maastricht Treaty’s ambiguity over exchange rate policy as having the potential to spark a conflict between exchange rate stability and price stability, threatening the ECB’s independence.³⁶

Costs and benefits of EMU. Discussion among Federal Reserve economists concerning the costs and benefits of European monetary union followed the lines

33. As outlined in an ECB press release of October 13, 1998, “A stability-orientated monetary policy strategy for the ESCB.” This strategy rests on two pillars: first, a prominent role for money—this is signaled by the announcement of a reference value for the growth of broad money supply; second, a broadly based assessment of the outlook for future price developments and the risks to price stability in the euro area. See also Bertaut (2002).

34. The Governing Council is the highest decision-making body of the ECB, comprised of the six members of the Executive Board and the governors of the national central banks of the euro area. Each member of the Governing Council has one vote in policy decisions. The key task of the Governing Council is to formulate the monetary policy of the euro area.

35. See for instance Little (1998), Goodfriend (1999), Wrase (1999) and Wynne (1999a).

36. Goodfriend (1999) and Wynne (1999a).

of the standard academic debate on the advantages of a fixed exchange rate. Ed Stevens (1999), for example, viewed the costs of membership in terms of surrendering a pegged rate as being more than offset in the long run by the elimination of transaction costs, by increased transparency of the price discovery process and the reduction of exchange rate uncertainty.³⁷

Gwen Eudey (1998) considered the potential dangers associated with a permanently fixed exchange rate regime, namely a monetary union. She acknowledged that the loss of an independent monetary policy to counter asymmetric shocks necessitated adjustment occurring “through changes in wages or through the movement of workers from one country to another.” The long-run success of the single currency depended on the degree to which prices and wages were flexible and on the ability of labor to move across national borders. She suggested that “member countries may find it necessary to institute international tax and redistribution policies through growth of the European Union’s budget to allow for regional differences in policy stimulus or restraint.”

Jerry Jordan (1997), president of the Federal Reserve Bank of Cleveland, covered the links between the monetary policy of the ECB and fiscal policy. He stated that the overall fiscal position of all euro area member states was likely to affect the credibility of the common currency. In his opinion, the ability of national fiscal authorities to maintain tight discipline would ultimately determine the success or failure of the single currency. The “separation of monetary policy from the conduct of fiscal policies will place stringent constraints on individual Member States.”³⁸

The impact of the euro on the dollar. In a speech on U.S. perspectives on EMU, William J. McDonough (1997), president of the Federal Reserve Bank of New York, stated that it “would be a mistake to think that the United States looks at this prospect with concern, as if the introduction of the euro could somehow compromise the ability of the United States to continue to trade and conduct financial transactions with the rest of the world.”³⁹ In his opinion, the euro would only have an impact on the dollar as the predominant means of exchange in international financial transactions in the long run: “it seems safe to assume that significant changes in the international role of the dollar and the functioning of the international monetary system would occur only gradually and surely in a manner

37. See also Klein (1998) and Whitt (1997).

38. See also Gramlich and Wood (2000) and Spiegel (1997) on the economic arguments for the Stability and Growth Pact. (The Stability and Growth Pact, adopted in 1997, enables the European Commission to monitor the government finances of EU member countries.) Carlino (1998) examined the impact of potential external shocks on EMU member states and concluded that the absence of a fiscal redistribution mechanism would be a key disadvantage of EMU.

39. See also Volcker (1997), Guynn (1998) and Meyer (1999).

that could be easily coped with.” This appears to have been the general view within the Federal Reserve System in the late 1990s.

Federal Reserve research on the dollar-euro relationship was largely based on reviews of the functions of an international reserve currency. Examining the first two years of the euro, Patricia Pollard (2001) noted little change in the role of the dollar as an exchange rate peg for third countries or as the globally preferred reserve currency. She concurred with McDonough’s view that the emergence of the euro as a truly international currency and companion for the dollar could only be achieved gradually. Pollard acknowledged that the position of the dollar as the leading international currency depended primarily upon the ability of the United States to avoid financial crises and to maintain strong economic performance. Both McDonough and Pollard concluded that the successful establishment of the euro on the world’s financial markets and the completion of EMU created many new benefits for U.S. firms in trade and finance.

