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Stability, Asymmetry, and Discontinuity: The Launch of European Monetary Union

ALTHOUGH STILL LESS than one year old as this volume goes to press, European Economic and Monetary Union (EMU) is already under trial, charged with at least three offenses. The first is false advertising: Europeans, it is claimed, did not get the strong, stable currency they were promised, for within seven months of its birth the euro had lost 13.5 percent of its value against the dollar. The second is obfuscation: markets are finding the signals from the new monetary institutions confusing and inconsistent, and a scarcity of relevant information—from delays in releasing reliable euro area-wide statistics to lack of access to the deliberations of the Governing Council—makes it difficult to forecast economic developments and to understand the policy conduct of the new European Central Bank (ECB). The third is lack of impartiality: the ECB's new policies are claimed to be exacerbating asymmetries between fast-growing and slow-growing countries and validating the presumption that the costs and benefits of monetary cohabitation are unfairly distributed among small and large member states.

This paper espouses a rather different thesis. In terms of its impact on financial market integration and the ability of its institutions to cope with

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cyclical contingencies, EMU is performing well above expectations. And it is doing so even though persistent asymmetries across countries represent a threat to the ability of the new policy framework to guarantee economic stability and promote further integration in Europe. It is clearly premature to attempt even a first assessment of the new European monetary architecture—it will take quite a few years before the track record of the ECB becomes sufficiently long and rich for such an evaluation. This paper is instead devoted to the more modest task of casting light on early developments in the euro area and their potential implications for the future of EMU, surveying the main points in the current debate, noting contrasting positions, and evaluating those positions in light of the available evidence. Our synthetic but comprehensive overview of the first few months in the life of the euro is thus aimed at disentangling those facts, empirical evidence, and institutional details that we consider useful toward a balanced interpretation of the current monetary and financial evolution in Europe.

The paper is organized as follows. We begin by placing our analysis of the swift launch of the euro in the context of the macroeconomic convergence and integration that took place in Europe following the 1992–93 crisis of the European Monetary System (EMS). We then discuss the monetary strategies of the European System of Central Banks (ESCB), reviewing the official positions taken and the main criticisms leveled in the recent debate. Next we focus on the instruments of monetary policy in the euro area and on liquidity management and money market integration. We then present an update of developments in the bond and equity markets and a preliminary assessment of public debt management strategies by the eleven independent sovereign states coexisting in the euro area. We go on to deal with some open issues in the euro area banking sector, comment on the behavior of the euro in the currency markets, and analyze asymmetries across European regions and their implications for centralized monetary policy. Finally, we review the process of fiscal consolidation and the debate on the code of budgetary discipline in Europe.¹

1. Although extensive, this list of topics is certainly not exhaustive. For a wider window on the EMU debate and an update of the information presented in this paper, see the contributions available online on the website “Euro Economic Sources: Economic Policies in the EMU,” maintained by Giancarlo Corsetti at www.econ.yale.edu/~corsetti/euro/.

The Launch of the Euro in Historical Perspective

From a technical standpoint, the euro was born on December 31, 1998. That was the date when the fixed conversion rates among euro area currencies were determined, and thus when the national currencies were demoted to nondecimal denominations of the new currency.² It was also the start of the changeover weekend, during which clearing and settlement systems were retooled and trading positions and accounts redenominated from the old currencies into euros. The euro's birth itself was almost a nonevent. Even ECB President Wim Duisenberg felt compelled to observe that the decision "turned out to be almost a formality—different from what many of us might have expected barely a year ago."³

What might have gone wrong at the euro's launch? One danger was that the values of the national currencies might have become misaligned in the months preceding its birth. As established by the European Council meeting in Madrid in December 1995, the euro replaced the European currency unit (ECU) at the rate of one euro for one ECU. Thus the value of the euro coincided with the value of the basket of currencies in the ECU, valued at market rates on December 31, 1998. Meanwhile, with the goal of providing a clear signal to the markets, bilateral parities for the eleven currencies in the euro had already been set and announced on May 1998, after the determination of the initial membership in EMU. In the few months before EMU's takeoff, some commentators expressed concern over the possibility of divergences between the preannounced rates and market rates, reflecting speculative attacks or insufficient monetary cooperation among national central banks, or both.⁴

Also, during the conversion weekend the complexity of the operations and the tight timetable (from the fixing of euro rates, announced at

2. The locking in of exchange rates represents the first step toward full monetary integration. For three years beginning in 1999, all money values in the euro area will be expressed either in euros or in national currency on a voluntary basis. Euro notes and coins will be introduced on January 1, 2002. Between that date and June 30, 2002, both euros and national currencies will circulate in parallel. After June 30, 2002, national notes and coins will be exchangeable only at banks. The possibility of shortening the period of parallel circulation is under discussion at the time of this writing.

3. Wim Duisenberg, statement at the joint press conference following the Ecofin meeting, Brussels, December 31, 1998.

4. See the discussion in Obstfeld (1998a, 1998b) and Centre for Economic Policy Research (1997).

1:30 p.m. on December 31, 1998, to the reopening of the markets on January 4, 1999) represented a potential source of systemwide risk. EU contingency plans, ranging from special authority to exclude unprepared agents from market operations to the introduction of special monetary policy procedures, had been designed to deal with possible market anomalies.⁵ But contrary to the prognostications of some euroskeptics, the outset of EMU was almost glitch-free. The euro currencies remained closely aligned for months, making the December 31 fixing a mere validation of the status quo. No contingency plan was activated. The new payments system of EMU, called TARGET (for Trans-European Automated Real-time Gross settlement Express Transfer), exhibited from the very start a high degree of technical reliability.⁶

What is truly remarkable about the birth of the euro is not only the smoothness of its delivery, but also the fact that its eight-year gestation did not break away from the timetable and procedures agreed upon in December 1991 at Maastricht. Recall that, just a few months after the drafting of the Maastricht Treaty, the EMS suffered the deepest and longest crisis in its history, generating widespread skepticism about the prospects for European policy cooperation and monetary integration.⁷ At the time, many believed that the EMU project would be postponed, or at best start out as a greater deutsche mark area, as even the participation of France was in doubt.

In historical perspective, the odds for a successful achievement of EMU were largely set by the policy and institutional response to the 1992–93 crisis. That crisis was rooted in an unresolved policy conflict between Germany and the rest of the system on how to deal with growing price and output asymmetries across countries, related both to the shock of German unification and to the cumulative effect of persistent inflation differentials on intra-European cost competitiveness. The crisis shattered all remaining enthusiasm for the EMS-based disinflation efforts of the 1980s (essen-

5. See Saccomanni (1999).

6. The only blemish on TARGET's record is the January 29 breakdown of its link with the French RTGS system. Also, because of high transaction volume and a few minor technical problems, the ECB decided to extend the daily TARGET deadline by one hour from January 11 through January 29. Normal working hours were then reestablished and have been in effect ever since.

