



*Econ Journal Watch*  
*Scholarly Comments on Academic Economics*  
Volume 7, Issue 1, January 2010

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## Editor's Notes: Acknowledgements 2008-09

I am grateful to the co-editors Bruce Benson, Fred Foldvary, George Selgin, and Larry White and the managing editor Kevin Rollins for all their fine work, and to readers for their interest and feedback.

We are very grateful to John Stephens for building the new EJW website, and to Brett Barkley, Ryan Daza, Tim Peck, and Anton Rasmussen for their help on the project.

We are immensely grateful to the American Institute for Economic Research for their friendship and support, including a three-day EJW conference; especially the president of AIER, Charles E. Murray, and communications director, Ryan Goodenough, and program director Walker Todd, who coordinated the conference at AIER.

Also we thank our other donors, especially the Charles G. Koch Charitable Foundation and the Earhart Foundation for their faithful support.

And we are grateful to the Atlas Economic Research Foundation for their friendship and in-kind support in housing EJW within their organization; especially Romulo Lopez and Brad Lips.

We thank these following individuals for helping provide intellectual accountability to EJW.

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## Euro Symposium

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

Lars Jonung<sup>1</sup> and Eoin Drea<sup>2</sup>

### 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).<sup>3</sup> This unparalleled experiment in monetary unification is a milestone in European integration.<sup>4</sup> The euro has emerged as a major currency, even challenging the U.S. dollar as the

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*Acknowledgments:* This paper was prepared for the session “Reflections on American Views of the Euro Ex Ante: What We Have Learnt 10 Years Ex Post,” at the American Economic Association meetings in January 2009 in San Francisco. We have benefited from constructive comments by Michael D. Bordo, Benjamin J. Cohen, Barry Eichengreen, Harry Flam, Jeffrey Frankel, Charles Goodhart, Dale Henderson, Peter Kenen, Ellen Meade, Francesco Mongelli, Niels Thygesen and Jürgen von Hagen, as well as from participants at the 11th Annual Conference on European Integration in Mölle, Sweden in May 2009. We owe a special debt to Jeffrey Frankel and Francesco Mongelli. The usual disclaimer applies. The opinions here are solely those of the authors. They do not represent the views of the Directorate General for Economic and Financial Affairs of the European Community.

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.<sup>5</sup> 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-

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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.<sup>6</sup>

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.

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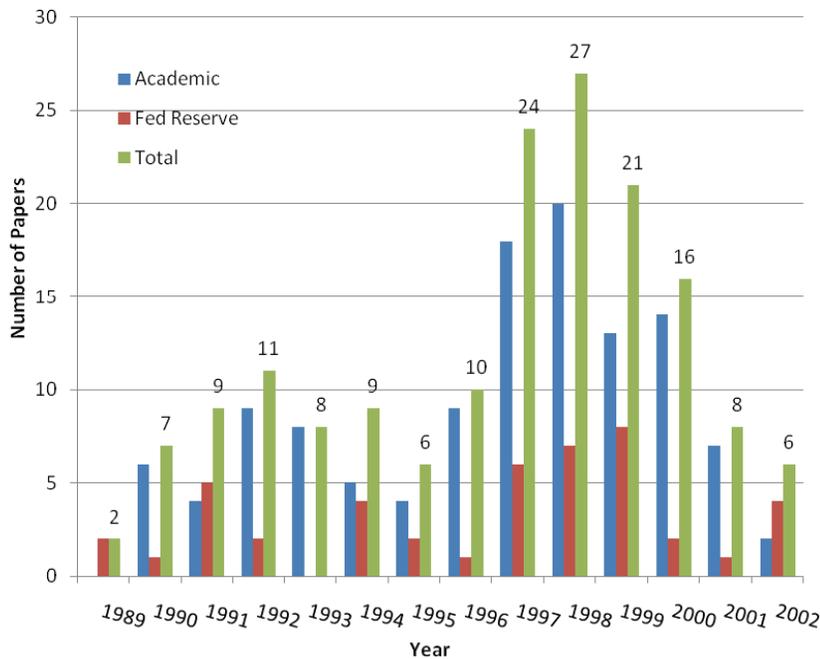
6. For a discussion of the vast literature on the strength and weakness of the euro project, including European contributions, see among others Jonung (2002).

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

<b>February 1986</b>	Signing of the Single European Act, advancing economic and political integration within the European Community.
<b>April 1989</b>	The Delors Report calls for Economic and Monetary Union (EMU) leading to a single European currency through three stages.
<b>June 1989</b>	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.
<b>October 1990</b>	The Rome Summit of the European Council agrees that Stage 2 of EMU will begin January 1, 1994.
<b>December 1990</b>	The Dublin Summit of the European Council marks the beginning of intergovernmental conferences on EMU and political union.
<b>February 1992</b>	Signing of the Maastricht Treaty to establish the European Union, the successor to the European Community.
<b>June 1992</b>	Danish voters narrowly reject the Maastricht Treaty.
<b>September 1992</b>	Currency crises force Britain and Italy to abandon the Exchange Rate Mechanism (ERM).
<b>July 1993</b>	Member states agree to widen the “narrow” band in the ERM from 2.25% to 15% around the central rates.
<b>January 1994</b>	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.
<b>May 1995</b>	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).
<b>December 1995</b>	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.
<b>May 1998</b>	Special meeting of the European Council decides that 11 member states satisfy the conditions for adopting the single currency.
<b>June 1998</b>	The European Central Bank and the Eurosystem are set up.
<b>January 1999</b>	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.
<b>January 2001</b>	Greece adopts the euro.
<b>January 2002</b>	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.<sup>7</sup> 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.<sup>8</sup>

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

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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.<sup>9</sup> Table 2 summarizes this set of events.

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

<b>November 14, 1991</b>	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.
<b>June 2, 1992</b>	Danish voters narrowly reject the Maastricht Treaty.
<b>August 26, 1992</b>	The pound sterling falls to its Exchange Rate Mechanism (ERM) lower limit.
<b>September 8, 1992</b>	Finland severs the markka's ECU link.
<b>September 13, 1992</b>	Italy devalues the lira by 7% against other ERM currencies.
<b>September 16, 1992</b>	Britain suspends ERM membership. Italy suspends foreign exchange market interventions and allows the lira to float. Spain devalues the peseta by 5%.
<b>September 20, 1992</b>	French voters narrowly approve the Maastricht Treaty.
<b>November 19, 1992</b>	Sweden abandons its ECU peg.
<b>December 10, 1992</b>	Norway abandons its unilateral ECU peg.
<b>January 30, 1993</b>	Ireland devalues the punt by 10% within the ERM.
<b>May 14, 1993</b>	Spain devalues the peseta by 8%; Portugal devalues the escudo by 6.5%.
<b>July 30, 1993</b>	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

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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.<sup>10</sup>

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

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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.<sup>11</sup>

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.<sup>12</sup>

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

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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.<sup>13</sup>

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.<sup>14</sup>

**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)
	Graboyles (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)	Gynn (1998)			
Chriszt (1991, 1992)		Meyer (1999)			
EMU: Will it fly? (likelihood of a single currency)	Schinasi (1989)	Costs and benefits of EMU	Spiegel (1997)		Wynne (2000, 2002)
	Craig (1994)		Jordon (1997)		Pollard (2001)
	Leahy (1994)		Eudey (1998)		Dwyer and Lothian (2002)
	Johnson (1994)		Klein (1998)		
	Edison and Kole (1994)		Carlino (1998)		
	Pollard (1995)		Whitt (1997)		
	Estrella and Mishkin (1995)		Stevens (1999)		
	Aglietta and Uctum (1996)		Gramlich and Wood (2000)		

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.<sup>15</sup>

Many academic economists questioned the economic rationale behind the convergence criteria of the Maastricht Treaty.<sup>16</sup> 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.<sup>17</sup>

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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.<sup>18</sup> 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.<sup>19</sup>

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.<sup>20</sup>

*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.<sup>21</sup> The original optimum

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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.<sup>22</sup>

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.<sup>23</sup> Table 4 summarizes the views of academic economists.

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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.<sup>24</sup>

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.<sup>25</sup>

*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

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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.”<sup>26</sup>

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 21<sup>st</sup> 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

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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.<sup>27</sup> Neither group devoted much thought to the likelihood of establishing a single currency in Europe without further political integration.<sup>28</sup>

## 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.<sup>29</sup> 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.

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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.<sup>30</sup> 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.<sup>31</sup> 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.<sup>32</sup> (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.<sup>33</sup> The strategy stimulated considerable debate, resulting in mixed conclusions. Carol Bertaut and Murat

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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.<sup>34</sup>

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.<sup>35</sup> 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.<sup>36</sup>

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

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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.<sup>37</sup>

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.”<sup>38</sup>

*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.”<sup>39</sup> 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

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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.<sup>40</sup> 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

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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.”<sup>41</sup> 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.<sup>42</sup>

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.<sup>43</sup>

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

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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.<sup>44</sup>

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.<sup>45</sup>

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

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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.”<sup>46</sup>

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.<sup>47</sup>

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.

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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.<sup>48</sup> 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

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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.<sup>49</sup> 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.

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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]?

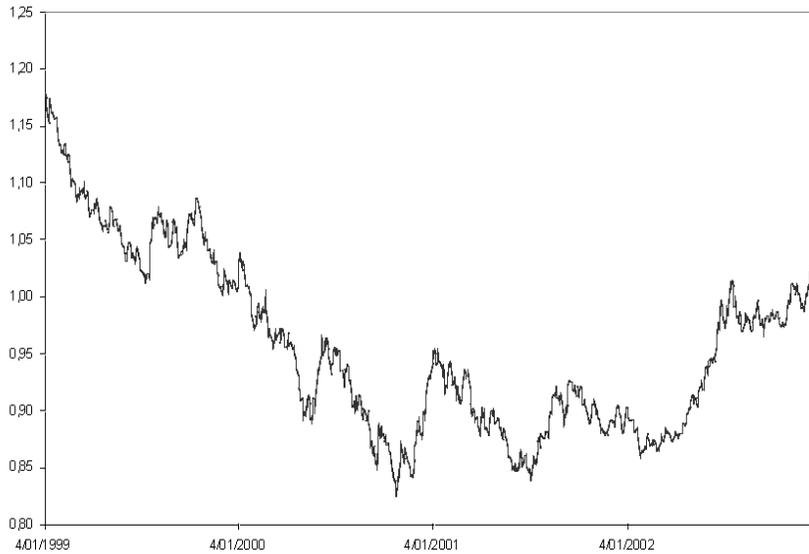
**Friedman:** No, not for a second. At the moment the situation is very clear. The Euro is undervalued; the U.S. dollar is overvalued. As a result of the undervaluation of the Euro, the producing enterprises in Europe are doing very well, the consumers in Europe are suffering, the consumers in the United 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?*<sup>50</sup> 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.<sup>51</sup>

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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.<sup>52</sup> 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.”<sup>53</sup>

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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.<sup>54</sup>

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.<sup>55</sup> 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.<sup>56</sup> 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

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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.”<sup>57</sup>

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.<sup>58</sup>

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.