David Gould and Fiona Signalla (1997) examined the consequences of the euro for the dollar as the global currency. They viewed the introduction of the euro as probably leading to a significant drop in the international holdings of dollars. Justin Marion (1998) identified a larger market and the removal of obstacles to trade freely within the EU’s borders as the future benefits of European monetary union to U.S. businesses. He believed that the dollar’s position as the preferred currency was unlikely to be supplanted in the short to medium term by the euro: “because the dollar has a strong history as a store of value and is so widely used and accepted, it is unlikely that it will be supplanted as the preferred reserve currency any time soon.” Adam Zaretsky (1998), as well as Gould and Signalla (1997), held that the impact of the euro on the world’s financial system remained highly uncertain and depended solely on the perception by investors of the success or failure of the European monetary union after the introduction of the single currency. Gerald Dwyer and James Lothian (2002) concluded that the replacement of the dollar by the euro is dependent on *inter alia* the stability of the European monetary institutions.

The published views of Federal Reserve economists on the EMU during this period were consistent with the official position of the U.S. Treasury and the White House, which held that the introduction of the euro would do little to alter the relative strength and position of the dollar in the short term.⁴⁰ Consecutive U.S. administrations welcomed a single currency within the European Union while acknowledging that “the euro is not likely to cause a sudden decline in the dollar’s use as an international currency in the near future, and any shift away from

40. See, for instance, the speech by Treasury Secretary Lawrence Summers (1997) and the report of the Council of Economic Advisers (1999, 290-305).

the dollar will be gradual.”⁴¹ The official position of the U.S. government was that the euro was a sign of the progress made by the European Union.

Views of U.S. Academic Economists, 1996-2002

Like the views of Federal Reserve economists, the opinions of academic economists were influenced by the plan for the single currency to commence in 1999. The scenario of “it can’t happen” disappeared from the debate, while the arguments “it’s a bad idea” and “it can’t last” remained. The debate centred on three distinct but related issues: politics versus economics in EMU; the euro area as a suboptimal currency area; and the euro as a challenge to the dollar.

Politics versus economics in EMU. As it became more certain that the single currency would be established, there was a hardening of the divide between economists positive or supportive towards EMU and those who were negative or even critical towards the single currency. Some economists, such as Martin Feldstein, argued consistently that EMU would prove an “economic liability”: to impose a single interest rate and fixed exchange rates on countries characterised by inflexible wages, low labor mobility and lack of centralised fiscal redistribution would achieve nothing except increasing the level of cyclical unemployment among the members of the single currency area.⁴²

Feldstein viewed EMU as an economic tool for political leaders in Europe to further their agenda for a federalist union, and as a first stage in the creation of a United States of Europe with a single foreign and military policy. He regarded such a construction as having a destabilising influence impact on Europe and on world peace. In his opinion, national political interests in France and Germany provided the driving force behind EMU: France saw EMU as a mechanism for gaining equality with Germany, while Germany saw it as deepening EU political and fiscal integration.⁴³

Considering the long-term consequences of the single currency, Feldstein (1997a) concluded that the inevitable contest for leadership between Germany and France would only exacerbate tensions within the EU. He believed that the

41. U.S. General Accounting Office (2000, 25-26). The Council of Economic Advisers (1999, 305) spoke of the euro in the following terms: “The United States salutes the formation of the European Monetary Union. The United States has much to gain from the success of this momentous project. Now more than ever, America is well served by having an integrated trading partner on the other side of the Atlantic.” See also Wynne (2000, 2002).

42. See Feldstein (1997a-b, 1998, 1999, 2000a-b, and 2001) and Feldstein and Feldstein (1998).

43. Feldstein (1997a) viewed other EU member states, such as Italy and Spain, as participating in EMU not for its questionable economic benefits, but due to fear of being excluded from deeper political union and fear of being discriminated against in other EU policy areas if they did not join EMU.

long-run sustainability of EMU depended on its contribution to long-term political security rather than on any economic success. In his opinion, disintegration in Europe and conflict with the United States should not be ruled out. In a similar vein, Charles Calomiris (1998) suggested that the collapse of EMU was likely, due to structural weaknesses of the EU economies, in particular the potential for future pension system insolvency and banking system weaknesses.

Jeffrey Frieden (1998) suggested that the rationale for joining the euro was overwhelmingly political. He identified three primary factors behind the desire of member states to join: fear of being left out of a central EU institution, fear of losing the support of the pan-European business community, and fear of the economic consequences of losing the benefit of many years of hard work to get into Europe's monetary club. In a related analysis, Eichengreen (1998b) argued that German fears over inflation would slow political integration and provide a more permissible application of the criteria of the Stability and Growth Pact, thereby sustaining the longer-term European integration process.