7. On the EMS crisis see Eichengreen and Wyplosz (1993); Buiter, Corsetti, and Pesenti (1998a, 1998b).

tially a process of “borrowing credibility from the Bundesbank” through exchange rate targeting). As was said at the time, “fixed exchange rates now seem much less effective as means to price stability than many of us thought before. Therefore, *monetary stability and credibility have to be built at home with other means.*”⁸

For the countries that decided to stay out of the Exchange Rate Mechanism of the EMS, building stability and credibility at home meant, in addition to fiscal rectitude, a reform of monetary policy signaling some radical break with the past. The Bank of England and the Bank of Sweden adopted inflation targeting as a new comprehensive strategy to stabilize prices. The other European countries were de facto freed from the corset of a fixed exchange rate in August 1993, once the bands around the central exchange rate parities were widened up to 15 percent in either direction. What constituted a departure from the past was a stronger domestic political consensus to participate in EMU, and therefore to fulfill all the formal prerequisites established in the Maastricht Treaty.⁹ These prerequisites included complying with the convergence criteria of the treaty in terms of inflation, fiscal stance, and interest rates,¹⁰ as well as appropriate reforms to prepare central banks to be integrated into the new European system.

So, whereas for some countries the crisis led to largely new policy strategies, other countries succeeded, over time, in confirming their political commitment to the Maastricht model of monetary integration through macroeconomic convergence. As regards fiscal policies, most countries adopted some cosmetic and temporary measures to pull their deficits below the formal limit established at Maastricht (3 percent of GDP), but even so, the European fiscal stance did show some fundamental improvement in these years.

Since participation in EMU was conditional on having already achieved low inflation, financial and exchange rate stability, and a small fiscal

8. Svensson (1994, p. 467), emphasis added.

9. See Kenen (1995).

10. As the exchange rate convergence criterion was conceived as having fluctuation margins around the central parities as large as 2.25 percent in each direction, its meaning became less clear with the 1993 widening of the currency bands. In 1995 the European Monetary Institute decided to include in its analysis of convergence an “ex post judgment” on the degree of exchange rate stability inside the new bands. See European Monetary Institute (1998, p. 37).

deficit, the convergence process was designed to enhance macroeconomic policy *continuity* at the birth of the euro. Whether by means of convergence policies or not, macroeconomic stability was reached in Europe well before the formal launch of the euro. National inflation rates were already extremely low in 1997. Notably, the Asian and Russian crises of 1997–98 did not induce any significant wave of speculation in European financial and currency markets. A common monetary policy *de facto* preceded the birth of the common currency, as the ECB, established in June 1998, engineered in December of that year a coordinated cut of interest rates by nearly all the national central banks to the common level of 3 percent. (The sole exception was Italy, which cut its rate to 3.5 percent.)

According to several observers, the Eurosystem¹¹ was structured so as to guarantee as much continuity as possible with the objectives and policy framework of those national central banks that had been most successful in the past, notably the German Bundesbank. Continuity with the Bundesbank was seen as key to endowing the newly created ECB with an anti-inflationary reputation: at the birth of the euro, European countries were, more than ever before, “borrowing credibility from the Bundesbank.” At the same time, continuity was seen as a way to reassure the German public, who until the last were reluctant to give up the *deutsche mark*.

Not surprisingly, objections to the policy of continuity are at the heart of the current debate over the ECB. Critics contend that European policy-makers are missing an opportunity to build a monetary policy framework suitable for Europe on its own merits, rather than on the merits of the institutions (such as the Bundesbank or any other national central bank) that have adopted the same strategy in the past. Given the political dimension of European integration, most critics focus on the standards of transparency and accountability of the ECB. Some urge the ECB to change its strategy by moving toward explicit inflation targeting—a move that would reduce the distance with the EU countries still outside of EMU. Yet considerable uncertainty remains about the monetary architecture that will actually emerge in Europe as a result of the regime shift associated with a switch to a common currency. The next two sections are devoted to these issues.

11. The Eurosystem comprises the ECB and the eleven national central banks of the euro area. The ESCB comprises the ECB and the national central banks of all the EU countries.

The Eurosystem's Monetary Strategy in the ECB's Own Words

As a starting point for assessing criticisms of monetary strategies in the euro area, we begin with a detailed overview of the ECB's own explanation. At the beginning of the 1990s, the Maastricht Treaty stated that "price stability" would be the primary objective of the ESCB. It also established (in Article 2) that the ESCB is expected to support the general policies of the European Union as long as this can be done without prejudice to the price stability objective (Article 105[1]). For a quantitative definition of "price stability," however, one had to wait until October 13, 1998, when the Governing Council of the ECB officially announced its monetary strategy. The council defined price stability as a year-on-year *increase* in the Harmonized Index of Consumer Prices (HICP, essentially a consumer price index without interest costs) for the euro area as a whole of *less than 2 percent*, which is to be maintained over the *medium run*. The focus on the euro area as a whole implies that sector- or region-specific shocks will be considered only insofar as they provide information on the development of the aggregate HICP. The word "increase" in the definition suggests that the ECB is concerned about the "downward risk for price stability" (that is, deflation). Thus any inflation rate in the range of 0 to 2 percent seems to be compatible with price stability, although a precise lower bound has not been officially announced.¹² Incidentally, the choice of 2 percent as the upper bound can be justified mainly on grounds of continuity, as that is the value used in the past by the Bundesbank.¹³

The reference to the medium run acknowledges that monetary authorities might be unable to control short-run price variability. In particular, in the presence of shocks threatening price stability, "a medium run orientation . . . is important in order to permit a gradualist and measured response."¹⁴ Interpreting this remark in light of the experience of the Bun-

12. Because of measurement bias, the rate of growth of the HICP may not coincide with the true rate of inflation. As the HICP is a relatively new index, the sign and magnitude of its measurement bias are largely unknown. For this reason, the ECB is reluctant to announce a lower bound for the definition of price stability before having learned more about the properties of its price index.

13. See Angeloni, Gaspar, and Tristani (1999, p. 14). These authors also discuss "other reasons [than continuity with the Bundesbank] to allow for small but non-zero inflation rate" put forward in the literature, namely, nominal and real rigidities in prices and wages and the lower bound at zero to nominal interest rates.

14. European Central Bank, *Monthly Bulletin*, January 1999, p. 47.

desbank seems to suggest that the ECB may show some flexibility in letting inflation rise temporarily above 2 percent, say, when the economy is hit by a supply shock. Perhaps to rule out expectations that any change in prices outside the 0 to 2 percent range would automatically entail a policy response, the ECB has stressed that its quantitative definition of price stability is not an inflation range target. Indeed, the definition of price stability by the ECB differs in two ways from that of an inflation target as usually understood: first, it is time- and state-invariant; and second, its time horizon, the medium run, is not precisely quantified. Yet the announcement of “an objective benchmark” for the rate of inflation in the medium run is presented as “the most important step [taken by the ECB] to achieve accountability.”¹⁵

In addition to the quantitative definition of price stability, the monetary strategy of the ECB rests on two “pillars”: a reference value for the annual growth rate of M3 (a broad monetary aggregate), and a broad assessment of the outlook for future price developments and the risks to price stability. The M3 reference value, according to the ECB, is not to be considered a target but rather a “realistic alternative to a monetary target.”¹⁶ That is to say, “deviations of monetary growth from the reference value will signal risks to price stability” and would prompt further analysis to identify and interpret the economic disturbances that caused the deviation. However, no automatic policy reaction should be expected when the actual monetary aggregate deviates from its reference value.