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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.<sup>59</sup>

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.<sup>60</sup> 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.<sup>61</sup> 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.

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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.<sup>62</sup> 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.<sup>63</sup> 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

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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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## Euro Symposium

# I Was a Euro Enthusiast

C. Fred Bergsten<sup>1</sup>

### ABSTRACT

Jonung and Drea (2010) err in concluding that there was no American economist who made a strong case for the euro prior to its birth. I in fact consistently espoused a viewpoint opposite to the three components of the taxonomy by Rudiger Dornbusch that inspired the title of their paper, arguing from the outset of the debate that the new currency would be created on schedule; that it was a good idea; and that it would be wholly successful. I was a bit premature in suggesting as well that the exchange rate of the new euro would be quite strong from the outset, but that was probably due to its being solely a virtual asset in the initial period; it has of course appreciated considerably ever since. My view that the new currency would “eventually” or “ultimately” move up alongside the dollar as an international currency “over a longish transition period” has also arguably proven to be premature, though the euro’s global market share has risen about five percentage points since its inception. I believe a clear trend in that direction is underway, due to the flow diversification accurately predicted by Peter Kenen rather than my expectation of a large portfolio diversification.

My analysis differed from that of virtually all my colleagues because it was based on political economy rather than technical considerations such as the theory of optimum currency areas. Having worked on the economics of European unification throughout my career, dating back almost to the Treaty of Rome itself, I have been constantly impressed—indeed, often amazed—by how the individual members of the Union invariably overcame their substantial national differences

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to complete the successive projects that maintained (at least until quite recently) the forward momentum of their integration process. Economic and Monetary Union was probably the most far-reaching of all these efforts and undoubtedly represented the greatest intrusion into national sovereignty, so it was no sure thing. I nevertheless concluded from the outset that its failure would represent such a (perhaps fatal) setback to the entire process that a negative outcome would prove to be unacceptable to the leaders of all member states. I also concluded that the implications of the optimum currency area debate for the economic impact of EMU were ambiguous, and that the outcome was close enough even on that criterion to permit a basically political decision to prevail and, much more importantly, to have a very good chance to succeed.

In an effort to mobilize American (and non-American) economists to play a more constructive role in the ongoing euro project than most of them did prior to its creation, as described by Jonung and Drea, our Peterson Institute for International Economics has conducted two systematic appraisals of the record of the European currency to date: *The Euro at Five* (Posen 2005) and *The Euro at Ten* (Pisani-Ferry and Posen 2009). Both concluded that the euro has been a huge success in term of effectively performing all the functions of a currency and achieving price stability for the euro area. More countries now want to join the area than did before the recent global financial crisis.

On the other hand, many of the key economic reforms that were expected to follow the creation of the euro have not occurred; the forward momentum of meaningful integration has stalled. Partly as a result, European economic performance has been disappointing and the currency has not yet come to rival the dollar on the global level. Moreover, the member states have been unable to come together on fiscal policy or most elements of structural reform and still must get their institutional act together. Hence, Euroland still has a very full agenda, and its Economic and Monetary Union remains very much a work in progress.

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## Euro Symposium

# A Political Scientist's Perspective

Jeffrey Frieden<sup>1</sup>

### ABSTRACT

Lars Jonung and Eoin Drea (2010) have given us an excellent survey of how American scholars analyzed the process of European monetary integration in the crucial years between 1989 and 2002. They highlight how common were skeptical views, although they are too polite to point out just how badly wrong many economists were when they attempted to forecast the prospects of Economic and Monetary Union.

It would seem important to attempt to understand why so many fine scholars were so often mistaken. I profess a special interest, and perhaps an unusual position here, along two dimensions. First, I am a political scientist, not an economist, although Jonung and Drea have very generously included work of mine in their survey. Second, it is probably fair, if immodest, to say that my own analyses and expectations were somewhat less skeptical than those of the average economist. I observe this not to excuse my mistakes, but by way of introducing my own interpretation of what was lacking in much of the economic analysis.

Most economic analyses of European monetary integration focused almost entirely on the *economics* of the matter. Many economists, to be sure, remarked frequently (sometimes disapprovingly) on the political factors driving monetary union. However, even when scholars attempted to incorporate political considerations, they did so quite unsystematically, typically to invoke vague geopolitical, or Europeanist, or ideological factors. The result was a literature that

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was often lopsided: sophisticated economic analyses were melded with simple-minded political observations that rarely went beyond the level of political journalism.

Most economic analyses ignored two central tenets of political economy. The first is that governments are not benevolent social planners. The optimum currency area literature, which dominated most economic analyses, is extremely useful as a baseline, but it is not very useful as a predictor of what governments are likely to do. Governments rarely adopt policies simply because economic analysis identifies them as socially optimal; policymakers have to take into account the preferences of their constituents, weighted by features of national social and political institutions. So it should surprise nobody that the optimum currency area findings are not a good explanation of policy. If our goal is to *explain* government actions rather than to advise governments on a preferred course, we need a careful analysis of the electoral, partisan, special-interest, and other pressures on governments—all of which tend to push governments in directions orthogonal to what would be expected from a naive view of policymaking as an exercise in maximizing the utility of the representative agent. This is not to say that governments are venal or corrupt, but that their actions are constrained by their political environment. To explain, and anticipate, government policies, we need a systematic analysis of both the economic and the political constraints and opportunities that policymakers face.

The second principle of political economy that would have provided more accurate assessments of the state of European monetary integration is that policies made jointly by a number of governments are strongly affected by bargaining among states. Just as there is no authoritative planner to aggregate a social welfare function at the national level, there is no supranational authority to aggregate the welfare impact of policies jointly adopted by several national states. European governments bargained their way to the eventual EMU outcome, making deals at every step of the way. Some of these deals were on the purely macroeconomic front, such as linking fiscal improvement to membership in the currency union; others were on less directly macroeconomic, or perhaps even noneconomic, dimensions. Some European governments may have settled for their second or third choices on EMU, in return for more desirable outcomes on other policies.

There is nothing particularly novel about attempting to integrate political and economic analysis, and most good economists know that explanations of government policy require consideration of both economic and non-economic influences on policy. However, it is striking how many of the projections about the future of a single European currency relied on purely economic analyses. This was a sure-fire formula for inaccurate predictions. Going forward, analyses of the future course of EMU—whether with regard to potential new adherents to the

euro, or with regard to the European Central Bank's policies—similarly need a broader, political economy, approach to the matter.

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## Euro Symposium

# Understanding the Euro Requires Political Economy, Not Just Economics

Charles Goodhart<sup>1</sup>

### ABSTRACT

Once upon a time our academic subject went under the title Political Economy. But in (an unavailing) pursuit of scientific purity, the more political aspects were discarded, leaving a focus on the purely economic. The main failing in this respect of academic U.S. economists was to look at the European monetary experiment almost entirely through the prism of a narrowly economic model, the optimum currency area theory—a model which has been wholly insufficient to explain relevant facts about the life, and death, of currencies—rather than via wider political economy factors.

That failing continues. The current financial crisis has caused many of those who initially doubted the single currency's successful introduction now to forecast its imminent dissolution. But just as its original introduction was a matter of political will, rather than the result of an economic cost-benefit exercise, so any dissolution would follow from a conscious political act of separation, not from purely economic strains.

Of course, really severe economic strains could alter political perceptions of the eurozone, but there is little sign of that happening. Rather, the reverse is happening: countries in Europe under extreme strain, e.g., Ireland, Iceland, and

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the Baltics, have found the potential embrace of the eurozone to be supportive. And, while it remains possible that persistent and intensifying adjustment strains could lead to a (political) campaign in some country, or countries, to exit the euro, any cool-headed assessment of the huge costs and meager benefits of doing so should deter all but the most hot-headed or accident-prone politicians from such a course.

The choice and combination of currency regimes is a political economy issue. The failure of most U.S. academics to give due weight to political factors has made their analysis unbalanced.

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## Euro Symposium

# Reflections on Currency Reform and the Euro

Steve H. Hanke<sup>1</sup>

### ABSTRACT

Lars Jonung and Eoin Drea (2010) conclude that the pessimistic stance taken by most American economists toward the euro in the 1989-2002 period “was probably fostered by the propensity of U.S. economists to view the euro as a political project driven by murky motivations and based on an insufficient institutional foundation.” If most American economists thought the euro was largely a political project, they were right on target. As one reads thorough accounts of the birth of the euro, it is clear that politics, not economics, ruled the roost (Brown 2004; Marsh 2009).

This realistic view—that “politics” dominates—does not suggest that one would take either a pessimistic or an optimistic stance toward the euro, however. In my experience as an adviser on currency reforms in Europe in the 1990s, I observed first-hand that politics, and on occasion personal pique, not the economics of optimum currency areas, dominated, and that this state of affairs could still produce good reforms.

In Estonia, which established an independent currency in 1992, the overriding national objective was to exit the ruble zone, and more broadly, Moscow’s sphere of influence. A currency board was the most effective way to rapidly accomplish the goal. The driving force behind Lithuania’s similar 1994 currency reform was Prime Minister Adolfas Slezevicius. A currency board

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appealed to him because it was a means to move the governor of the central bank to the sidelines and to impose fiscal discipline on his own Democratic Labor Party, which controlled parliament. A hyperinflation in Bulgaria in 1997 sparked a popular outcry for sound money and a currency board, an idea that had been circulating in professional circles since 1991. Indeed, a Bulgarian-language knockoff of an old monograph I had written in 1991 (Hanke and Schuler 1991) made the bestseller list in Sofia during the hyperinflation. Bosnia and Herzegovina also installed a currency board in 1997. It was mandated by the Dayton/Paris Peace Agreement of November 21, 1995—an international treaty. Montenegro, while still part of the Federal Republic of Yugoslavia along with Serbia, dumped the Yugoslav dinar and replaced it with the German mark in November 1999. This bold move by then-President Milo Djukanovic; was part of a political strategy to establish Montenegro's independence. Like the establishment of the euro, Montenegro's embrace of the German mark had politics, not economics, as its hallmark.

That there was a political rationale and popular support for the currency reforms that I was advocating made my day. That the finer economic points took a back seat failed to move me.<sup>2</sup> All of the above-mentioned countries continue today with the monetary policies they established in the 1990s. (Montenegro switched to the euro when euro notes and coins replaced the German mark.) The policies were adopted in large part for political reasons, but they have persisted because they have produced what was anticipated: strong economic results.

My views on exchange rates are based on the distinction between strictly fixed, strictly floating and pegged regimes. Fixed and floating rates are regimes in which the monetary authority is aiming for only one target at a time. Although floating and fixed rates appear dissimilar, they are members of the same free-market family. Both operate without exchange controls and are free-market mechanisms for balance-of-payments adjustments. With a floating rate, a central bank sets a monetary policy but the exchange rate is on autopilot. In consequence, the monetary base is determined domestically by a central bank. With a fixed rate, there are two possibilities: either a currency board sets the exchange rate, and the money supply is on autopilot, or a country is “dollarized” and uses the U.S. dollar or another foreign currency as its own, and the money supply is again on autopilot. From the perspective of an individual country, a monetary union such as the eurozone is similar to dollarization. In consequence, under a fixed-rate regime, a

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2. The following publications contain the economic fine points and served as blueprints for currency reforms in the countries mentioned: Estonia (Hanke, Jonung and Schuler 1992), Lithuania (Hanke and Schuler 1994), Bulgaria (Hanke and Schuler 1991), Bosnia and Herzegovina (Hanke 1996/7) and Montenegro (Bogetic and Hanke 1999).

country's monetary base is determined by the balance of payments, moving in a one-to-one correspondence with changes in its foreign reserves. With either a floating or a fixed rate, there cannot be conflicts between monetary and exchange rate policies, and balance-of-payments crises cannot rear their ugly heads. Floating- and fixed-rate regimes are inherently equilibrium systems in which market forces act to automatically rebalance financial flows and avert balance-of-payments crises.