Similarly, Anna Schwartz (2001) viewed the decision to proceed with a monetary union prior to the creation of a more integrated political structure as reflecting a lack of consensus within EU member states with regard to a deeper political union—that is, whether to be a federal state or a community of nation states. Thomas Willet (2000) regarded EMU as a way to further the political integration that had begun in the 1950s. He viewed EMU as a political project driven by misdirected economic analysis, with limited economic benefits for potential members.⁴⁴

Maurice Obstfeld (1997), reviewing the costs and benefits of monetary union in Europe, concluded that although the broad membership of EMU made it highly vulnerable to asymmetric shocks, EMU might succeed economically. This would greatly enhance the process of European integration and generate social and political benefits in the future. In addition, he believed that economic success of the euro would drive political integration.⁴⁵

Barry Eichengreen (1996a) argued that “EMU will happen if policymakers are convinced that currency stability is the only way to solidify the single market and that monetary union is the only way to guarantee currency stability. It will happen if there exists a viable package in which the French get EMU and the

44. See also Willet (1999) on the weaknesses of the EMU project.

45. Obstfeld (1997) noted that “with European economic and monetary union finally underway, potential fault lines are apparent. EMU, it is often said, is at bottom about politics, not economics. Political change is, however, an ongoing, dynamic process; it is a mistake to think that the visions motivating today's European leaders will be enough to sustain EMU indefinitely.” See also Obstfeld (1998, 1999).

Germans get an increased foreign policy role in the context of an EU foreign policy.”⁴⁶

Peter Kenen (1998a) reasoned that U.S. attitudes towards EMU were strongly influenced by the words and actions of European officials involved in monetary integration. He held that “Americans tend to evaluate EMU in light of their own preconceptions. Because they repeatedly hear that EMU is a political project—a vehicle for promoting political integration—they conclude that there is no economic rationale for EMU. Helmut Kohl has made some extravagant claims for EMU—which he may truly believe—and they have inspired extravagant rejoinders on my side of the Atlantic.”

In December 1998, on the brink of the launch of the euro, Paul Krugman (1998a) summarized the state of opinion as follows: “for seven long years since the signing of the Maastricht Treaty started Europe on the road to that unified currency, critics have warned that the plan was an invitation to disaster. Indeed, the standard scenario for an EMU collapse has been discussed so many times that it sometimes seems to long term eurobuffs like myself as if it had already happened.” Such a pessimistic view was probably fostered by the propensity of U.S. economists to view the euro as a political project driven by murky motives and based on an insufficient institutional foundation.

The euro area as a suboptimal currency area. James Tobin (1998) summarized the factors underlying the skepticism of many U.S. economists towards EMU: the absence of an authority for centralized fiscal redistribution, sticky wages, and a monetary policy objective that took no account of employment, production or growth. His conclusion that the euro area was “much less equipped” than the U.S. monetary union to deal with potential interregional or wider asymmetric shocks mirrored the initial U.S. consensus that the euro area was a suboptimal currency area. Similarly, Dominick Salvatore (1997) concluded that due to limited labor mobility and inadequate fiscal redistribution, a major asymmetric shock would cause the euro area to dissolve.⁴⁷

Despite such criticisms, other researchers were shifting discussion of European monetary unification from whether the euro area fulfilled optimum currency area criteria to whether the theory of optimum currency areas in its standard form was really appropriate for assessing the costs and benefits of European monetary unification. Gradually they concluded that it was not appropriate.

46. For elaborations, see Eichengreen and Ghironi (1996), Bayoumi, Eichengreen and von Hagen (1997) and Eichengreen and von Hagen (1996). See also Kenen (1998b) and Makin (1997).

47. See also Frieden (1998), Salvatore (1998) and Salvatore and Fink (1999) as applications of the optimum currency area approach to European monetary integration.

Jeffrey Frankel and Andrew Rose (1996, 1997, 2000) developed the strongest objections to the standard use of the theory for assessing the future viability of the euro area. They argued that the optimum currency area criteria were endogenous. That is, once a country becomes a member of a monetary union, its economy adjusts to the new environment. Membership of a monetary union is likely to boost trade within the union and thus increase the correlation of the national business cycles, bringing it closer to fulfilling some of the optimum currency area criteria. The empirical work by Frankel and Rose gave strong support to this interpretation. Their conclusions cautioned against mechanically applying the optimum currency area approach to judge the suitability of a country for membership in a monetary union.

Tamim Bayoumi, Barry Eichengreen and Jürgen von Hagen (1997), reviewing the literature on EMU and optimum currency area theory, concluded that with “OCA theory, while providing a useful template for research and helping to structure the debate over EMU, it remains difficult to estimate the projects benefits and costs.” This conclusion supported the findings of Bayoumi and Eichengreen (1997) and Eichengreen (1996b) that the difficulty of making the theory of optimum currency areas operational limited its usefulness for evaluating EMU.⁴⁸ Rudiger Dornbusch (1997) highlighted that the concentration of debate on fiscal criteria becomes redundant once an independent central bank is created with a specific mandate. Conversely, Ronald McKinnon (1997) viewed EMU as the perfect opportunity to impose restrictions on member countries’ ability to overspend, thereby achieving fiscal retrenchment.