The ECB has chosen to announce a single reference value (4.5 percent) for annual M3 growth, rather than a range as in the tradition of the Bundesbank. The calculation of the M3 reference value, however, follows the German tradition: as Frederic Mishkin has noted, it is a very public exercise.¹⁷ Upon its announcement, the 4.5 percent reference value was explained using a quantity-equation framework,¹⁸ together with esti-

15. See Angeloni, Gaspar, and Tristani (1999, p. 15).

16. Wim Duisenberg, “The ESCB’s Stability-Oriented Monetary Policy Strategy,” speech to the Institute of European Affairs, Dublin, November 10, 1998.

17. See Mishkin (1999).

18. The basic formula for the derivation of the Bundesbank’s monetary targets was as follows: the growth of (real) production potential plus the medium-term price assumption plus any addition or deduction for the longer-term change in the velocity of circulation of money equals the growth of the money stock that is consistent with the production potential. See Deutsche Bundesbank (1995, p. 81).

mates of the medium-run rate of change in money velocity (in the range of -0.5 to -1 percent) and trend output growth (in the range of 2 to 2.5 percent). Under these assumptions, the annual increase in the HICP associated with a 4.5 percent growth rate of M3 is in the range of 1 to 2 percent. Like the Bundesbank, the ECB uses trend GDP growth, rather than GDP growth forecasts, in order to distance its policy from short-run considerations of employment and cyclical conditions. This practice allows for stabilization: other things being equal, calculating the reference value in this way allows for the provision of more liquidity during recessions and less during periods of overheating.¹⁹

Judging from the first few issues of the ECB's monthly bulletin, the second pillar amounts to an analysis of a rather long and diverse list of indicators.²⁰ The vagueness in the definition of the second pillar raises the critical question as to which analytical framework—which economic and econometric model—the ECB will use to filter the relevant information from such a diverse set of variables. What the ECB itself claims in this respect is that the Eurosystem “will evaluate the full range of inflation forecasts produced by international organisations, other authorities, market participants, etc., and will also produce its own assessment of the future inflation outlook.”²¹ But at least so far, the ECB has not been willing to publish its forecasts, and it has virtually declined to discuss how it reads third-party forecasts in formulating its strategy.²²

This attitude toward inflation forecasts exhibits a striking resemblance to that of the Bundesbank, whose monthly and annual reports neither publish the organization's own forecasts of economic variables nor discuss private sector forecasts.²³ The ECB explains its decision not to publish its inflation forecasts by arguing that giving prominence to a single official

19. Deutsche Bundesbank, *Monthly Report*, January 1998.

20. See European Central Bank, *Monthly Bulletin*, April 1999, pp. 27–40. Angeloni, Gaspar, and Tristani (1999) group these indicators into five classes: gap measures (for instance, the output gap, the capacity utilization rate, unemployment); labor cost measures (wage dynamics, unit labor costs); international prices and exchange rates; asset prices (the yield curve, interest rates); and measures of expectations (business and consumer confidence surveys).

21. European Central Bank, *Monthly Bulletin*, January 1999, p. 50.

22. The June bulletin includes a short section on inflation forecasts by the International Monetary Fund and the Organization for Economic Cooperation and Development. See Centre for Economic Policy Research (1999b) for a discussion of this point.

23. See, for instance, Mishkin and Posen (1997).

forecast would not adequately reflect the actual decisionmaking process of the Governing Council, and would ultimately confuse and mislead the public.²⁴ It is also plausible that, especially in the initial phase of EMU, the ECB does not want to be evaluated as a forecaster and held responsible for forecast errors, given the considerable uncertainty about the time-series properties of the relevant real and financial variables, or to be tied to any particular econometric model. If this interpretation is correct, it may be that, in the future, the ECB will consider some form of public discussion of inflation forecasts, without necessarily implying a formal change in its strategy.²⁵

We conclude by noting that, shortly before EMU, German central bankers suggested that the ECB should combine elements of both monetary and inflation targeting: “this would place the ECB under a double obligation to justify its action. It would have to explain its policy to the public in terms of both its monetary target and its price expectations. Comprehensive transparency of this kind might assist in rapidly establishing the credibility that is needed for a successful monetary policy.”²⁶ Although the two pillars in the new monetary framework suggest acceptance of the idea of combining elements of both monetary and inflation targeting, it is worth emphasizing that in its strategy the ECB eschews the notion of targets per se.

As part of the ECB’s effort to ensure transparency and accountability, the president of the ECB holds a press conference immediately after the first meeting of the Governing Council every month,²⁷ and provides an

24. See Wim Duisenberg, “The ESCB’s Stability-Oriented Monetary Policy Strategy,” speech to the Institute of European Affairs, Dublin, November 10, 1998.

25. According to Angeloni, Gaspar, and Tristani (1999), the ECB is determined to publish its internal econometric models (although not the forecasts) as soon as they have been sufficiently tested. Currently, the ECB relies on a quarterly macroeconomic model for the euro area and, in conjunction with the national central banks, a quarterly multicountry model.

26. Deutsche Bundesbank, *Monthly Report*, January 1998. See also the brief but effective discussion by Dornbusch (1997) of the intellectual debate between Bundesbank President Hans Tietmeyer and ECB Executive Board member Otmar Issing before EMU took place.

27. The decisionmaking body of the ECB, the Governing Council, comprises the governors of all eleven national central banks in the Eurosystem plus the ECB’s Executive Board (the president, vice-president, and four other members). Decisionmaking in the euro zone is thus currently in the hands of seventeen persons (and will involve twenty-one when all the EU countries have joined EMU). For comparison, the Bank of England’s Monetary Policy Committee and the Bank of Japan’s Policy Board have nine members each.

extensive statement of the council's analysis and deliberation. The analysis and data in the ECB's monthly bulletin, as well as speeches by members of the ECB Executive Board, are meant to supplement the president's statement. The ECB, however, does not publish the minutes of the meetings, claiming that the president's press conference provides all relevant information—a claim contested by some ECB watchers.²⁸ By the same token, the voting records are kept secret. This feature largely conforms to the model of “collective responsibility”—the formal exclusion of any account of internal disagreement—that characterizes the history of the Bundesbank.

An annual and four quarterly reports on the activities of the Eurosystem are submitted to the EU Council of Ministers, to the Commission of the European Communities, and to the European Parliament (EP), which then holds a general debate on the findings. Members of the Executive Board of the ECB testify before the committees of the EP, either on their own initiative or on the initiative of the EP. An open issue is to what extent the EP will be willing to exercise its powers, for instance by putting pressure on the ECB to provide more information about its decisionmaking process.²⁹

Issues in Implementing the Eurosystem Strategy

Over the short history of EMU, the correspondence—or lack thereof—between actual monetary policy and the announced monetary framework has been the object of extensive scrutiny and debate. Here we analyze the main points of this debate by organizing our discussion around three key questions. First, does the Eurosystem focus strictly on price stability to the exclusion of other concerns? Second, is its strategy systematically biased in favor of the cyclically weaker countries in EMU? And third, what role does the strategy assign to broad monetary aggregates?