Most economists use “fixed” and “pegged” as interchangeable or nearly interchangeable terms for exchange rates. For me, they are very different exchange-rate arrangements. Pegged-rate systems are those where the monetary authority is aiming for more than one target at a time. They often employ exchange controls and are not free-market mechanisms for international balance-of-payments adjustments. Pegged exchange rates are inherently disequilibrium systems, lacking an automatic mechanism to produce balance-of-payments adjustments. Pegged rates require a central bank to manage both the exchange rate and monetary policy. With a pegged rate, the monetary base contains both domestic and foreign components.

Unlike floating and fixed rates, pegged rates invariably result in conflicts between monetary and exchange rate policies. For example, when capital inflows become “excessive” under a pegged system, a central bank often attempts to sterilize the ensuing increase in the foreign component of the monetary base by selling bonds, reducing the domestic component of the base. And when outflows become “excessive,” a central bank often attempts to offset the decrease in the foreign component of the monetary base by buying bonds, increasing the domestic component of the monetary base. Balance-of-payments crises erupt as a central bank begins to offset more and more of the reduction in the foreign component of the monetary base with domestically created base money. When this occurs, it is only a matter of time before currency speculators spot the contradictions between exchange rate and monetary policies and force a devaluation, interest-rate increases, the imposition of exchange controls, or all three.

During the ramp-up to the launch of the euro, I served, among other things, as an officer of a hedge fund. Given my views on exchange-rate regimes, the period provided many profitable trading opportunities. After all, the Exchange Rate Mechanism (ERM) was a system of pegged exchange rates. When a pegged system experiences trouble, typically a country's interest rates rise, its currency slumps, or both. With this in mind, I was either selling deposits in a “weak” currency country or shorting other European currencies against the German mark. As an example of my thinking (and trading), in January 1992 I wrote:

Within the next month, the market will push sterling to its lowest point in the ERM band. Facing that eventuality, there are four possible British policy responses: 1) allow sterling to be devalued to about DM2.5 and eventually allow interest rates to come down a bit; 2) defend sterling and restore a central rate of DM2.95 by increasing interest rates a full percentage point to 11.5%; 3) negotiate a realignment of the ERM along the lines we suggest; or 4) bring back (God forbid) exchange controls.

Rational as options 1) and 3) might be, we believe that the Brits have invested so much political capital in the ERM and the ridiculous DM 2.95 that they will grudgingly choose option 2) and raise interest rates. Sell March three-month sterling deposits. Place stop at 90, good anytime. (Hanke 1992)

As it turned out, that was a profitable trade. But my judgment about what the United Kingdom would do with the pound caused me to miss the big trade on Black Wednesday, September 16, 1992, when the government floated the exchange rate, in effect devaluing, rather than raising interest rates further.

That said, there were paydays associated with bets against the ERM pegs. The most notable one occurred at the end of July 1993, when France's pegged rate, dubbed the *franc fort*, came a-cropper (Sulitzer 1993). In consequence, the ERM's narrow band was widened from 2.25% to 15% around the central rates.

I considered the euro sound from a technical perspective, because it requires a fixed exchange rate rather than pegged rates among member countries, but my policy views concerning the euro were generally skeptical during the euro's ramp-up phase. The basis for my skepticism was the idea that a strong euro would in the long run require a strong central state, as Robert Mundell (2000) has suggested. While I agree with Mundell's diagnosis, I did not, and do not, consider a strong central state desirable. For me, the European Union and the European Commission represent additional political and bureaucratic layers that will impede much-needed European economic liberalization.

While I was skeptical of a common currency for Europe, I favored European currency unification via currency boards (Hanke and Walters 1990). And I was not alone. During a May 1990 meeting in East Berlin with Karl Otto Pöhl, President of the Bundesbank, he confirmed that we shared the same vision (Marsh 2009, 131) and encouraged me to press ahead. Such a unified currency approach, with the German mark as the anchor, would have given Europe monetary stability, while at the same time it would have avoided the ratcheting up of the state and bureaucratic powers that have accompanied the euro.

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## Euro Symposium

# It Has Happened—And It Will Continue to Succeed

Otmar Issing<sup>1</sup>

### ABSTRACT

Reading the article by Lars Jonung and Eoin Drea (2010) reminded me on almost every page of my own thinking, how it evolved over time, and my experience as member of the Executive Board of the European Central Bank (ECB).

## Optimum Currency Area Theory and Maastricht Treaty

Since as an academic I had read the seminal articles on optimum currency areas by Robert Mundell, Ronald McKinnon, and Peter Kenen, I was fascinated by the idea that the domain of a currency might not be determined by the frontiers of a state, but by economic criteria. It was obvious that strengthening economic integration in Europe one day could lead to a situation in which this idea might become a realistic option. However, the optimum currency area criteria were extremely demanding, so that a monetary union seemed feasible only among very few countries.

With the ratification of the Maastricht Treaty, the creation of a single currency became a concrete project, which would start with an initially unspecified

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number of countries. The treaty formulates convergence criteria that have to be fulfilled if a country wants to join the European Monetary Union. However, it was also clear that in the end the European Council, i.e., politics, would decide on participation.

## Skepticism among Economists

The Maastricht Treaty triggered a discussion among politicians, academics of all kinds, and media. The reaction from economists was overwhelmingly critical, especially in the Anglo-Saxon world. The title of Jonung and Drea's paper reminds me of the comment by British observers invited to the Messina Conference in 1955 devoted to European economic integration. They departed, claiming as follows: The Continentals will not be able to agree on anything of substance. In the unlikely case of an agreement, they will not be able to implement it. However, in the hypothetical case that they realize such a project, it will become a disaster. Remember, not much later (1957) the Treaty of Rome was signed, and the establishment of the European Economic Community in 1958 set in motion a process that finally led to the single market and the European Union, which now has 27 members. Only a few years later, in 1961, Britain asked for participation. After French President Charles de Gaulle's veto, it took then more than ten years before the United Kingdom finally could become a member.

The camp of "it can't happen" had many supporters for a number of years after Maastricht. On many of my visits to the United States, either EMU was a non-issue or I was asked, "Do you really think this will happen?" The more the start of EMU seemed to become reality, the louder became the voices of the "bad idea" and "won't last" camp.

However, in Europe also a majority of academic economists was sceptical. In Germany, 155 economists published an open letter in February 1998 entitled "The euro is coming too early" (Issing 2008). I myself, as member of the Executive Board of the Deutsche Bundesbank, had warned against a premature start of EMU in a number of publications and speeches.

After nomination for the Executive Board of the European Central Bank, every candidate had to testify before the European Parliament.<sup>2</sup> In my hearing on May 7, 1998 (a few weeks before the board's first meeting, on June 1), I explained:

The dismantling of all trade barriers, the free movement of persons—in short, the four great economic freedoms—were the grand objective that

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2. In my first weeks in office, I received a letter by Milton Friedman offering "congratulations on an impossible job." On several occasions he predicted the collapse of the euro within the next five years.

was achieved with the single market. I will not deny that I was more hesitant with regard to monetary union—not as regards the grand goal, which was always the culmination, the completion of integration, but rather out of concern about the great leap. Concern because I know, or think I know, what monetary union means, what its consequences are for many economic and political spheres beyond the monetary one... To be frank, I would not have thought it possible that, before the start of monetary union, Europe—that is, the eleven countries we are talking about here—would attain virtual price stability and that Germany's inflation rate would be no better than the average! A few days ago, Eurostat released the March inflation figure: 1.2 per cent. Now that is price stability!

My concerns have not entirely disappeared, however, as Europe has not made similar progress with convergence in all areas of the economy. Here a lot remains to be done...

The introduction of the euro will change the face of Europe. The introduction of the euro is the most significant event in the world of international money and finance since the end of the Second World War. The euro will only be able to play its intended role if it is a stable currency. To achieve this, the Maastricht Treaty gives the European Central Bank clear priority for the goal of price stability and endows its decision-makers with independence so that they can take the necessary decisions to achieve that end. (Issing 2008)

## **The Euro Has Become a Success**

There is nothing more convincing than success. After 11 years of existence, the euro is seen worldwide as an overwhelming success (Issing 2009). From the start it was appreciated as a stable currency and inflation expectations remained firmly anchored most of the time consistent with the European Central Bank's definition of price stability. Challenges like Y2K, 9/11, and, most important, managing the recent financial market crisis were mastered in a way which confirmed the reputation of the ECB as a key player in the world of central banking. So it did not come as a surprise that within a few years the euro found its position as the second most important international currency after the U.S. dollar.

Considering all the critical reservations how can this success be explained? The answer lies on two different but related levels.

In contrast to many skeptics' expectations, the ECB has conducted a stability-oriented monetary policy not influenced or undermined by national interests, but devoted to maintain price stability in the euro area as a whole. The stability-oriented monetary policy strategy was the foundation for taking the appropriate decisions during all challenges (for a detailed analysis, see Issing 2010). The "two-pillar" strategy of using both money-supply growth and other economic indicators to analyze risks to price stability was initially widely criticized, but it has demonstrated its advantages, not least in the context of the financial market crisis and the discussion about the appropriate reaction to asset price developments (Issing 2009). In short, the euro and its stability have worked as the anchor for the coherence of EMU.

In the context of this experience, the discussion on optimum currency areas has continued. A preliminary summary might conclude that the optimum currency area criteria are not exclusive, and their fulfilment may to a certain extent be endogenous to membership in the currency union (Issing 2004). The jury is still out on the question to what extent EMU and the single monetary policy might work as a catalyst for needed reforms (Alesina et al 2008).

The change in the attitude of economists, especially in the United States, could be observed by a series of panels organised by Dominick Salvatore at the occasion of the annual meetings of the American Economic Association. After very critical reactions before the start of EMU, the panelists and the audience became more and more positive about the future of EMU as the years passed.<sup>3</sup>

## Will It Last?

Eleven years are a short period in the life of a currency. A successful start and mastering severe challenges are a foundation for the future, but of course no guarantee. The ECB, with its independence and a clear mandate for maintaining price stability—enshrined in an international treaty which concerning these provisions can be changed only unanimously—will remain an anchor of stability. The other pillar of EMU, solid public finances, is under severe stress. With budget deficits exploding, the Stability and Growth Pact is ahead of a dramatic challenge. Further reforms for greater flexibility are badly needed.