Peter Kenen (1998a) argued that basing the debate over EMU on the theory of optimum currency areas was misleading, because the optimum currency area approach concerned the choice between a floating and a fixed exchange rate regime, whereas the members of the European Union were faced with a choice between the pegged (adjustable) exchange rates of the European Monetary System and the euro. In his opinion, applying the optimum currency area criteria biased U.S. economists against EMU because they compared the single currency to a nonexistent ideal system of flexible exchange rates, not to the actual system of

48. Bayoumi and Eichengreen (1997) tried to operationalize optimum currency area theory by analyzing the determinants of exchange rate variability by relating it to asymmetric output disturbances, the dissimilarity of the composition of exports of different countries, the importance of bilateral trade linkages and relative economic size. Eichengreen (1996a), while stressing the usefulness of this approach for ranking candidates for EMU, admitted that it was impossible to say whether the costs and benefits dominate for an individual country or the group as a whole. See also Eichengreen and Wyplosz (1998) and Eichengreen and Frieden (1998). Kouparitsas (1999) provides the only Federal Reserve analysis we have found of the subject during this period.

pegged rates.⁴⁹ As a result, they misunderstood the economic costs and benefits of EMU.

Similarly, Jeffrey Frieden (1998) argued that the practical insights offered by the static theory of optimum currency areas were limited by the difficulty of measuring accurately the long-run dynamic effects of monetary unification and the welfare effects of a single currency.

To our knowledge, Milton Friedman wrote nothing about the euro, which itself suggests an undecided attitude on his part. In May 2000 he was interviewed by John B. Taylor, and his conversation shows a mix of doubt and hope, as well as some foresight. Here is the relevant segment of the interview:

Taylor: Let me ask a question about monetary issues that relates to the global economy. You have Europe's new single currency, and you have Bob Mundell arguing that we should have one world currency. You also have talk about dollarization in Argentina and a greater commitment to floating in Brazil. Where is this all going?

Friedman: From the scientific point of view, the Euro is the most interesting thing. I think it will be a miracle—well, a miracle is a little strong. I think it's highly unlikely that it's going to be a great success. It would be very desirable and I would like to see it a success from a policy point of view, but as an economist, I think there are real problems, arising in a small way now when you see the difference between Ireland and Italy. You need different monetary policies for those two countries, but you can't have it with a single currency. Yet they are independent countries; you are not going to have many Italians moving to Ireland or vice versa. So I do not share Bob Mundell's unlimited enthusiasm for the Euro. But it's going to be very interesting to see how it works. For example, I saw a study in which somebody tried to ask the question, "What is the effect of having a common currency on the volume of intercountry trade?" And the result was surprising. It was that having a common currency had a surprisingly large effect, about four times the effect of geographical proximity or of flexible exchange rates. Now that was just a small sample.

49. In a related context, Eichengreen (1998c) identified the ECB's potential reliance on repurchase agreements, uncertainty about future exchange rate relations between the euro and other EU member currencies, and unknown conversion rates for such currencies into the euro as representing key areas of active debate in 1998.

Taylor: And beware of multiple regressions!

Friedman: Right! At any rate, one thing that I could be leaving out in my evaluation of the dangers of the Euro is the effect of a common currency on the volume of trade between the countries. If it has a major effect on trade, it may enable trade to substitute for the mobility of people.

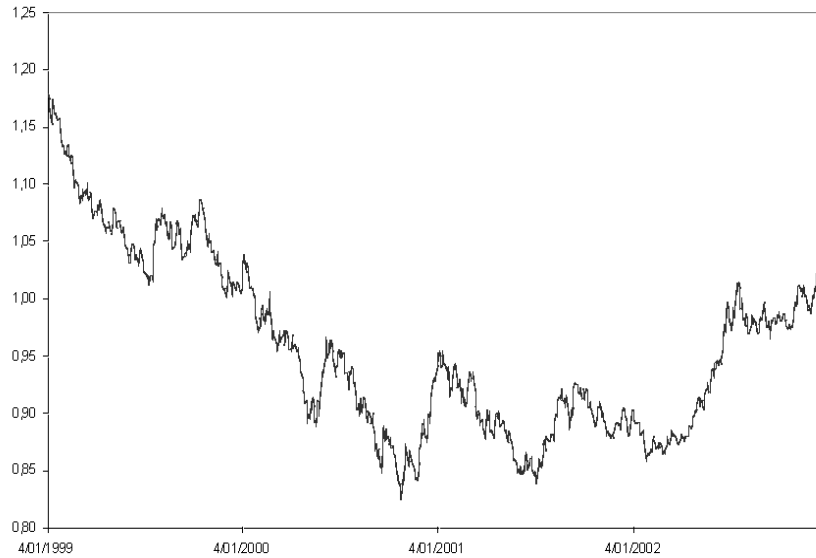
Taylor: Do you think that the depreciation of the Euro is bad sign [it was about \$0.90 at that time]?