28. See, for example, Buitert (1999b).

29. Tabellini (1998) proposes that the EP take the initiative on ECB transparency and accountability, for instance by demanding that the ECB publish its internal inflation forecasts in the form of an inflation report.

Does the Eurosystem Focus Strictly on Price Stability?

On announcing its monetary strategy in October 1998, the ECB expressed its intention to adhere to a strict interpretation of its mandate to guarantee price stability. Moreover, the ECB has frequently asserted that “central bank[s] should, above all, avoid being, in themselves, an *additional* source of uncertainty” for the market, and make sure that their actions are “understood and therefore predictable.”³⁰ Many market participants interpreted this as a move away from the style of the Bundesbank, which often took pride in having surprised the market by its actions.³¹

Nevertheless, the ECB’s interest rate cut of 50 basis points on April 8, 1999, came at a time of strong disagreement among market participants about the direction of the ECB’s next move, and its size surprised almost everyone. One of the main arguments in favor of the cut was fresh evidence of a deteriorating economic outlook for Germany and Italy, which together account for more than half of euro area GDP. Thus the move clearly responded to cyclical conditions. Yet the need for further monetary easing at that time was controversial. For instance, during 1998 many countries’ interest rates had already declined toward the German level, and as already noted, the ECB had engineered a coordinated rate cut in December of that year. If one takes into account the “long and variable lags” with which monetary policy affects the economy, the generalized fall in interest rates in the preceding quarters meant that a significant monetary stimulus was already under way. Some indicators were indeed providing signals in this direction: M3 growth was 50 basis points above the reference value, credit to the private sector was growing at a high and sustained rate, and a weakening euro (along with recovery in Asia) was improving export demand.

Some observers and market participants have criticized the ECB for paying too much attention to short-term trends in economic activity and for allowing too much latitude for discretion in its monetary strategy, relative to what—in their view—the ECB’s own statements initially suggested. According to these critics, in April 1999 the ECB disappointed the markets in two respects. First, it showed that its commitment to price stability really coexists with other concerns. Second, it did not opt for a

30. The quotations are from Issing (1999a, pp. 12 and 29). The same concept is expressed in many other documents of the ECB.

31. See, for instance, Goldman Sachs, *European Weekly Analyst* 99/24, June 25, 1999.

conservative stance (no rate cut) or more predictable conduct (a smaller rate cut) in a situation of widespread disagreement about its likely next move.

Such criticism, however, is hard to justify in light of the monetary constitution of Europe as established by Article 105(1) of the Maastricht Treaty. Provided that it does not see its actions as putting price stability at risk in the medium run—and at the time of this writing (September 1999) annual inflation has been around 1 percent, at the very center of the reference range—the Eurosystem is *expected* to support countercyclical policies. Also, a strict focus on price stability need not imply that the output gap and unemployment must be ignored in policy decisions, but rather that they are treated exclusively as indicators of *future* inflation or deflation. Recent econometric evidence suggests that these indicators were indeed used in this way by the Bundesbank.³²

The ECB cannot afford to overlook the risk that, in a scenario of generalized growth slowdown, national policymakers will decide to postpone important structural reforms. This consideration may help explain the ECB's April decision, especially as regards the size of the interest rate cut. A large cut was expected to create the appropriate macroeconomic conditions for national authorities to carry out reforms of the budget and the labor market. The former is seen as an essential element for stability in the euro area, and the latter as the key policy to reduce the region's high rates of unemployment.³³ This motivation is clear in the ECB president's statement accompanying the April 8 cut:

The decision taken today . . . contributes to creating an economic environment in which the considerable growth potential of the euro area could be exploited. Those responsible for other policy areas are urged now even more to take the necessary steps to improve longer-term growth prospects for the euro area through strictly and decisively adhering to the aims of the Stability and Growth Pact and through convincing structural reforms in the economy.³⁴

The view that policy coordination should be conducive to structural reforms is reflected in many initiatives at the EU level, such as the adoption of the European Employment Pact at the summit meeting in Cologne

32. See, for instance, Favero and Rovelli (1999).

33. For a discussion of this thesis, see the paper by Laurence Ball in this issue of *Brookings Papers*.

34. Wim Duisenberg, speech prepared for press conference, Frankfurt, April 8, 1999.

in June 1999. Notably, the pact promotes a macroeconomic “dialogue” in Europe among national governments, the European Commission, the ECB, and social partners (that is, the unions). Although the content and goals of this dialogue are only vaguely defined, this European forum could play an important role in addressing basic political and distributional issues stemming from what will surely be an extensive adjustment process in European labor markets. Yet policy coordination remains to a large extent an open issue in post-EMU Europe.

Is Eurosystem Policy Biased in Favor of the Weaker Countries?

Economists of the “Monitoring the ECB” group at the Centre for Economic Policy Research in London have interpreted the April rate cut as a sign that the ECB is pursuing its mandate in a balanced way, avoiding both excessively narrow and excessively restrictive interpretations. The same group, however, also writes, “although the ECB has vowed not to look at national situations, the interest rate cut was easier to understand in light of the economic situation in the weaker member countries rather than in light of the aggregate data in Euroland.”³⁵ While the cyclical condition of Germany and Italy was deteriorating at the time of the rate cut, GDP in other EMU countries, such as Ireland, Portugal, and Spain, was growing at sustained rates. There was a consensus that France, too, was growing at a rate exceeding 2 percent. Some observers are inclined to read the April decision to expand the money supply as an indication that the Eurosystem is somewhat biased in favor of the cyclically laggard countries.³⁶

It has been suggested that the root of this presumed bias toward weaker countries in the euro area could be the constraints on fiscal policy implied by the Stability and Growth Pact (SGP), as analyzed later in this paper. In the presence of asymmetric cyclical conditions, the argument goes, a single monetary policy cannot fit the needs of all countries, but national governments can still use fiscal policy toward their output and employment goals. If the monetary stance reflects the average cyclical conditions of the area as a whole, stronger countries will have to contract, and weaker countries expand, their fiscal stance to achieve the desired level of aggregate

35. Centre for Economic Policy Research (1999b, p. 1).

36. Similar views were expressed in the aftermath of the December 1998 coordinated rate cut. See, for instance, Martin Feldstein and Kathleen Feldstein, “Currency’s Effects on Booming Economy Worry Some: Ireland’s Euro Struggle,” *Boston Globe*, January 5, 1999, p. C4.

demand. In the euro area, however, fiscal rules limit the extent to which the weaker countries can let their budget deficits increase. As their budgets automatically deteriorate in a downturn, these countries may not have enough room to implement the desired fiscal expansions. The problem clearly diminishes if monetary policy is tailored to the need of the cyclically laggard countries, since the SGP does not constrain the size of fiscal restrictions. Note that such a strategy would also favor a long-run reduction of national debts and deficits, as the policy mix would be biased toward an easy money–tight budget configuration.