Sceptics are not convinced by the successful first eleven years and see the major challenges only coming, not least due to large internal imbalances. However, for member countries EMU is without any reasonable alternative, in

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3. Panelists were C. Fred Bergsten, Rudiger Dornbusch, Martin Feldstein, Peter Kenen, Ronald McKinnon, Robert Mundell, and Michael Mussa.

political as well as in economic terms.<sup>4</sup> Therefore, there are important reasons to expect that this situation will finally enforce needed reforms and fiscal discipline.

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4. On the issue of the need for a political union, see Issing (2009).

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## Euro Symposium

# There Was No Analytical Alternative to the Theory of Optimum Currency Areas

Peter B. Kenen<sup>1</sup>

### ABSTRACT

Lars Jonung and Eoin Drea have produced a remarkably thorough and fair account of U.S. economists' views on EMU during the years before it came into being. I cannot quarrel with their account of my own views, or those of others with whose work I am familiar, as they evolved during the period they cover. There was, I agree, excessive reliance by U.S. economists on the theory of optimum currency areas, which posited a binary choice between fixed and floating exchange rates, and these were not the options that bounded the evolution of European thinking.

The widening of the European Monetary System's bands resulting from the exchange-rate crisis of 1992 served as a stark warning that "fixed but adjustable" exchange rates were inherently fragile, a lesson that most economists had already learned from the dollar crisis of 1971, and if a reversion to floating was seen to be a blow to European integration, there was nevertheless no clear alternative to tighter monetary integration. This view was not always articulated clearly, but it was surely a powerful influence on those who believed that monetary union was

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the appropriate goal, even though there was much uncertainty in Europe itself about the speed with which that objective could be reached.

To say, as many Americans did, that EMU was a political project without adequate economic justification, was to ignore the European consensus in favor of closer economic integration. Whether the time was ripe for monetary union was nevertheless debatable.

All of which leads me to confess that reliance on the theory of optimum currency areas, to which I was myself a contributor and user, narrowed many American economists' perspective on the choices facing Europe. I must note, however, that there was then no other analytical framework available for assessing the benefits and costs of monetary union, and that there was much skepticism in Europe itself about the likelihood of monetary union. When the Delors Report was about to be published, I phoned someone close to the work of the Delors Committee. Acting in my role as Director of Princeton's International Finance Section, which published a well known series of papers on international monetary economics, I asked him whether I should organize a symposium on the Delors Report and whether he would write an introductory chapter. Without revealing anything about the content of the Report, he told me not to bother, because the forthcoming report would have no long-lasting effect. Americans were not the only EMU-skeptics!

Later, I spent a year as Houblon-Norman Fellow at the Bank of England, where I was invited to sit on the Bank's staff committee monitoring the Maastricht negotiations. That is how I came to write *EMU After Maastricht* (1992), which was based in part on the memoranda I had written for that committee. When I submitted the manuscript to a senior officer of the Bank to make sure that I had not committed any indiscretions, his only suggestion was that I refer to the British stance as an "opt-in" rather than an "opt-out"—a suggestion that I declined to adopt.

But I wander, so let me return to Jonung and Drea. I have two small quarrels. First, I question the relevance of their assertion that "European monetary unification since the Delors Report has been much faster than its U.S. counterpart was in the late 1700s." True enough, but comparing the degree of internal integration in the era of the horse and buggy with integration in the era of high-speed trains is hardly fair. (It also ignores the fact that U.S. states in the late 1700s were more closely integrated with Europe, especially Britain, than among themselves.) Second, I question their repeated criticism of American economists' reliance on the theory of optimum currency areas. It is, I agree, ahistorical and apolitical, but what other analytic framework did economists have for basing empirical judgments about the economic benefits and costs of monetary integration? Rather than criticizing us for relying too heavily on that framework,

they should perhaps have criticized us for failing to produce a better multidimensional approach to the cost-benefit analysis of EMU, which was, after all, the matter before us. It was not for economists to assess the political benefits and costs of monetary union. The true failing of many American economists was rather their insistence on comparing EMU with floating exchange rates within the European Union rather than comparing it with crisis-prone pegged but adjustable exchange rates.

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## Euro Symposium

# Mundell Changed His Mind

Ronald I. McKinnon<sup>1</sup>

### ABSTRACT

My own view has always been that stable exchange rates among the highly integrated European economies were devoutly to be wished. The only question was whether a common monetary standard or a common currency was the best way to achieve it. But after the Maastricht Treaty imposed credible fiscal constraints on the participating countries, I became convinced that a common currency was feasible and the best way to go.

One of the paradoxical aspects about the debate was that outstanding euro skeptics, such as Martin Feldstein and Barry Eichengreen, were essentially using the model in Robert Mundell (1961). They worried about asymmetric shocks: European countries suffered the business cycle out of phase and so needed exchange rate flexibility. However, Mundell himself became the leading enthusiast for the euro!

In McKinnon (2004) I showed that Mundell essentially changed his mind about 1970 in two articles published in 1973 in an obscure conference volume that virtually nobody read (Mundell 1973a, b). Henceforth, Mundell emphasized the importance of absolutely fixed exchange rates, which only a common currency could give, in order to secure full capital market integration and risk sharing.

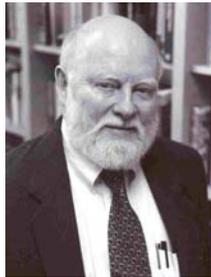
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**Ronald I. McKinnon** is William D. Eberle Professor of International Economics at Stanford University. He is best known for an important article on the theory of optimum currency areas (1963); *Money and Capital in Economic Development* (1973), which highlighted how policies of “financial repression” retarded economic growth; *The Order of Economic Liberalization* (2nd edition 1993), which outlined how to traverse the perilous path from central planning to the market economy; and his work on regional and worldwide monetary arrangements.

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## Euro Symposium

# The Secret of the Euro's Success

George Selgin<sup>1</sup>

### ABSTRACT

I never doubted that the euro could succeed, allowing “success” here to connote nothing beyond the new currency’s ability to take root and survive. As I wrote in 1994, the successful establishment of a new fiat money depends mainly on its promoters taking advantage of “a launching vehicle consisting of a fixed exchange rate link either to an established money or to some real good or goods” (Selgin 1994, 821). In the euro’s case, the link consisted of a set of fixed exchange rates with the various pre-existing European fiat currencies which, as Jonung and Drea (2010) observe, were themselves “irrevocably locked together” by fixed rates at the start of 1999. The fixed rates made it easy for potential euro users to place an initial value on the new currency and to overcome the “network externality” that might otherwise have discouraged them from adopting a new currency and underlying unit of account.

But the Europeans wisely went beyond merely making it relatively easy for people to switch from established fiat monies to the euro: they made a wholesale switch compulsory by announcing the older monies’ eventual withdrawal. Small wonder, then, that the euro “flew” instead of foundering! Had a plan along the lines of British prime minister John Major’s “hard ecu” proposal been adopted instead, with euros forced to compete indefinitely with Europe’s established monies, things might have been very different: perhaps euro notes would have suffered the same fate as Susan B. Antony and later Sacagawea dollar coins, becoming mere curiosities to most Europeans, and a nuisance to merchants.

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The euro's prospects for success in the narrow sense considered here clearly had very little to do with those considerations that form the basis for the theory of optimum currency areas. Such considerations would, to be sure, have bearing on whether and to what extent the euro's adoption would contribute to cyclical and regional unemployment within the euro zone, and might therefore matter to the euro's *political* popularity and to individual nation's decision to join or not join the euro zone. But they could only play but a minor part in otherwise influencing the European public's real demand for euros, through their influence on European real income and on the actual and expected willingness of the European Central Bank to preserve the euro's purchasing power. In general, individual money holders give no thought to a currency's macroeconomic virtues or shortcomings in choosing whether to hold it, and in what amounts.

Of course the theory of optimum currency areas might suggest that a benevolent social planner would have opposed European monetary unification. But as Eichengreen and Frieden (1994) correctly observe, no such planner took part in the decision to foist the euro on Europe. The tendency of some economists to reason otherwise, as if denying that we live in a theoretically "optimal" world were tantamount to abandoning the assumption of *individual* optimization, may be the greatest single fallacy perpetuated by contemporary economists.

The strategy that succeeded in establishing the euro was also far more capable of assuring its survival than many critics appear to have anticipated. By first linking the euro to established European currencies and then withdrawing the latter, the euro's sponsors were able to take advantage of what the network externalities literature calls "lock-in." In effect, the authorities kicked away the ladder Europe's economy had scaled to establish a common currency, leaving Europeans with no equally convenient way of retreating to the *status quo ante*. It was mainly for this reason that predictions like Dominick Salvatore's (1997), to the effect that "a major asymmetric shock would cause the euro area to dissolve," proved overly pessimistic.

To be fair to skeptics about the euro, though, their concerns that the EMU might not fly were for the most part grounded, not on the belief the euro could not take root and survive if the European powers chose to adopt it, but on the belief that those powers would fail either to gain their citizens' approval of the plan or to meet fiscal and other participation conditions set forth in the Maastricht Treaty. These concerns were certainly legitimate; that they failed to materialize suggests not a failure of economic analysis, but at worst a failure of economists to fully grasp the direction and strength of European political movements.

Although I myself steered clear of public pronouncements concerning the likelihood of European nations adhering to the Maastricht timetable, I did offer some thoughts concerning the euro's likely influence on inflation. In particular, I

sought to counter Hayek’s suggestion that, by reducing opportunities for currency substitution, the substitution of one European currency for many would prove a recipe for higher inflation—higher, certainly, than what could be expected from the best of the original European currencies—the German mark and the Swiss franc. This belief, I argued, overlooked the fact that, once having conquered Europe, the euro had “a fighting chance to become a serious rival to the dollar as an international currency” (Selgin 2000, 107; see also Selgin and VanHoose 2007). The European Central Bank might therefore choose “to take the high road of endeavoring to supply the international currency market” by securing for the euro, by means of a relatively tight monetary policy, a reputation as a low-inflation currency, foregoing thereby the low-road option of merely exploiting its European monopoly. To this extent I was, I suppose, something of a euro-believer, if only relative to my Hayekian counterparts. Alas, under present circumstances it would be tempting fate to claim that my view has been vindicated.

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## Euro Symposium

# The Euro and the German Veto

Roland Vaubel<sup>1</sup>

### ABSTRACT

## Why They Thought It Couldn't Happen

American (and European!) economists did not understand the politics behind EMU at the time. The political causes of EMU were revealed by Jacques Attali, adviser to French president Francois Mitterand, as late as 1998. In a television interview he said (my translation),

It is thanks to French reticence with regard to an unconditional reunification [of Germany] that we have got the common currency....The common currency would not have been created without the reticence of Francois Mitterand regarding German unification.<sup>2</sup>

In 1999, this interpretation was confirmed by Hubert Védrine, another longtime foreign policy adviser to Mitterand and later his minister for foreign affairs:

The President knew to grasp the opportunity, at the end of 1989, to obtain a commitment from [German Chancellor Helmut] Kohl....Six

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2. The interview is shown in the film "The History of the Euro." The German version was broadcast on March 26, 1998. All interviews were presented in the original with German subtitles. Attali (1995, 353-358) had hinted at this linkage already in his memoirs.

months later, it would have been too late: no French President would have been in a position any longer to obtain from a German Chancellor the commitment to introduce the common currency. (Quatremer and Klau 1999, 172, my translation)

On the German side, there is a single sentence in the memoirs of Horst Teltschik, chief foreign policy adviser in the Chancellor's office, confirming Attali's testimony. Teltschik (1991, 61) quotes himself telling a French journalist at the beginning of December 1989 (i.e., three weeks after the fall of the Berlin Wall and ten days prior to the Strasbourg summit calling the intergovernmental conference on EMU) that "the German Federal Government was now in a position that it had to accept practically any French initiative for Europe." In a 1998 interview, Richard von Weizsäcker, President of Germany, called EMU the price of German reunification, but Kohl always denied this, and Hans-Dietrich Genscher, the minister of foreign affairs from 1974 to 1992, called it a "legend."<sup>3</sup> My historical research on these events has been published in Vaubel (2002), which cites many more sources.