Friedman: No, not for a second. At the moment the situation is very clear. The Euro is undervalued; the U.S. dollar is overvalued. As a result of the undervaluation of the Euro, the producing enterprises in Europe are doing very well, the consumers in Europe are suffering, the consumers in the United States are getting a good deal, and the opposite is true for the producers in the United States. And there's very little doubt that within the next few years that's going to come together. Relative to the dollar, the Euro will appreciate and the dollar will depreciate. (Friedman 2001, 128).

*The euro and the dollar: a struggle for dominance?*⁵⁰ The sharp fall in the value of the euro against the dollar in 1999-2001 (see Figure 2) triggered a vibrant debate about the euro and the dollar. Prior to the launching of the euro in January 1999, discussion had focused on the potential for a massive rebalancing of portfolios away from dollars and into euros. This forecast was premised on the arrival of a currency representing a zone of economic power as large as the United States and on the immediate potential of the euro to challenge the reserve currency status of the dollar. Fred Bergsten (1997b) argued that since the euro would create an integrated financial zone larger than the United States, the euro would quickly rival and even surpass the dollar as the international reserve currency of first choice.⁵¹

50. Title borrowed from Kenen (2002).

51. Bergsten (1997a, 1999), McKinnon (2001a-b), Mussa (1997, 2000) and Salvatore (2000) also considered this issue.

Figure 2: U.S. Dollars per Euro, 1999-2002

Source: Allied Irish Bank

Robert Mundell (1997, 1998, 1999) similarly predicted that the euro would rival the dollar as a global currency and that the euro-dollar exchange rate would become the most important in the global currency markets. Mundell (1999) forecast that by 2010 “world foreign exchange reserves will consist of \$1.2 trillion in dollars, \$1.2 trillion in euros and \$0.8 trillion in other currencies.” That meant that dollar reserves and euro reserves would be roughly of equal size. Today at Mundell’s forecast date, though, the dollar is still the leading reserve currency.

Placing EMU in a longer-term historical context, Eichengreen (1998a) stressed that should the euro persist in the long term, it had the potential to supplant the dollar as the global currency. Other economists were more cautious. George Selgin (2000) noted that if the ECB wanted the euro to be a global currency, low inflation policies would need to persist while the euro established itself as a worthy successor to the German mark.⁵² He concluded that “Should the euro fail to earn this status, however, the consequences will not be limited to higher European inflation. The dollar would once again reign unchallenged in the market for international currency.”⁵³

52. See also Prati and Schinasi (1997). Masson and Turtleboom (1997) concluded that the dollar would remain a dominant international currency in the absence of political and economic meltdown in the United States.

Offering a broader perspective of U.S. economic fortunes in the 21st century, Paul Krugman (2000) noted that “while the euro surely will rival the dollar as an international currency, the benefits for Europe will be modest.” This is consistent with Jeffrey Frankel (2000a) and earlier work by Krugman (1998a, 1999a), who considered it likely that the dollar would lose out gradually to the euro.

Both Barry Eichengreen (1998d) and Krugman (1998b) questioned the benefits to the United States of having the dollar as the global reserve currency over the past half century. In a broadly similar analysis, Benjamin Cohen (2000) argued that the key drivers of the success of the U.S. dollar—political stability, capital certainty, exchange convenience and a broad transactional network—would probably not be challenged by a huge portfolio realignment in favor of the euro, due to prevailing inertia and a high degree of risk aversion.⁵⁴

The underlying causes of the fall of the euro against the dollar in the period 1999-2001 led to varying interpretations. Eichengreen (2000a), reviewing the behavior of the euro in its first year, noted that while the euro had failed to challenge the dollar as Fred Bergsten (1997b) and others had forecast, it had produced an immeasurably strong impact by creating wider and deeper European financial markets.⁵⁵ He argued that the decline of the euro in 1999 “does not reflect the incompetence of the ECB or flaws in the design of Europe’s monetary union. Rather, it is the response to cyclical asymmetries, between the U.S. and Europe,” reflecting the stronger economic performance of the United States at the time.⁵⁶ Rudiger Dornbusch (2000 and 2001b) likewise did not view the initial weakness of the euro as an overwhelming worry.