Can this argument play a substantial role in Eurosystem strategy? In our view there are two main problems. First, suppose that the laggard countries were those experiencing major structural problems, such as high levels of public debt or highly regulated labor markets. The ECB's policy stance could be misinterpreted as subverting the fiscal discipline that EMU should impose on its members. Second, the argument presupposes that all the countries in relatively good cyclical shape are willing and able to adopt timely budget cuts of the appropriate size, to keep the overall policy mix from becoming too expansionary. Thus the absence of risks for price stability depends on some form of monetary and fiscal coordination that may not exist.

A different argument is that the ECB would tend to focus on large countries, whether cyclically strong or cyclically weak, simply because of their weight in the euro area. This argument is not persuasive on technical grounds. There could be theoretical and practical reasons for weighing regional developments differently than suggested by their relevance for euro area GDP. For instance, the presence of structural links across regions could determine specific patterns of international transmission of the business cycle: responding to cyclical development in one region could be an effective way to implement a preemptive policy action for the euro area as a whole. In any case, given the short history of EMU, limited understanding of the international transmission of the business cycle within the euro area suggests caution in adopting such an interpretation.

It is worth stressing that the ECB has not provided any information on the role of regional asymmetries in its decision process. So far, the monthly bulletins include almost no reference to local conditions and indicators in the discussion of monetary developments in the euro area. The rare allusions to country-specific situations do not specify which country they refer to. Such a striking omission may reflect a pedagogical objective,

namely, to encourage Europeans to think in terms of the euro area as a whole. But it could also be attributed to the ECB's desire for caution in dealing with regional considerations, in view of their potential political impact.

Does the Eurosystem Assign a Prominent Role to Monetary Aggregates?

As already noted, in the few months in the life of EMU to date, the annual rate of growth of M3 in the euro area has exceeded the reference value of 4.5 percent. From a three-month average of 5.2 percent between January and March, it gradually increased to 5.9 percent between July and September. Despite this overshooting of the reference value for the first pillar, as late as August 1999 M3 developments were not seen "as signaling inflationary pressures."³⁷ Demand for liquidity has been buoyant throughout the period: growth of overnight deposits in particular has been higher during 1999 than before EMU, and uncertainty about the year-2000 (Y2K) computer problem could cause investors to accumulate more liquid assets over the last quarter of 1999. Although not formally a component of the first pillar, the rate of growth of credit to the private sector has also remained strong during 1999 and accelerated at the beginning of the summer.³⁸

Ultimately, how the ECB will use the first pillar in practice remains unclear. The often-mentioned experience of the Bundesbank shows that, between 1975 and 1995, the German annual money target was achieved

37. European Central Bank, *Monthly Bulletin*, August 1999, p. 5. The text continues: "... careful monitoring will be necessary in the coming months, particularly in view of the fact that the dynamic growth of the most liquid components of M3 and of credit to the private sector implies that euro area residents are not facing liquidity constraints at present."

38. Assessing the potential inflationary implications of the high rate of growth of credit to households and corporations that continued from 1998 throughout the first months of 1999 is one key to the ECB's analysis of prospective inflationary risk. Credit to the private sector is increasing at a rate exceeding 10 percent a year. As presented in various issues of the ECB's *Monthly Bulletin*, potential explanations include low interest rates (which stimulate bank lending), asymmetric local conditions (high growth rates and booming real estate markets in some countries), and the financing of mergers and acquisitions, as well as rising inventories, changes in tax regulation at the end of the year, and above all, the financing of investment abroad by euro area residents. Stressing this last item, the ECB points out that the growth of private credit does not necessarily translate into higher domestic spending. The relative importance of each of these explanations is, however, unclear.

only about 50 percent of the time,³⁹ and that most of the misses were intentional.⁴⁰ In other words, the reliability of the M3 growth rate as a leading indicator of inflation was dubious, even in the country with the strongest proclaimed reliance on monetary targeting. “Continuity” with the Bundesbank would then suggest that the ECB, too, will frequently let M3 growth drift away from its reference value without acting to correct such behavior.

What is the rationale for bringing monetary indicators center stage in the official Eurosystem strategy? At least three answers can be suggested.

The first argument, made by the ECB itself, is that monetary aggregates may provide a more dependable guide for monetary policy in the euro area as a whole than they have in single member states. Econometric studies show, in fact, that money demand appears to be more stable in a larger European context than in any national environment, both in the short and in the medium run.⁴¹ A key problem with these studies, however, is that, to obtain sufficiently long series for European money, prices, output, and interest rates, they must necessarily rely on pre-EMU country-specific information. This procedure is an easy target for the Lucas critique, since there is no presumption that the time-series properties of the variables considered are invariant to the EMU regime shift. For instance, Ivo Arnold points out that the relatively good performance of average European monetary aggregates as leading indicators of inflation in the past could be driven by the low correlation of country-specific shocks, which cancel each other out in the process of aggregation.⁴² To the extent that country-specific shocks become positively correlated in EMU, the demand-for-money function becomes correspondingly less stable. The ECB acknowledges this point but, on the basis of findings from simulation studies,⁴³ considers its quantitative importance rather limited.⁴⁴

A second interpretation sees the choice of mixing (weak) elements from both inflation and monetary targeting in the Eurosystem framework as an implicit declaration that the ECB is unwilling, in the present circumstances, to commit to a specific strategy, model, or vision of monetary

39. See Deutsche Bundesbank (1995, p. 79) and Von Hagen (1998).

40. See Issing (1997, p. 71).

41. See Angeloni, Cottarelli, and Levy (1994); Monticelli and Papi (1996).

42. Arnold (1994).

43. See, for instance, Fagan and Henry (1998).

44. See Issing (1999a, p. 18).

policy. The ECB is well aware that, after the launch of EMU, it will take time to develop some understanding of the new economic environment and the transmission mechanism of monetary policy in Europe. Even the availability and quality of data, although rapidly improving, are still far from adequate.⁴⁵ A monetary policy strategy based on direct inflation targeting is deemed, for better or worse, infeasible because of the difficulties of forecasting price developments in current circumstances.⁴⁶ At the same time, the major economic changes sweeping the euro area are likely to exacerbate all kinds of short- and medium-term problems with monetary aggregates as leading indicators of inflation. In view of these unique conditions and the circumstances of particular uncertainty associated with the start of EMU, the Eurosystem attributes high value to flexibility in choosing among alternative policy strategies.