Jonung and Drea (2010) quote Barry Eichengreen (1996) predicting that EMU "will happen if there exists a viable package in which the French get EMU and the Germans get an increased foreign policy role in the context of an EU foreign policy." This had been Genscher's (and probably Kohl's) original strategy, but it was overtaken by events—the prospect of German reunification. Genscher's original strategy had been aptly described by Bernard Conolly (1995, 73f.):

Genscher...wanted to change the perception of Germany as an economic giant but a political pygmy....Political union...would provide a convenient shell for German diplomatic action....Genscher was prepared to offer France the bait of a diminution of German national sovereignty in monetary policy, an area that did not interest him a great deal, in order to increase Germany's diplomatic weight.

Wolfgang Schäuble, state secretary in the Chancellor's office, was even reported to have envisaged a "nuclear option" in which Germany would participate in the framework of a European defense policy. However, in private correspondence, Teltschik wrote me that this had not been Kohl's position. When proposing EMU in February 1988, Genscher was directly reacting to the rejection of European political and military union by the French and the British

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3. Von Weizsäcker's interview is in Joergens (1998). Genscher made his claim in a speech in the Bundestag on April 23, 1998 (*Frankfurter Allgemeine Zeitung*, April 24, 1998).

governments at a conference in The Hague in October 1987. In the intergovernmental conference that prepared the Maastricht Treaty, Kohl and Genscher still fought for “European Political Union,” but without success. Their bargaining chip—giving up the German mark—was no longer available for this purpose. It had to be used to obtain Mitterand’s assent to German unification. In the words of Dorothee Heisenberg (1999, 1985), a political scientist,

EMU had been the leverage to achieve greater EU political union. Thus, if anything was traded for German unity, it was Germany’s requirement of significant EU political union....With the timetable for EMU being hurried by Mitterand, the casualty was political union.

Major steps toward a common foreign and defense policy have subsequently been taken in the treaties of Amsterdam, Nice and Lisbon, but these were quite different bargains. Genscher’s proposal of EMU led to the establishment of the Delors Committee, which Jonung and Drea mention in their paper. However, contrary to their claim, it is not true that “the Delors Report of 1989 recommended Economic and Monetary Union.” The Delors Report did not state whether EMU ought to be undertaken or not, otherwise Bundesbank chairman Karl-Otto Pöhl and Bank of England governor Robin Leigh-Pemberton would not have signed it. The report merely stated how EMU would best be attained if the member states decided to strive for it.

Jonung and Drea attribute the crisis of the European Monetary System in 1992 and 1993 to the Danish referendum of June 1992. This is not convincing. The crisis was a consequence of the Maastricht Treaty and German unification. German unification led to massive budget deficits. To counter their highly expansionary effect, the Bundesbank adopted an increasingly restrictive monetary policy. Moreover, the Maastricht Treaty defined convergence criteria for EMU membership, notably an inflation criterion. As I pointed out in January 1993 (Vaubel 1993, 108),

it has strengthened the Bundesbank’s determination to reduce German inflation to very low levels (and to keep it there as long as possible)...As the Bundesbank is not keen to lose its independence to a European central bank, it will make it as difficult as possible for the others to satisfy the convergence criteria with respect to inflation and exchange rate stability.

The markets did not believe that the other central banks would be able to follow. This is why, for all practical purposes, the European Monetary System

collapsed in August 1993. The margins of plus or minus 15 percent established then left the currencies effectively floating.

This leads me to another circumstance that was not expected by U.S. economists—the fact that EMU started with as many as eleven member states. They simply did not imagine that the convergence criteria would be fudged in the way they were. Austria, Germany, Italy and Spain unambiguously violated the deficit criterion. Finland, Ireland, Italy and Portugal unambiguously violated the exchange rate criterion because, at the time the selection was made, they had not been members of the exchange rate mechanism of the European Monetary System for at least two years. Only one member state, Luxembourg, satisfied all convergence criteria unambiguously. In the case of Belgium and the Netherlands, the answer to whether they met all the criteria depended on whether the reduction of the debt-to-GDP ratio—even though still exceeding 60 percent—was considered to be acceptable (Vaubel 1998). Greece, as is now well known, gained admission in 2001 by forging its accounts.

Why did EMU not start with a smaller group of countries? Here is the prediction I made (Vaubel 1993, 111):

How many member-countries will enter the third stage from the beginning? It is safe to assume that no member-government will vote in favour of moving to the third stage unless its own country is admitted to the third stage. Thus, a qualified majority of the Council will decide that a qualified majority of the member-countries is fit to enter the third stage. This implies that European monetary union will not begin with a hard core of hard currencies.

## Why They Thought It Was a Bad Idea

Did U.S. economists fail to understand that EMU would feed back to the criteria of optimum currency areas as Jonung and Drea seem to think? I doubt it. This was not a new insight. I quote from a 1976 paper:

Currency unification itself may affect the need for real exchange-rate adjustment....Who knows the size of the impact which currency unification will have on factor mobility, diversification and openness? What is certain is only that it will increase them. Moreover, just because it increases factor mobility, diversification and openness, currency unification has also effects which reduce the need for real exchange-rate adjustment. Indeed, it seems likely that the self-validating forces of

currency unification will prove stronger than the disequilibrating demonstration effect so that observed real exchange-rate changes between independent currency areas will under- rather than overstate the desirability of currency unification. (Vaubel 1976, 441)

However, the argument does not relate to business cycle correlations. Jonung and Drea approvingly report the view of Jeffrey Frankel and Andrew Rose that, as currency unification raises the correlation between national business cycles, it brings the group closer to fulfilling optimum currency area criteria. This is not true. A high positive correlation of business cycles is highly unfavourable for a currency union if it is caused by demand shocks in one country and supply shocks in the other. If, for example, country A is hit by a positive demand shock while country B experiences a positive supply shock, the need for real exchange rate adjustment is especially large: there has to be a large real appreciation of country A vis-à-vis country B. It is necessary to look at demand shock correlations and supply shock correlations separately (as, for the first time, Bayoumi and Eichengreen did in 1993).

Finally, have U.S. economists been too skeptical about EMU, as Jonung and Drea suggest? EMU has indeed happened, but has it performed so well? And how will it evolve in the future if it lasts?

Monetary policy affects the inflation rate with a lag of two to three years.<sup>4</sup> Thus, the low consumer price inflation rates of 1999 and 2000 (1.75 percent on average) were inherited from the German Bundesbank. From 2001 to 2008, inflation in the eurozone has been 2.3 percent per annum on a compound average basis. This is more than in Denmark (2.1 percent), Norway and the United Kingdom (both 1.9 percent), Sweden (1.8 percent) and Switzerland (1 percent)—in other words, more than in any other West European currency area with an independent central bank. In each year, the European Central Bank has exceeded the upper limit of its inflation target, which has always been 2 percent (see Table 1). Moreover, owing to the need for real exchange rate adjustment, five EMU member states (Greece, Ireland, Netherlands, Portugal, and Spain) have suffered from annual inflation rates in excess of 3 percent in several years. Table 1 also shows that the four East European EU member states that have pegged their currencies to the euro have experienced even higher inflation rates—up to 15 percent in Latvia in 2008—due to the Balassa effect.

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4. See the evidence in the ECB *Monthly Report* of July 2000, 59.

**Table 1: Consumer Price Inflation**

	2001	2002	2003	2004	2005	2006	2007	2008
Euro area	2.4	2.3	2.1	2.2	2.2	2.2	2.1	3.3
<i>Euro area members</i>								
Greece	independent		3.4	3.0	3.5	3.3	3.0	4.2
Ireland	4.0	4.7	4.0					3.1
Netherlands	5.1	3.9						
Portugal	4.4	3.7	3.3					
Spain		3.6	3.1	3.1	3.4	3.6		
<i>EU member states pegging to the euro</i>								
Bulgaria	7.4	5.8		6.2	6.0	7.4	7.6	12.0
Estonia	5.8	3.6		3.0	4.1	4.4	6.6	10.4
Hungary	9.1	5.3	4.7	6.8	3.5	4.0	7.9	6.0
Latvia		not yet pegging		6.2	6.9	6.6	10.1	15.3

Note: Only individual countries and years with inflation of 3 percent or more are shown.

What is most worrying, however, is the series of institutional and procedural changes that has taken place in EMU since 1999:

1. In May 2003, the European Central Bank raised its inflation target from a band of zero to two percent (with an ideal point of 1.5 percent<sup>5</sup>) to 1.99... percent.
2. Instead of modifying the monetary reference rate in response to the permanent portfolio shift that lowered velocity in 2002<sup>6</sup>, the European Central Bank demoted it to low rank in May 2003 and effectively abandoned it in 2007.
3. In March 2005, the Stability and Growth Pact was watered down beyond recognition.
4. In 2006, the European Central Bank's research department, which had been directed by Otmar Issing, a German conservative, was given to Loukas Papademos, a Greek socialist. Papademos has suggested that inflation is not a monetary phenomenon but a consequence of low unemployment (Modigliani and Papademos 1976), and he immediately organized a conference aiming to show that the money supply does not matter.

These changes amount to a trend. They suggest that the future of the euro will not be like its past. The initial choice of the institutions, the rules and the

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5. For the derivation see, e.g., Vaubel (2004, 153).

6. For the econometric evidence, see Hofmann (2008).

persons governing EMU was made in a very special historical setting. The overture to the euro-game was special because one country, Germany, enjoyed veto power. Without German assent, EMU would not have started. Even though Chancellor Kohl had committed Germany to monetary union in December 1989 in principle, the implementation of that promise was a matter of negotiation up to the very end. The German government, based on a coalition of Christian Democrats and Liberals, was the driving force behind the European Central Bank statute; it imposed the Stability and Growth Pact on its reluctant partners; it postponed the redistribution of seigniorage, which was costly to Germany; it carefully screened the candidates for the executive board, including the first president; and it made sure that the economic and research directorate would go to a German monetary conservative with a maximum term of office. Even though seven of the eleven participating states had socialist-led governments in 1998, European Central Bank president Wim Duisenberg was the only one of the six executive directors with a socialist background, and even he was known to be a monetary conservative.