Dornbusch (2001c) offered a further interpretation, arguing that the weakness of the euro was due to failure to fully launch the euro on 1 January 1999 (euro coins and notes were not to be introduced until January 2002); the poor communication skills of Wim Duisenberg, the first head of the ECB; and the

53. See Eichengreen and Ghironi (1996) for a historical analysis of the rise and fall of reserve currencies. Eichengreen held that the institutional structure of the ESCB would prevent the euro from turning into an international currency. See also Frankel (2000a-b), Scott (1998), Devereux and Engel (1999), Devereux et al. (1999) and McKinnon (2002).

54. On the distribution of currencies, see Cohen (1998 and 1999) and Beddoes (1999).

55. Ferson and Harvey (1999) viewed the greatest benefit of the euro as reducing the complexity of foreign exchange risk in asset pricing models.

56. Eichengreen (2000a) noted the “the incompetence of the ECB or flaws in the design of Europe’s monetary union” were made up of policy mistakes by an inexperienced ECB Executive Board, the failure of the ECB to release its inflation forecasts, policy disagreements among ECB officials, the exemption Italy was granted from the Stability and Growth Pact and the confrontational attitude of some national politicians such as the German finance minister Oskar La Fontaine. See also Dornbusch et al. (1997) for a similar analysis.

differences in the performance of the U.S. and euro area economies (“the euro is weak because Europe is weak”).

Explaining the rapid fall of the euro against the dollar during its first twelve months in existence, Martin Feldstein (2000a) held that the decline throughout 1999 proved that the euro was unable to provide European producers with exchange rate certainty. The pre-1999 projections of the euro’s strength had been based on political rather than economic fundamentals. The very credibility of the euro had been undermined by the two-pillar strategy of the ECB, which left “financial markets confused, an uncertainty that is compounded by the limited information that is revealed about the deliberations of the ECB and by the occasional tendency for the members of the ECB to speak in contradictory terms. It is exacerbated also by the apparent lack of agreement about the significance of the international value of the currency.”⁵⁷

As for Milton Friedman, as we have seen, when asked in May 2000, “Do you think that the depreciation of the euro is a bad sign?”, he replied, “No, not for a second. At the moment the situation is very clear. The euro is undervalued; the U.S. dollar is overvalued....Relative to the dollar, the euro will appreciate and the dollar will depreciate” (Friedman 2001, 128). The forecast proved correct.

The management of the euro exchange rate attracted also the attention of Krugman (1999b) and Dornbusch (2001c). They concurred that the seignorage benefits accruing to Europe as a result of the internationalization of the euro were minor. Both argued that the ECB should adopt an attitude of benign neglect towards its exchange rate and instead, like the Federal Reserve System, focus monetary policy on domestic (pan-European) objectives.⁵⁸

Peter Kenen (2002), viewing in retrospect the pre-1999 predictions of an early advent of a monetary system based on two global entities, noted that the euro-dollar exchange rate had not come to symbolize the struggle for global dominance by the two most powerful protagonists, but rather that “the switch to the euro is most apt to manifest itself as a growing flow demand for euro-denominated bonds, equities and other assets, rather than a once for all stock adjustment of the sort predicted by euro enthusiasts a few years ago.” So far, Kenen’s forecast has proved correct.

57. The Maastricht Treaty does not give sole power to the ECB for the management of the euro’s external value.

58. Krugman (1999b) cites the findings of Portes and Rey (1998) that the sum of the gains accruing from seignorage would be no more than 0.2 per cent of GDP.

Why Were U.S. Academics So Skeptical?

The main finding of our survey is that US academic economists were mostly skeptical of the single currency in the 1990s. By now, the euro has existed for more than a decade. The pessimistic forecasts and scenarios of the U.S. academic economists in the 1990s have not materialized. The euro is well established. It has not created political turmoil in Europe, and it has fostered integration of financial, labor and commodity markets within the euro area. Trade within the euro area has increased, and so has business cycle synchronization. Inflation differentials within the euro area are presently of the same order of magnitude as in the United States.⁵⁹

Why were U.S. economists so skeptical towards European monetary integration prior to the physical existence of the euro? The published discourse exhibits several aspects of the thinking of U.S. economists.

First, the thinking of U.S. economists was deeply influenced by the optimum currency area theory, which had been a North American innovation. The theory was their main analytical tool for analyzing the benefits and costs of forming a monetary union.⁶⁰ The optimum currency area paradigm gave a negative bias to the evaluations of the single currency by stressing static costs of unification, while ignoring dynamic, political and institutional aspects of monetary integration.⁶¹ The original optimum currency area approach was “backward-looking” (Mongelli 2005). All optimum currency area-inspired studies of Europe—and there were many—concluded that the potential members of a common European monetary union did not fulfil the criteria for an optimum currency area as regards labor mobility, cross-border fiscal transfers, business cycle movements, incidence of shocks, etc. Sometimes this result was combined with the qualifier that a core set of European countries was closer to an optimum currency area than a wider geographical area including peripheral countries like Greece and Portugal. A standard conclusion of this strand of work was that the United States was a better candidate for a monetary union than Europe.