A third argument, already mentioned, is that the first pillar provides a public sign of adherence to the tradition of the Bundesbank, under the presumption that continuity in itself will enhance the ECB's credibility. Alan Blinder puts the credibility problem faced by central banks in the following terms: "central bankers may want the latitude to change short-run tactics (e.g., abandon a money growth target) without being thought to have changed their long-run strategy (e.g., fighting inflation). To pull off such a feat without spooking the markets, it helps to have a reputation for keeping your word."⁴⁷ Now, at the launch of EMU—precisely when the need for flexibility and discretion is greatest—the Eurosystem starts off without a track record on which to base its credibility. At the same time, however, EMU does not start off in a historical vacuum: one of the national central banks absorbed by the new system is the unchallenged repository of anti-inflationary reputation in Europe. The better the Eurosystem is able to signal continuity of strategy and behavior between its experience and the Bundesbank's, the richer the perceived bequest of credibility accruing

45. See the discussion in Issing (1999a). The introduction of the new European System of Accounts 1995 provides a good example of the discontinuity in statistical information faced by the ECB. The new system adopts many conceptual changes from past accounting schemes, affecting both the level and the rate of growth of GDP. Estimates of growth and external trade in the first quarter of 1999 have been revised substantially upward under the new methodology (European Central Bank, *Monthly Bulletin*, August 1999, pp. 18–20).

46. See Otmar Issing, "Monetary Policy in EMU," speech given in Washington, October 6, 1998.

47. Blinder (1998, pp. 65–66).

to the new institution. In the words of Wim Duisenberg, the “reference value [for money growth] ensures as far as possible continuity with successful monetary strategies in the euro area in the past.”⁴⁸

A problem with this argument is that, as discussed above, the Bundesbank’s adherence to monetary targeting was more formal than effective, and the anti-inflationary reputation of the German central bank was not really based on such adherence. (It has even been argued that the Bundesbank’s reputation was achieved *despite* the monetary targets.) From this vantage point, it is not obvious that continuity with the Bundesbank is the best possible course of action for the ECB. Critics stress that credibility will actually be hampered by the adoption of the first pillar. Decisions made while paying limited attention to the growth rate of M3 will have to be explained to the public while pretending that monetary developments are nonetheless essential leading indicators of inflation. A cosmetic token of continuity with the Bundesbank could be harmless, provided that in its communications strategy the ECB is able to provide a convincing account of its true decision process. But the risk emphasized by ECB critics is that the first pillar may become a smokescreen, hiding the true motivations of monetary decisions. In that case, it is argued, lack of openness and transparency cannot but induce the impression of a very high degree of discretion, eroding rather than increasing any initial capital of credibility that the ECB has managed to inherit from the past.⁴⁹

These objections to the first pillar are part of a general concern with the choice of the Bundesbank as a model for the ECB. Critics such as Willem Buiter argue that key elements in the Bundesbank strategy, such as secrecy and collective responsibility, are inappropriate in the euro area context.⁵⁰ Secrecy and collective responsibility undermine the ability of external observers to judge the behavior and relative competence of the

48. Wim Duisenberg, “The ESCB’s Stability-Oriented Monetary Policy Strategy,” cited in note 24.

49. In this respect, Lars Svensson writes (1999, p. 1), “the choice between inflation targeting and Bundesbank-style ‘pragmatic’ monetary targeting is, in effect, a choice between high and low transparency. Inflation targeting and pragmatic monetary targeting, in practice, imply similar policy decisions, but pragmatic monetary targeting implies that policy decisions are explained in terms of money-growth developments that are not essential for policy. . . . [T]he Eurosystem . . . proposes a prominent role for an essentially irrelevant money-growth indicator in analysis and communication, but will keep secret the inflation forecast that will, in practice, be the decisive input in policy decisions.”

50. Buiter (1999b).

Governing Council members. To the extent that this translates into a higher probability of reappointment of less competent members, the efficiency of the ECB is reduced. Also, as individual members of the council have a weaker incentive to express their disagreement with a dissenting vote, they provide a fertile ground for compromises reflecting special interests—and denying the statutory mandate of the ECB.

A widely discussed issue is whether lack of public accountability gives Governing Council members more discretion in defending national and partisan views in the process of policymaking. Realistically, national policymakers will have a great deal of information about the positions of individual council members. As the latter do not have to explain their behavior to the public of the euro area, pressures from national institutions and lobbies may become more effective, implying an excessive influence of regional considerations. However, given the complex dynamics of a decision process in a body with seventeen members, secrecy could also favor the (perhaps excessive) centralization of power in the hands of the president of the ECB. At this early stage in the history of EMU, it is hard to determine which of these considerations will be more important. The French protest over the appointment of the first president of the ECB in June 1998, which reportedly led to the awkward agreement to split the first term between the current president and the French candidate, suggests that this initial period in the ECB's life will be dominated by the search for a political equilibrium within which diverse national interests can coexist.

Instruments of Monetary Policy in the Euro Area

The new operational framework of the Eurosystem hinges upon three monetary policy instruments: open market operations, standing facilities, and reserve requirements.⁵¹ These instruments affect all credit institutions established in the euro area, both domestic institutions and branches of overseas banks. It should be stressed that, although decisions regarding the use of these instruments are made by the ECB, operations are then technically implemented by the national central banks.

51. The official reference on the monetary policy instruments and procedures of the Eurosystem is European Central Bank (1998).

Open market operations typically take the form of repurchase agreements (repos) implemented by the national central banks through auctions: banks bid for liquidity by offering collateral.⁵² The main refinancing operations, short-term interventions having a maturity of two weeks that are undertaken by the ECB every Tuesday, play the key role in steering interest rates and managing market liquidity. Longer-term refinancing operations, carried out every month, with a maturity of three months, are not generally meant to provide specific signals of the monetary policy stance.

In 1999 the main refinancing operations have occurred at a fixed rate (the so-called refi rate). As shown in figure 1, this rate was 3 percent until April 8, when the ECB announced a cut of 50 basis points, to take effect with the next operation. In a fixed-rate repo, the ECB controls both the price *and* the quantity of money. A representative short-term operation takes the following form. The ECB announces the tender by 3:30 p.m. on Monday. The counterparties have until 9:30 a.m. on Tuesday to submit their bids. At 11:15 a.m. the ECB announces the total amount of liquidity to be allotted. The submitted bids are then satisfied pro rata, according to the ratio of the allotment to the sum of the bids, and settlement takes place on Wednesday.⁵³ Settlement takes place one day after the trading day to prevent the auction from being affected by a scarcity of liquidity due to the settlement of earlier operations.