Once EMU had started, the German veto was gone. Appointments and policies are no longer determined by the most inflation averse member-country—as they were under currency competition—but by the median. The first effects can be seen. They are the beginning of a major shift from initial conditions to the long-run politico-economic equilibrium of the game.

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# Outliers and the Halloween Effect: Comment on Maberly and Pierce

H. Douglas Witte<sup>1</sup>

## ABSTRACT

In an article in the *American Economic Review*, Bouman and Jacobsen (2002) document a curious stock return pattern. They analyzed monthly returns in 37 countries from January 1970 through August 1998. For 36 of the 37 countries, mean monthly returns were lower over the period May to October than over the period November to April. The finding has been dubbed the Halloween effect and coincides with the older market adage, “Sell in May and go away.”

In an *Econ Journal Watch* comment, Maberly and Pierce (2004) contend that “Bouman and Jacobsen’s documentation of significant Halloween effects for U.S. equity returns appears to be driven by two outliers” (31). Maberly and Pierce identify the two outliers, without formalizing criteria, as October 1987, in which the U.S. and world equity markets declined markedly, and August 1998, in which the U.S. market declined amid the collapse of the hedge fund Long-Term Capital Management. They contend that the Halloween effect in the United States is rendered insignificant after an adjustment is made for the impact of these two outliers.

The primary contention of this paper is that Maberly and Pierce deal with outliers in an unsatisfactory way and that better methods of confronting influential data produce results very similar to those first reported in Bouman and Jacobsen. We use robust regression methods to estimate the Halloween effect for the same January 1970 through August 1998 monthly U.S. stock returns data analyzed by Maberly and Pierce. Contrary to the Maberly and Pierce findings, our results indicate statistical significance of a Halloween effect at levels similar to those

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originally reported in Bouman and Jacobsen. We find that the four biggest outliers aside from October 1987 and August 1998 all work against finding a Halloween effect. The effect of these additional outliers is, then, to obscure, rather than to drive, the Halloween effect.

Lucey and Zhao (2008) also examine Bouman and Jacobsen's work. They analyze monthly U.S. stock returns from 1926 to 2002 to determine the persistence of the Halloween effect over time. Using sub-period analysis, they find that the Halloween effect is not consistently significant over time for value weighted returns. Although the Lucey and Zhou study is not the focus of our comment, we have applied robust regression to the extended CRSP returns they examine. In untabulated results, the Halloween effect is statistically significant over the 1926 to 2002 time frame at a similar level to that found by Bouman and Jacobsen over the 1970 to 1998 time frame.<sup>2</sup>

Maberly and Pierce use a regression framework in which October 1987 and August 1998 are given a separate dummy variable in order to eliminate the impact of these two observations on the estimate of the Halloween effect. However compelling the case may be for Maberly and Pierce to control for October 1987 and August 1998, their framework is somewhat arbitrary in the number of outliers to control for. As we'll see in Table 2, November 1973 has very nearly the same degree of influence on the Halloween effect estimate as August 1998. During this time, President Nixon imposed price and marketing allocation controls on oil products in response to an oil boycott Arab nations had placed on nations that supported Israel. What makes one an outlier and the other not? Additionally, March 1980 is associated with widespread financial market uncertainty brought on by the precipitous fall in silver prices and concern over the large bank-financed silver positions of the Hunt brothers. Using the Maberly and Pierce framework, it is difficult to imagine a definitive way in which to determine the appropriate number of influential observations that are to be treated specially.

Bouman and Jacobsen employ the typical dummy variable regression technique which equates the regression equation to a simple means test. To determine whether the higher mean return over the November-April period might merely be the result of high January returns (the well known "January effect"), they modify their original regression specification to the following:

$$r_t = \mu + \alpha_1 S_t^{adj} + \alpha_2 Jan_t + \varepsilon_t \qquad \text{Model 1}$$

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2. The Huber and Tukey bisquare regression estimates of the Halloween effect over the 1926 to 2002 time frame are .52% (t = 1.69), and .49% (t=1.66), respectively.

The continuously compounded monthly return in month  $t$  is denoted by  $r_t$ . The adjusted Sell in May dummy,  $S_t^{adj}$ , takes the value of 1 in the period November to April, except in January, and 0 otherwise. The January dummy,  $Jan_t$ , takes the value of 1 in January and 0 otherwise. The intercept,  $\mu$ , represents the average return over the May to October period. The coefficients  $\alpha_1$  and  $\alpha_2$  represent return relative to the May to October period. The size and statistical significance of  $\alpha_1$  relate to the question of a Halloween effect: Are mean returns over the period November-April, excluding January, significantly higher than during the period May-October?

**Table 1. Regression estimates of the Halloween effect. Halloween effect represented by  $\alpha_1$ . Monthly Returns Data for 1970:01-1998:08**

(t-statistics in parentheses, returns in basis points)						
Model 1: $r_t = \mu + \alpha_1 S_t^{adj} + \alpha_2 Jan_t + \varepsilon_t$ Model 2: $r_t = \mu + \alpha_1 S_t + \alpha_2 Jan_t + \alpha_3 D_t + \varepsilon_t$						
Regression Model						
	1	1	2	1	1	1
Estimator						
	OLS	OLS	OLS	Huber	Tukey	Median
$\mu$	49.9 (1.39)	42.3 (1.21)	68.0 (2.08)	67.2 (2.16)	71.5 (2.29)	47.6 (.94)
$\alpha_1$	77.1 (1.62)	87.7 (1.69)	62.0 (1.28)	79.1 (1.71)	79.7 (1.72)	104.2 (1.83)
$\alpha_2$	168.5 (1.62)	181.5 (1.98)	93.8 (1.08)	145.2 (1.77)	142.7 (1.73)	230.9 (1.71)
$\alpha_3$			-2205.7 (-7.27)			

Notes: OLS estimates in Column 1 are based on continuously compounded MSCI index returns for the U.S. The t-statistics are derived from White (1980) heteroskedasticity-adjusted standard errors.

OLS estimates in Columns 2 and 3 are based on continuously compounded CRSP value weighted returns. The t-statistics are calculated from traditional coefficient standard errors.

Huber (Column 4) and Tukey bisquare (Column 5) estimation results are based on continuously compounded CRSP value weighted returns. The t-statistics are calculated from the estimated asymptotic covariance matrix (see Fox (1997) for details). The tuning constant in the Huber regression is 1.345. The tuning constant in the Tukey regression is 4.685.

Median regression estimates in Column 6 are based on continuously compounded CRSP value weighted returns. The t-statistics are derived from a bootstrapped sample covariance estimate.(see Koenker, et.al. (2000) for details)

The evidence Bouman and Jacobsen report for a Halloween effect in the United States is, at best, of marginal statistical significance. Although they only report the t-statistic of  $\alpha_1$ , its value can be determined by using the current version of the value-weighted MSCI reinvestment index they used. The results are reported in Column 1 of Table 1. The estimate of  $\alpha_1$  is .771% and has a t-statistic of 1.62. The Bouman and Jacobsen paper reports a t-statistic of 1.61 for  $\alpha_1$ , just outside the 10% significance level. Although Maberly and Pierce do not report the results of an identical regression run on the CRSP value weighted returns they analyze, we can easily do so. The results are reported in Column 2 of Table 1. The estimate of  $\alpha_1$  is .877% and has a t-statistic of 1.69, significant just inside the 10% level. Given the very similar t-statistics for  $\alpha_1$ , inferences regarding the Halloween effect from the two different datasets are likely similar.

Some readers will surely view the U.S. market results reported by Bouman and Jacobsen as statistically insignificant given that a t-statistic of 1.61 does not indicate marginal significance at the 10% level much less significance at the more conventional 5% level. We do not disagree. However, the Maberly and Pierce critique does not focus on significance level issues. Given the nature of the Maberly and Pierce critique, it is more useful in the present context to use t-statistics and their associated p-values as gradated measures of the strength of the regression evidence as opposed to using them to make a formal rejection decision of a null hypothesis.<sup>3</sup> Thus, our analysis concerns whether consideration of outliers materially affects the strength of the regression evidence.

In order to determine the extent to which outliers drive the results, Maberly and Pierce formulate a regression specification augmented with a separate outlier dummy to accommodate October 1987 and August 1998:

$$r_t = \mu + \alpha_1 S_t + \alpha_2 Jan_t + \alpha_3 D_t + \varepsilon_t \quad \text{Model 2}$$

The dummy variable,  $D_t$ , takes the value of 1 on the two outlier dates and a value of 0 otherwise. The Sell in May dummy,  $S_t$ , takes the value of 1 in the period November to April, including January. The results of this alternative specification are reported in Column 3 of Table 1. The Halloween effect estimate is .62% with an associated t-statistic of 1.28 ( $p = .201$ ). According to Maberly and Pierce, this recognition of outliers solves the Halloween effect puzzle and allows “stock market efficiency” to withstand another challenge.

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3. Using p-values as a flexible measure of significance or relevance is often associated with the views of pioneering statistician R.A. Fisher. The use of p-values to make decisions about a hypothesis is more consistent with the views of Fisher’s contemporaries Jerzy Neyman and Egon Pearson.

To identify the observations which most influence the Halloween-effect estimate and to determine the broader effect of unusual returns, we calculate an influence vector. An influence vector measures the influence of an observation by calculating OLS coefficient estimates with that observation omitted. Influence on coefficients is, heuristically speaking, the product of an observation's leverage (the degree to which the explanatory variable(s) is unconditionally unusual) and the observation's discrepancy (the degree to the response variable is unusual conditional on the explanatory variable(s)). For *Model 1*, all of the observations in months other than January have similar leverage given that six out of the 12 calendar months fall in the May-October period and five out of the 12 calendar months fall in the November-April period excluding January. The similar leverage of the pertinent observations (i.e., all those save January) implies we can attribute an observation's influence to the extent to which the observation is a *regression outlier*—an unusually large return in absolute value terms conditional on the explanatory variables. We focus on the change in the coefficient estimate on the Halloween indicator in regressions of *Model 1* using the same CRSP returns Maberly and Pierce use. We report the 10 biggest outliers in Table 2.

**Table 2. The Impact of Outliers on the Halloween Effect. Change in  $\alpha_1$  Resulting from Omitting Outliers in Descending Order of Magnitude. Monthly CRSP VW Returns Data for 1970:01-1998:08.**

			$\Delta\alpha_1$		
Month	Year	Outlier Return	Outlier Omitted	Cumulative	
<i>Value Weighted Index Returns. <math>\alpha_1 = .877\%</math> in original regression</i>					
1	October	1987	-25.5%	-.152%	-.152%
2	August	1998	-17.2%	-.103%	-.256%
3	November	1973	-12.9%	.100%	-.156%
4	March	1980	-12.8%	.099%	-.055%
5	April	1970	-11.1%	.088%	.035%
6	October	1974	15.3%	.087%	.122%
7	October	1978	-11.8%	-.071%	.048%
8	September	1974	-11.6%	-.071%	-.026%
9	August	1982	11.3%	.064%	.038%
10	October	1982	11.2%	.063%	.102%

Notes:  $\alpha_1$  is the estimated coefficient on the Halloween indicator from *Model 1*. The outlier return is the continuously compounded return to the CRSP value weighted index.