Second, the optimum currency area paradigm inspired U.S. economists to apply a static, ahistorical approach. U.S. economists generally used the U.S.

59. See *European Economy* (2008).

60. Of course, this holds for non-U.S. economists as well. See the survey by Mongelli (2005) for an assessment of the use of the theory of optimum currency areas to analyze EMU.

61. See also Paul De Grauwe (2003, 58) on the bias of the optimum currency area paradigm against unification: “The traditional theory of optimal currency areas tends to be rather pessimistic about the possibility for countries to join a monetary union at low cost.”

monetary union as the benchmark for the Europe of the 1990s. The use of such a benchmark led to the observation that Europe was less flexible, less integrated, provided less union-wide fiscal redistribution mechanisms and exhibited less centralized political control than the United States, leading to the conclusion that Europe should avoid monetary unification. U.S. economists made the mistake of comparing the early stages of the ongoing process of monetary integration in Europe, with its backlashes, crises, economic and political tensions, with the mature and stable state of U.S. financial and monetary integration at the time, neglecting that the U.S. monetary union was the outcome of a long process of political, financial and economic unification. Hugh Rockoff (2000) concluded that it took the United States about 150 years to form an optimum currency area, which suggests that the proper benchmark for the Europe of the 1990s was the U.S. monetary situation after the Revolutionary War, when different states issued their own currencies.

Seen from the perspective of the firmly established U.S. dollar union in the 1990s, it was easy for U.S. economists to qualify European attempts to create a single currency as inappropriate and inconclusive. However, European monetary unification since the Delors Report has been much faster than its U.S. counterpart was in the late 1700s. Eventually, U.S. economists, led by Jeffrey Frankel and Andrew Rose, came to acknowledge some of the “evolutionary” weaknesses of the traditional optimum currency area paradigm in their work on the endogeneity of monetary unions, making the optimum currency area approach forward-looking as well.

Instead of comparing Europe before the introduction of the euro with the United States of the 1990s, a more proper comparison would have been with the future workings of the euro area. Such an approach should also have considered whether the U.S. system of fiscal federalism would function more or less efficiently than the EMU system, where fiscal policy is designed according to regional (national) preferences within the framework of the Stability and Growth Pact.

Third, the conventional optimum currency area paradigm rests on a comparison between the costs and benefits of a fully flexible exchange rate and a permanently fixed rate. However, Europe was never faced with a choice between these two extreme cases, since a flexible exchange rate was not a serious option for the majority of the countries considering monetary union. Instead, the alternative to a monetary union of permanently fixed rates was a system of pegged (adjustable) rates, sometimes described as “semi-permanent exchange rates.” This system was discredited in the 1970s, 1980s and early 1990s, because it gave rise to frequent exchange rate realignments that were politically costly and that consistently created tensions among European countries. Countries avoided the

necessary realignments for as long as possible. Unfavorable experience with exchange rate developments contributed to the impetus for a single currency. U.S. economists were inclined to reject monetary unification without paying sufficient attention to the costs and benefits of the existing monetary arrangements in Europe.

Fourth and finally, the pure optimum currency area paradigm gave a limited role to political economy factors such as the preferences for deeper European integration, the wish to avoid exchange rate tensions and the desire to move towards more stable price levels.⁶² Many U.S. economists believed that the single currency for Europe was primarily a political project that ignored economic fundamentals stressed by the optimum currency area approach, and they feared that the Europeans were building a badly designed monetary union with a short lifespan. In addition, the crisis of the European exchange rate system in the early 1990s strengthened U.S. disbelief in European monetary integration. Consequently, they perceived a permanently fixed rate as a bad political solution for Europe.

Of course, the single currency was a political project. The whole European integration project after World War II has been driven by politics and political will. However, it has been influenced by economic developments and economic thinking. The aim of European policymakers in the 1980s was a single market. In this context, they saw a common currency as an important step towards a well-functioning common market.

Monetary history suggests that the predictive power of the optimum currency area approach is extremely weak.⁶³ Monetary unions have not been established according to the optimum currency area criteria. The approach ignores the political and historical factors driving integration. Thus, the optimum currency area approach is too narrowly defined in economic terms to interpret European monetary integration. By adopting the optimum currency area view, U.S. economists denied themselves a balanced understanding of European monetary integration.