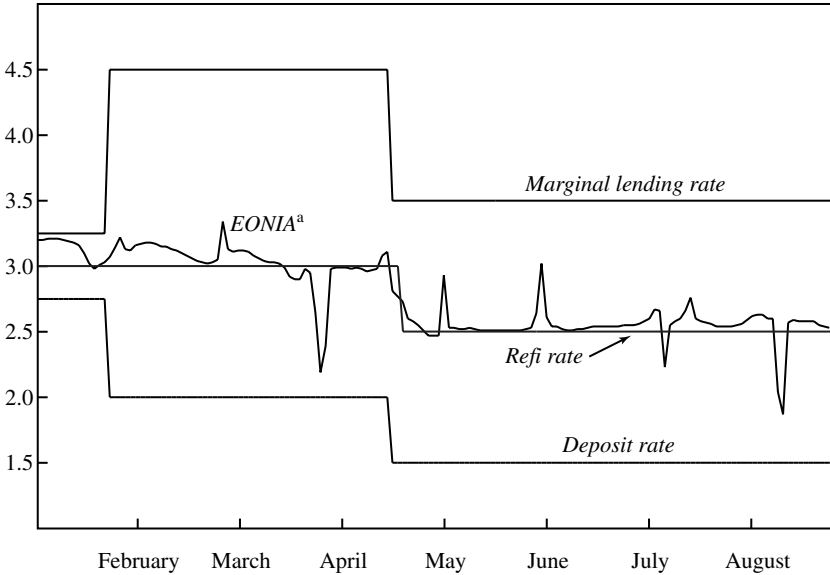
Technical aspects of the auction, such as the publication of the auction calendar well in advance of the tenders and the one-day delay between auction and settlement, represent elements of continuity with the procedures of the Bundesbank and other, but not all, European central banks. Before the euro, for instance, the Bank of Italy did not consider a predetermined auction calendar well suited to managing the sharp fluctuations

52. The Eurosystem may also use outright transactions, the issuance of debt certificates, foreign exchange swaps, and the collection of fixed-term deposits.

53. The longer-term operations are implemented instead through variable-rate tenders: the counterparties bid the amounts of money and the interest rates at which they want to enter into transactions with the national central banks. In the case of liquidity-providing tenders, the ECB lists the bids in diminishing order of offered rates: the bids with the higher interest rates have priority and are accepted until the total liquidity to be allotted is exhausted. In the early stage of EMU the allotment method was by Dutch auction, in which all tenders are satisfied at the lowest or "marginal" interest rate. This was done to prevent smaller institutions with less information about market conditions from being penalized compared with larger institutions. From March 24 onward the method is by American auction, in which successful bidders pay the rate they bid.

Figure 1. Interest Rates in the Euro Area, 1999

Percent per year



Source: European Central Bank, *Monthly Bulletin*, various issues.
 a. Euro overnight index average.

induced by the Italian Treasury's activities.⁵⁴ Already, the liquidity impact of activities by the treasuries of France, Italy, and Spain has posed a challenge to the forecasting ability of the ECB.

The preference for fixed-rate auctions as the mechanism for the main refinancing operations is also controversial. A typical feature of fixed-rate short-term operations in 1999 has in fact been substantial overbidding. The ratio between the amount allotted by the ECB and the total amount of bids was often below 10 percent during the first seven months of 1999; in July it ranged between 4.2 and 7.4 percent. Since the ECB does *not* indicate the amount of funds it intends to allot at the tender, and since counterparties need only have sufficient collateral to cover the successful portion of their bid, institutions tend to present larger bids than necessary. This is particularly the case in situations where banks are concerned with

54. See Bianchi and others (1999, p. 77).

liquidity redistribution in the interbank market and prefer direct access to Eurosystem funds.⁵⁵ This procedure injects uncertainty into the environment for European banks.

Recently, the Eurosystem has been considering a switch from fixed-rate to variable-rate tenders. Implementing short-term variable-rate auctions would attain two goals: they would provide a better picture of conditions in the money market, and they would eliminate the overbidding problem. However, in a context of incipient inflationary pressures already priced into forward rates, markets may interpret such a switch as a signal of policymakers' desire for higher rates. This consideration may have played a role in the ECB's choice to maintain fixed-rate tenders over time, despite the problems just described. The ECB's initial preference for fixed-rate tenders probably stems from the fact that the Bundesbank adopted the same mechanism during the last stage of the transition to EMU. For the record, expectations of a switch to flexible-rate tenders arose in Germany in the second half of 1997, once again in an environment of incipient overheating and a depreciating currency. However, in that situation the Bundesbank opted for an increase in the refi rate (in mid-October 1997, from 3 percent to 3.3 percent) while maintaining fixed-rate tenders.⁵⁶

Assets accepted as collateral for the Eurosystem's open market operations are classified according to a two-tier system. Tier I collateral satisfies euro area-wide standards, whereas tier II collateral is certified by individual national central banks and includes marketable and nonmarketable debt instruments as well as equities. To reduce the moral hazard problem of national central banks certifying risky national assets as collateralizable,

55. In the early stages of EMU some confusion regarding the allocation mechanism described above resulted in a somewhat asymmetric allocation of liquidity across countries. In fact, institutions in countries such as Spain or Italy, where the mechanism was less familiar, had a tendency to be overcautious in their bids, reportedly acting under the presumption that sufficient collateral was required to cover the full extent of the bids. The asymmetry disappeared after the ECB clarified in a press release (on February 2) that availability of collateral was required only on the date of *settlement* of the tender, not at the time of the bids. See Bianchi and others (1999, p. 78) and International Monetary Fund (1999, annex 1).

56. In previous years, the German central bank had moved back and forth between fixed- and variable-rate fourteen-day tenders. Before October 1992, the adoption of a combination of fixed- and variable-rate operations (such as the "mixed double-decker" since September 1988, involving one-month fixed-rate tenders combined with a two-month variable-rate tender) was meant to let markets influence interest rates while providing a clear signal as to where the central bank wanted interest rates to move.

the certifying bank bears the entire default risk for tier II assets. The Eurosystem bears the default risk for tier I assets.⁵⁷ The two-tier system seeks to ensure equal treatment of financial institutions residing in different countries, while at the same time minimizing the risk of losses in the monetary operations of the Eurosystem. It is motivated by the numerous idiosyncrasies in national financial systems and by the political demand that EMU respect diversity in national financial cultures and traditions. Although such diversity may disappear in the long run, by recognizing the permanent need for a two-tier system the Eurosystem acknowledges that a common currency alone will not eliminate crucial asymmetries in national financial markets.⁵⁸

In contrast to open market operations, which provide or absorb short-term liquidity at the initiative of the Eurosystem, two constantly available (“standing”) facilities provide or absorb overnight liquidity at the initiative of individual counterparties. Upon presentation of collateral, institutions can borrow from the Eurosystem unlimited overnight funds through the marginal lending facility, and can deposit overnight funds with the Eurosystem through the deposit facility. The Eurosystem determines the official borrowing and lending rates, effectively setting upper and lower bounds for the overnight market rates at which institutions borrow from and lend to each other. The history of this interest rate “corridor” in the first part of 1999 is plotted in figure 1. After a brief introductory period in which the range of fluctuation was quite narrow (plus or minus 0.25 percent around the 3 percent refi rate), the marginal lending rate was set at 4.5 percent and the deposit facility rate at 2 percent. Note that the corridor at that point became asymmetric around the refi rate: the relatively high rate on overnight official loans provided banks an incentive to manage liquidity in

57. According to the “correspondent central banking model,” both tier I and tier II assets eligible for Eurosystem operations may be used in a cross-border context, implying that an institution can receive funds from the central bank of the country in which the institution is established by making use of assets located in another member state.

58. At the end of March 1999, tier I and tier II assets available for open market operations and payments system purposes summed to approximately €5.2 trillion. Over 97 percent consisted of tier I collateral. Government paper accounted for 76 percent of marketable collateral, and securities issued by credit institutions for 18 percent. Bonds and medium-term notes accounted for 91 percent of the instruments, short-term notes for 8 percent, and equities and other types of assets for the remaining 1 percent. See European Central Bank, *Monthly Bulletin*, May 1999, p. 33.

an efficient way. The asymmetry disappeared, however, after April 8, when the two rates were lowered to 3.5 percent and 1.5 percent, respectively.