We find that, although the October 1987 and August 1998 observations have the biggest impact on  $\alpha_1$ , the omission of any of the next four most influential returns, two of which are alluded to above, would all result in a higher estimated Halloween effect. Cumulatively, dropping the six most influential observations would add over 12 basis points to the Halloween effect estimate. Table 2 shows that while exclusion of the two biggest outliers would reduce the Halloween effect estimate by nearly one-third, omission of the 6 biggest (or even the 10 biggest) outliers would materially augment the estimate.

The results of omitting outliers demonstrated in Table 2 raise a question: How many outliers are appropriate to control for? One approach is to use formal statistical methods to indentify outliers, throw out the offending observations, and re-estimate the model using only the “clean” data. In our regression framework doing so would give outlying observations increased influence on the coefficient estimates up until some threshold point at which they are discarded and subsequently have no influence. When data are suspected of being contaminated or incorrectly coded, the approach may be appropriate. An alternative indirect approach is to include all of the data, but continuously downweight outlying data rather than simply discarding them. That is accomplished by robust regression. Given that our objective in this paper is to determine how unusual returns influence the Halloween-effect estimates rather than to determine an exact number of outliers, robust regression is a reasonable approach to resolving the issue.

The most common general method of robust regression is *M-estimation*, introduced by Huber (1964). Such methods are deemed robust because they produce estimates that are not as sensitive to outliers as OLS estimates. M-estimators and OLS typically display a similar sensitivity to observations with a high degree of leverage. In such high-leverage cases, bounded-influence estimators, such as least-trimmed-squares regression, are more effective. However, as noted above, the differential influence of the observations in our sample is almost entirely due to different degrees of discrepancy. M-estimation is effective in dampening the influence of observations with extreme discrepancy.

We use two robust M-regression methods to investigate the Halloween effect. First, we use the Huber (1964) estimator and we then apply the Tukey (1960) bisquare (or biweight) estimator. Additionally, we apply the median regression estimator that minimizes the sum of absolute errors (also known as least absolute deviation regression). All of these techniques limit the influence of outliers on regression results without arbitrarily selecting ex-ante the outliers to control for.

In Columns 4 through 6 of Table 1 we report the results of the three robust estimators of *Model 1* using the CRSP returns. The Huber and Tukey methods

both produce Halloween-effect estimates that are slightly lower than the OLS estimate, but the associated t-statistics are slightly higher. This is often the case with robust regression. Outliers are a two-edged sword; extreme returns influence the OLS estimates but also tend to inflate the standard error of the regression estimates. The lower estimates do suggest, however, that there are a number of “semi-outliers” (those outside the 10 largest we report in Table 2) that nudge the OLS estimates of the Halloween effect upward. The median regression estimate suggests that the Halloween effect has a larger impact on the return distribution’s median than on its mean. The  $\alpha_1$  estimate from median regression has a t-statistic of 1.83, the highest of any we find for the Halloween indicator.

All three robust regression methods indicate that the Halloween effect is significant at a level similar to their OLS counterpart and the original Bouman and Jacobsen results. Our robust regression analysis suggests that outliers do not drive the results of Bouman and Jacobsen. Marginal as the original results are, they remain marginally statistically significant using methods more resilient to outliers.

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## About the Author



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# 305 Economists Called to Answer Questionnaire on the Pre-Market Approval of Drugs and Devices

Daniel B. Klein<sup>1</sup> and Jason Briggeman<sup>2</sup>

## ABSTRACT

By acts of Congress, notably in 1938, 1962, and 1976, all new drugs and medical devices are banned until individually permitted by the U.S. Food and Drug Administration (FDA), a policy known as *pre-market approval*. In reviewing the regulatory history, Peter Temin writes:

The shift from assuming a capable consumer to assuming an incompetent consumer was made within the FDA within six months of the Federal Food, Drug, and Cosmetics Acts' passage [in 1938]. Not only was the shift in assumptions not controversial, the method by which it was accomplished occasioned no comment as well. The decisions of the FDA were ratified by the courts and enacted into statute by the Congress. Neither branch of the government undertook to question the FDA's assumptions. (Temin 1979, 104)

Is it possible that pre-market approval should be seen as an historic mistake, a policy that has never been satisfactorily justified? Is any economist today ready to stand up and stand by a market-failure rationale for the pre-market approval policy? If so, what rationale does he or she have to offer? If no one stands by a market-failure rationale, then we and others who oppose pre-market approval may feel more confidence both in the conclusion that the policy should be liberalized

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and in the implications that such conclusion would hold about the cultural ecology of professional economics and political discourse generally.

Here we call 305 economists to respond online to a questionnaire about the policy. We explain here why the economists summoned may have a moral responsibility to participate, and why any conscientious researcher is entitled to summon them in a manner that makes responding easy and uncompromised. Our questionnaire is straightforward and provides ample opportunity for open-ended responses.

## The Economics of Pre-market Approval

Klein and Tabarrok (2009) extensively review the literature, and Klein (2008) specifically addresses whether there is a market-failure rationale to justify pre-market approval. Here we briefly state our doubts about pre-market approval, omitting the elaboration and citations found elsewhere.

Due to pre-market approval, drugmakers face costs, delays, and uncertainties that suppress the development of new therapies. Famous studies of the introduction of beta-blockers showed that many tens of thousands of American deaths could be attributed to the delay between approval in Britain and in the United States. Scores of other drugs have been delayed that plausibly would have saved many other lives. But pointing concretely to delays in the approval of well-known drugs can only illuminate a potentially larger problem: the extra costs and uncertainties imposed by the pre-market approval process may prevent the development of many drugs. Those losses—of not-developed drugs, of would-have-been benefits—are impossible to identify or quantify, but they are no less real.

Might these costs of pre-market approval be redeemed by its benefits? Pre-market approval surely does prevent some baneful products from being developed and marketed. However, the vast majority of economists who address the matter and publish a judgment believe that the costs dominate the benefits, at least at the margins of current policy. Klein (2008) quotes 35 economists who favor some degree of liberalization of pre-market approval. On the other side, Klein finds just three economists who seem to oppose liberalization.

Since Adam Smith, the mainline of economics has worked from a presumption in favor of allowing voluntary action and exchange. We economists may differ in how strongly we hold this presumption, but we all carry such presumption to one degree or another. Restrictions are generally viewed as justified only if some species of market failure plagues the matter and if the restriction is thought to remedy the problem at an acceptable cost. So is there a

market failure in drug development and marketing? Is pre-market approval a wise means to remediate any such market failure that exists?

In illness and therapy, there are great uncertainties, but uncertainty *per se* is not generally seen as a market failure. Consumers no doubt make their share of errors, but is there evidence that they err systematically in a way that pre-market approval would remediate? Doctors, too, make errors, but still they are trusted to prescribe FDA-approved drugs that can be quite dangerous if misused; when doctors err, they face a variety of consequences including the possibility of civil lawsuits.

It seems to us that freeing up approval would give the consumer and her healthcare providers a wider set of options and greater control of the medical decisions they need to make. They are the ones with the greatest knowledge of the particular circumstances that surround the patient, and they are also the ones with the strongest incentives to seek opportune information—which in principle can be made no less available to them than to FDA decisionmakers. Until we have a significant market-failure argument for government intervention, these basic reasons recommend the principle of voluntarism.

## Purpose and Ethic

Despite the inability of Klein (2008) to locate in the literature a coherent market-failure argument for pre-market approval, a survey of American Economics Association members revealed broad support for FDA regulation of the pharmaceutical market (Klein and Stern 2007). We seek to explore whether there is any basis for the support.

Here we take an unconventional approach in calling selected economists to answer the questionnaire. Though unconventional, our call may be justified as an ethical summons. In *The Theory of Moral Sentiments*, Adam Smith distinguished types of justice. Commutative justice, “abstaining from what is another’s” (269), clearly places no duty on the summoned economist; one may often fulfill the duties of commutative justice “by sitting still and doing nothing” (82). A duty may spring, however, from distributive justice, which “consists in proper beneficence, in the becoming use of what is our own, and in the applying it to those purposes either of charity or generosity, to which it is most suitable, in our situation, that it should be applied” (270). Smith writes of *proper* beneficence, hence *a duty* of the economist to distribute his social resources—his time, attention, and participation—to the purposes of generosity to which it is most suitable, in his situation, that they should be applied.

Is it suitable that the summoned economist's time, attention, and expertise be applied to completing this questionnaire? The issue at hand is one of great importance; the vast preponderance of scholarly judgment indicates that something is amiss with current policy; participation in the study is easy and uncompromised; those invited are fitted to address the issue. It seems to us that, within the summoned economist's present situation, it is suitable that his social resources be applied to completing the questionnaire. To abstain, while no infraction of commutative justice, would be unbecoming, a blot on distributive justice.

Similarly, we believe that any conscientious researcher is entitled to issue a summons such as this one. Scholarship aspires to be an open exchange of learning. If questioning is fair, convenient, and transparent to all, then anyone should feel entitled to summon anyone. Such an attitude enhances the accountability of scholarly discourse. Furthermore, scholarship ought to inform politics, certainly in a democratic society. Greater accountability improves political discourse. Openness and dialogue have always been ideals of political democracy. Democratic values would seem to favor participation in efforts such as ours.

## Study Logistics

Each economist listed in Table 1 here has been sent **an email** containing a unique link to a gated version of the questionnaire. Each completed questionnaire will yield a transcript of the virtual conversation. A future issue of this journal will publish the transcripts of summoned economists, each with the respondent identified—i.e., those who complete the questionnaire at the gated site *will* be identified; that is, gated responses will *not* be anonymous.