Finally, economists are trained to be scientific, meaning critical, about policy proposals and grand projects, and the euro clearly belongs in this category. Given

62. This point is stressed by Charles Goodhart (1998), who has stated that in the optimum currency area approach “there is no reason why currency domains need to be co-incident and co-terminous with sovereign states. There is no reason why such a state should not have any number of currencies from zero to n, and an optimal currency area, in turn should be able, in theory, to incorporate (parts of) any number of separate countries from one to n.” However, such outcomes are rarely observed. Historically currency areas and nation states coincide as an empirical regularity. See also Bordo and Jonung (1997) on the importance of a historical perspective to understand how monetary unification emerges and dissolves.

63. According to Goodhart (1998), “OCA theory has little or no predictive or explanatory capacity ... it is unable to account for the close relationship between sovereignty and currency areas.”

this propensity stressed in our professional training, it may be fair to conclude that there is a pessimistic bias in our world outlook. In addition, the market for pessimistic forecasts is probably more attractive than that for optimistic forecasts. This may account for our inability to find any U.S. economist making a strong case for the euro prior to its birth.

Concluding Discussion

The process in the 1990s leading to the establishment of the euro was unlike anything in monetary and political history, making it difficult to judge and forecast the future of the European monetary integration. Still, U.S. economists eagerly commented on the unfolding story of the single currency, applying their models and techniques, affecting views at home and in the rest of the world.

Economists within the Federal Reserve System focused on the actual operation of the proposed common European central bank and its policies, describing it in fairly neutral and balanced terms. They took a more pragmatic view of the European common currency than U.S. academic economists. They also targeted a less sophisticated audience than the academic economists, writing fairly short, often popular, pieces. Usually, when reporting on the evolution of the new European central bank system, they applied a central bank perspective. They were basically positive toward European economic and monetary integration, at least compared to the U.S. academic economists.

Academic economists concentrated on the question, "Is EMU a good or a bad thing?" They looked for the answer, first of all, with the help of the optimum currency area approach, which resulted in a shared view: potential EMU member states were further away from a well functioning monetary union than the United States because of the lack of a pan-European fiscal redistribution mechanism, low labor mobility in Europe, and a higher frequency of regional asymmetric shocks in Europe than in the United States. In particular, weak fiscal transfers across national borders in the EU were a source of pessimism for the future of EMU.

The U.S. debate underwent significant changes, evolving in response to actual events, starting in the early 1990s from a rather skeptical view of European monetary integration as being unlikely to happen, or at least not happening according to schedule, to an acceptance of the euro in the late 1990s, sometimes combined with the prediction that it would not last very long.

The skeptical tone in the writings of U.S. economists in the first half of the 1990s was fostered by various stumbling blocks to European integration. Difficulty in ratifying the Maastricht Treaty, the collapse of the narrow ERM exchange rate bands in 1992, and the economic and political constraints imposed by the

convergence criteria featured heavily in U.S. arguments why the single currency was not a viable endeavor.

The December 1995 Madrid Summit, which set the date for the launch of the euro, was a turning point in U.S. opinion on EMU and the single currency. From then on, discussion moved away from debating the prospects of EMU actually being achieved towards an acceptance of EMU as an emerging reality according to the prescribed timetable. This awareness is also mirrored in the shift away from the use of the backward looking traditional optimum currency area theory towards a more broadly based examination of the future effects of European monetary union on trade and integration.

Although the conventional optimum currency area paradigm as a vehicle for analysis of the European monetary integration process was being challenged to an increasing extent, the optimum currency area approach maintained its grip over U.S. views on the euro throughout the 1990s. We suggest that the use of the optimum currency area paradigm was the main source of U.S. pessimism towards the single currency in the 1990s. The optimum currency area approach was biased towards the conclusion that Europe was far from being an optimum currency area. The optimum currency area paradigm inspired a static view, overlooking the time-consuming nature of the process of monetary unification. The optimum currency area view ignored the fact that the Europe was facing a choice between permanently fixed exchange rates and semi-permanent fixed rates. The optimum currency area approach led to the view that the single currency was a political construct with little or no economic foundation. In short, by adopting the optimum currency area theory as their main engine of analysis, U.S. academic economists became biased against the euro.

It is surprising that U.S. economists, living in a large monetary union and enjoying the benefits from monetary integration, were (and still remain) skeptical towards the euro. U.S. economists took, and still take, the desirability of a single currency for their country to be self-evident. To our knowledge, no U.S. economist, inspired by the optimum currency area approach, has proposed to break up the United States into smaller regional currency areas. Perhaps we should take this as a positive sign for the future of the euro: in due time it will be accepted as the normal state of monetary affairs in Europe just like the dollar is in the United States.

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