**Table 1: 305 Economists Summoned to Answer the Questionnaire.**

Akerlof, George (5)	Culyer, Anthony John (1)	Gottschalk, Adrian H. B. (2)	Kyle, Margaret K. (2)
Akerman, Mary Kay (3)	Currie, Janet M. (1)	Grabowski, Henry G. (2)	Langley, Paul C. (1)
Anis, Aslam H. (1)	Cutler, David M. (1)	Green, Colin (1)	Lapuerta, Pablo (1)
Antoñanzas, Fernando (1)	Danzon, Patricia M. (1,2)	Greenberg, Paul (1)	Lawrence, Robert Z. (4)
Arrow, Kenneth (5)	Darling, Helen (1)	Greiner, Wolfgang (1)	Lazear, Edward P. (4)
Askildsen, Jan Erik (1)	de Pouvoirville, Gérard (1)	Grootendorst, Paul (1)	Le Pen, Claude (1)
Auerbach, Alan J. (3)	DeLeire, Thomas (1)	Grossman, Michael (1)	Leffler, Keith B. (2)
Autor, David (3)	DeLong, J. Bradford (3)	Gruber, Jonathan (1)	Levinsohn, James (3)
Badia, Xavier (1)	Destache, Chris (1)	Guest, Julian F. (1)	Levitt, Steven D. (6)
Baicker, Katherine (1,4)	Donaldson, Cam (1)	Gulácsi, László (1)	Levy, Adrian (1)
Baily, Martin N. (4)	Dong, Hengjin (1)	Hadley, Jack (1)	Lindeboom, Maarten (1)
Barro, Robert (6)	Doran, Chris (1)	Hall, Jane (1)	Ling, Davina C. (2)
Barros, Pedro Pita (1)	Dranove, David (1,2)	Hamilton, James D. (6)	Liu, Gordon G. (1)
Basu, Anirban (1)	Drummond, Michael F. (1)	Hansen, Ronald W. (2)	Lucioni, Carlo (1)
Beales, J. Howard III (2)	Ekwurzel, Drucilla (3)	Harrington, Joseph E. Jr. (2)	Luft, Harold S. (1)
Beard, Stephen M. (1)	Elliott, Rachel (1)	Haycox, Alan (1)	Manca, Andrea (1)
Becker, Gary S. (2)	Ellis, Randall P. (1)	Hellinger, Fred J. (1)	Maniadakis, Nikos (1)
Berger, Marc L. (1)	Escarce, José J. (1)	Henderson, David R. (2)	Mankiw, N. Gregory (4)
Bernanke, Ben S. (4)	Ettner, Susan (1)	Hester, James A. (1)	Manning, Willard G. (1)
Berndt, Ernst R. (2)	Evans, Robert G. (1)	Higgs, Robert (2)	Marquis, M. Susan (1)
Bingefors, Chris (1)	Feder, Judith (1)	Hill, Suzanne (1)	Marron, Donald B. (4)
Birnbaum, Howard (1)	Feenstra, Talitha L. (1)	Hines, James R. Jr. (3)	Marx, Steven E. (1)
Bishai, David (1)	Fehnel, Sheri (1)	Holahan, John (1)	Matuszewski, Karl A. (1)
Blank, Rebecca M. (4)	Feldman, Roger (1)	Holcombe, Randall (2)	Mauskopf, Josephine (1)
Bleichrodt, Han (1)	Fenwick, Elisabeth (1)	Hollenbeak, C.S. (1)	Maynard, Alan (1)
Blinder, Alan S. (4)	Field, Alexander J. (3)	Hooper, Charles L. (2)	McClellan, Mark B. (4)
Boersma, Cornelis (1)	Fiscella, Richard (1)	Horner, John (1)	McGhan, William F. (1)
Bootman, J. Lyle (1)	Forbes, Kristin J. (4)	Hubbard, R. Glenn (4)	McGuire, Thomas G. (1)
Boskin, Michael J. (4)	Frank, Richard G. (1)	Hughes, Dyfrig (1)	Meek, Patrick (1)
Bradford, W. David (1)	Frank, Robert H. (6)	Husereau, Don (1)	Meltzer, David O. (2)
Brazier, John E. (1)	Frankel, Jeffrey A. (4)	Hutton, John (1)	Milne, Richard J. (1)
Brennan, Alan (1)	Freemantle, Nick (1)	Iezzoni, Lisa I. (1)	Moon, Marilyn (1)
Brennan, Troyen A. (1)	Freund, Deborah A. (1)	Ikegami, Naoki (1)	Morris, Louis A. (1)
Bridges, John F. P. (1)	Fullerton, Pete (1)	Iskedjian, Michael (1)	Mullahy, John (1)
Briggs, Andrew (1)	Gagnon, Jean Paul (1)	Iversen, Tor (1)	Mullins, C. Daniel (1)
Brouwer, Werner (1)	Gandjour, Afschin (1)	Johannesson, Magnus (1)	Mullner, Ross (1)
Bryan, Stirling (1)	Garattini, Livio (1)	Johnson, Kathleen A. (2)	Munnell, Alicia H. (4)
Buchmueller, Thomas (1)	Garattini, Silvio (1)	Jones, Andrew M. (1)	Nash, David B. (1)
Bungay, Kathleen M. (1)	Garber, Alan M. (1)	Jones, Charles I. (3)	Naughton, Michelle (1)
Burgess, James F. Jr. (1)	Garrison, Lou (1)	Jönsson, Bengt (1)	Neumann, Peter J. (1)
Buxton, Martin (1)	Gaynor, Martin S. (1)	Karnon, Jonathan (1)	Newhouse, Joseph P. (1)
Calfee, John E. (2)	Geisler, Benjamin (1)	Keith, Alison (2)	Niederman, Michael S. (1)
Campbell, Noel D. (2)	Geoffard, Pierre-Yves (1)	Kenkel, Donald (1)	Norton, Edward C. (1)
Cantor, Joel C. (1)	Getsios, Denis (1)	Keuffel, Eric L. (2)	Nuijten, Mark (1)
Caro, J. Jaime (1)	Getzen, Thomas E. (1)	Kifmann, Mathias (1)	O'Donnell, Owen A. (1)
Carswell, Christopher I. (1)	Gieringer, Dale H. (2)	Kind, Paul (1)	Olivella, Pau (1)
Claxton, Karl (1)	Glazer, Jacob (1)	Klein, David H. (1)	Onukwugha, Ebere (1)
Coast, Joanna (1)	Glick, Henry (1)	Knickman, James (1)	Paladino, Joseph A. (1)
Cohen, Alan B. (1)	Glied, Sherry A. (1)	Kroszner, Randall S. (4)	Palmer, Stephen J. (1)
Comanor, William S. (2)	Goolsbee, Austan (4)	Krueger, Alan B. (3)	Pashos, Chris L. (1)
Cowen, Tyler (6)	Gordon, Roger (3)	Krugman, Paul (2)	

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Peltzman, Sam (2)	Runge, Claus (1)	Singer, Mendel E. (1)	Tyson, Laura D'Andrea (4)
Pencavel, John (3)	Rutten, Frans (1)	Skjoldborg, Ulla S. (1)	van Doorslaer, Eddy (1)
Phelps, Charles E. (2)	Schelling, Thomas (5)	Slaughter, Matthew J. (4)	Vernon, John A. (1)
Philipson, Tomas J. (1,2)	Scherer, F.M. (2)	Smith, Richard (1)	Vernon, John M. (2)
Polsky, Daniel E. (1)	Schmalensee, Richard L. (4)	Smith, Vernon (5)	Vestal, Robert E. (1)
Prades, José Luis Pinto (1)	Schmier, Jordana (1)	Sobel, Joel (3)	Viscusi, W. Kip (2)
Priori, Stephen (1)	Schulman, Kevin A. (1)	Sobel, Russell S. (2)	von der Schulenburg, J. (1)
Propper, Carol (1)	Schumock, Glen T. (1)	Statman, Meir (2)	Wagner, Anita K. (1)
Prosser, Lisa A. (1)	Schwartzman, David (2)	Stearns, Sally C. (1)	Wagstaff, Adam (1)
Ramsey, Scott (1)	Sclar, David A. (1)	Stein, Jeremy C. (3)	Waldman, Michael (3)
Redekop, Ken (1)	Scott, Anthony (1)	Stiglitz, Joseph E. (3,4)	Ward, Michael R. (2)
Revicki, Dennis (1)	Scuffham, Paul (1)	Stoddart, Greg L. (1)	Wasserfallen, J.-B. (1)
Rice, Nigel (1)	Sculpher, Mark (1)	Street, Andrew D. (1)	Weidenbaum, Murray (2)
Richardson, Jeff (1)	Seibert, Uwe (1)	Strobeck, Matthew W. (2)	Weinstein, Milton C. (1)
Rizzo, Mario (6)	Severens, Johan L. (1)	Sullivan, Sean D. (1)	Wertheimer, Albert I. (1)
Roberts, Jennifer (1)	Shanahan, Marian (1)	Sun, Eric (2)	Whitty, Jennifer (1)
Robinson, James C. (1)	Shapiro, Carl (3)	Sutton, Matthew (1)	Wiggins, Steven N. (2)
Rodrik, Dani (6)	Shaw, Kathryn L. (4)	Svorny, Shirley (2)	Williams, Walter E. (2)
Rogowski, Jeannette (1)	Shields, Michael (1)	Szucs, Thomas D. (1)	Williamson, Oliver E. (5)
Romer, Christina (4)	Shih, Ya-Chen Tina (1)	Tabarrok, Alexander (2)	Wolak, Frank A. (3)
Rosen, Harvey S. (4)	Shleifer, Andrei (3)	Taylor, John B. (4)	Wonnacott, Paul (4)
Rothenberg, Jerome (2)	Siciliani, Luigi (1)	Taylor, Timothy (3)	Yellen, Janet L. (4)
Rouse, Cecilia E. (4)	Sigmond, Robert M. (1)	Temin, Peter (2)	Yip, Winnie (1)
Rovira, Joan (1)	Simoens, Steven (1)	Thoma, Mark (6)	Zuckerman, Howard S. (1)
Rowland, Diane (1)	Simon, Kosali (1)	Tollison, Robert (2)	
Rubin, Paul H. (2)	Sindeljar, Jody L. (1)	Torrance, George W. (1)	

Numerals in parentheses indicate group(s) (as given on next page) to which each economist belongs. A linked Excel sheet gives the breakdown of the general list by the various sub-groups specified below.

We have also created an ungated site where anyone can answer the questionnaire. We will not store or use any data from this ungated site; all users have direct access and should feel free to explore it. The ungated site provides the user with a transcript of his or her virtual conversation. We encourage readers to take the questionnaire. We believe they will find it convenient, fair, clear, and valuable.

Also, a PDF document containing the questions and sequencing can be found here: ([link](#)). It affords a bird's eye view of the questionnaire, but for one who wishes simply to engage the questionnaire as natural conversation it will be less useful, as it requires one to follow the sequencing instructions.

We also encourage the summoned economists to practice either with the PDF or at the ungated site, exploring the questionnaire there before completing it at the gated site. Again, none of the responses given at the ungated site will be stored or used in any way.

In deciding whom to summon, we aimed at those with expertise and leadership in health economics, research publications on the FDA, leadership in the cultural ecology of professional economics, and eminence in topics of information, uncertainty, and regulation. The 305 economists listed in Table 1 belong to at least one of these groups (details shown in worksheet ([link](#))):

1. Members of the editorial boards of seven leading health-economics journals: *Health Economics*; the *Journal of Health Economics*; *Inquiry: The Journal of Health Care Organization, Provision, and Financing*; the *European Journal of Health Economics*; *Applied Health Economics and Health Policy*; *Pharmacoeconomics*; and *Value in Health*.
2. Economists writing on the FDA cited in Klein (2008).
3. Current and former (post-1990) editors, associate or co-editors, and managing editors of the *Journal of Economic Literature* and the *Journal of Economic Perspectives*.
4. Current and former (post-1990) members of the President's Council of Economic Advisers.
5. Selected luminaries in the fields of information and/or health economics not otherwise included.
6. Selected prominent generalists and public intellectuals not otherwise included.

We will collate the responses of the summoned economists and write up a summary report to publish alongside the individual transcripts. As with a similar non-anonymous questionnaire on the minimum wage (Klein and Dompe 2007), the follow-up report to appear in this journal will not criticize or challenge the responses.

Meanwhile, we encourage all readers to examine the questionnaire or to complete it themselves. Again, a PDF document containing the questions is available here: [\(link\)](#). To complete (or practice, for those summoned) the questionnaire online, please visit the ungated site here: [\(link\)](#).

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