Use of the two standing facilities was particularly high during the first weeks of EMU, more as a result of the high volatility of money market rates within the narrow interest rate corridor than because of problems with the TARGET system. In January, because of the high volatility of overnight rates and some dispersion among rates quoted in different countries (although spreads did not exceed 10 basis points), both standing facilities were often simultaneously in use. This anomaly has occasionally recurred, for instance on July 14, 1999.

Credit institutions in the euro area are subject to a minimum reserve requirement of 2 percent of all deposits and debt with a maturity of less than two years (repos and interbank liabilities are excluded). There is no penalty for holding required reserves: these are in fact remunerated at the average refi rate over the maintenance period, which runs from the 24th of one calendar month to the 23rd of the next. The amount of required reserves for the current period is estimated using balance-sheet data for the end of the previous period (this is done on a quarterly basis for smaller institutions). Over the maintenance period the reserve requirement must be met on an average rather than a day-to-day basis.⁵⁹ In the monetary policy framework of the Eurosystem, required reserves are meant not to be an instrument for short-term control of the money stock, but rather to improve the ability of the ECB to operate efficiently as a provider of liquidity, by creating or increasing a structural liquidity shortage.

Liquidity Management and the Money Market

The monetary policy framework just described provides the institutional context within which to analyze the euro area money market. Two points are worth emphasizing. On the one hand, the new pan-European payments and settlement system has performed well, as the introduction of

59. At the end of each day, however, the reserve accounts with the national central banks are required to be nonnegative. At the end of the maintenance period, reserve holdings in excess of requirements are not remunerated (and if they are transferred to the Eurosystem through the deposit facility, they are remunerated at the lowest overnight rate). Failure to meet the reserve requirements is subject to penalties.

the euro has brought about an almost immediate convergence of national money market interest rates. On the other hand, difficulties have emerged in the process of liquidity management, and elements of market segmentation have been observed.

Since the launch of EMU and the redenomination of deposits in euros, the new TARGET payments system has been the essential catalyst for monetary integration in Europe. TARGET is composed of the real-time gross settlement systems of the EMU members and the ECB, connected by a set of common infrastructures and procedures. The key advantage of TARGET is its operational speed: settlements are immediate and final provided the sending institution has sufficient funds or overdraft facilities with a national central bank. However, TARGET is relatively expensive, in terms of both its pricing policy and its collateral requirements.⁶⁰ More than €1 trillion in daily payments were processed on an average day in January. Payments volume has since decreased (in May and June the daily averages were €869 billion and €923 billion, respectively), but the order of magnitude remains similar to that of the US Fedwire system.⁶¹

Since TARGET's inception, liquidity in the money market has improved across all maturities. The high volume of transactions is particularly evident in the overnight market, where the volume of trade exceeds €55 billion daily. The average ticket size has also increased relative to the sum of transactions in national currencies before conversion. Reportedly, trades in excess of €150 million are common, and trades of up to €5 billion have been recorded.⁶²

Among sources of price information, the euro area-measured EONIA, or euro overnight index average,⁶³ has emerged as the benchmark overnight interest rate, dominating its competitor EURONIA, an equivalent index measured in London.⁶⁴ The spreads between national overnight

60. For an analysis of TARGET see Prati and Schinasi (1999) and Garber (1998).

61. For cross-border payments TARGET competes in Europe with a number of alternative clearing systems: the system of the European Bankers' Association; the Euro Access Frankfurt system owned by the Landeszentralbank in Hessen, Germany; and the French Paris Net Settlement system.

62. Bank of England (1999, chapter 3, paragraph 25).

63. The EONIA is calculated as a weighted average of all overnight unsecured lending transactions initiated within the euro area by a panel of fifty-seven declaring banks.

64. For maturities beyond overnight, the benchmark euro interest rate and the preferred price source for derivative contracts is the EURIBOR (measured in the euro area), whose

rates and the EONIA are negligible, and the weighted standard deviation of average country rates fell below 2 basis points after the first three weeks of EMU. All available evidence suggests that unsecured interbank rates are well aligned across national markets, a measure of the success of EMU. Yet not all elements of national segmentation have been removed: bid-ask spreads remain somewhat different across countries, and in some countries they are higher than in pre-EMU Germany.⁶⁵

The behavior of the EONIA within the interest rate corridor is plotted in figure 1. The EONIA has often been quoted above the refi rate, possibly because, unlike Eurosystem refinancing operations or private repo transactions, interbank overnight loans are not collateralized. An alternative explanation, especially in the early stage of EMU, is that the spread reflects problems of redistribution of funds in the interbank market—large, collateral-rich banks absorb liquidity at the Eurosystem auctions and squeeze small banks in the unsecured market. It may also reflect a reluctance to look beyond national borders for funds, possibly because of still-insufficient cross-border credit lines supporting interbank lending in the euro area, a legacy of the pre-EMU system.⁶⁶

One of the clearest patterns exhibited by the EONIA is the sizable swings at the end of the reserve maintenance periods. For instance, the EONIA collapsed toward the end of the second maintenance period on March 23, falling as low as 2.19 percent before rebounding to a level close to the refi rate, at the time equal to 3 percent. Similar downward spikes occurred in July and August, and upward blips were recorded in April and May. The sharp swings in overnight rates apparently signal difficulties in managing liquidity in the euro area. For instance, in February the EONIA jumped upward—and borrowing from the Eurosystem's marginal lending facility peaked—as banks scrambled to meet their reserve requirements.

spread over the equivalent euro LIBOR (the London interbank offered rate) is usually within 1 basis point.

65. Elements of market segmentation are even more evident in the secured (repo) interbank market. National repo rates have largely converged in the euro area, but the development of a single European market is undermined by the absence of links between national securities settlement systems, hampering the cross-border use of collateral (International Monetary Fund, 1999).

66. See International Monetary Fund (1999).

The Eurosystem identifies the root of its difficulties as determining the appropriate amount of liquidity in the presence of “autonomous” factors, especially government deposits, which influence the demand for reserves. As late as the fifth reserve maintenance period, which ended on June 23, the ECB estimated the net liquidity-absorbing impact of the autonomous factors at €74.8 billion, compared with a net provision of liquidity through open market operations of €176.7 billion. The largest liquidity-absorbing change in treasury deposits during a reserve maintenance period stems from the Italian tax collection scheduled on the 23rd of each month, thus coinciding with the last day of the maintenance period.⁶⁷ In principle, the ECB could intervene in the market to smooth interest rate swings through fine-tuning operations. So far, however, it has decided not to do so, arguing that the volatility of the EONIA at the end of the reserve maintenance periods does not have a relevant impact on longer maturities along the yield curve.⁶⁸

The Growth of the Private Bond Market

The introduction of the euro is expected to foster the growth of a large market for corporate bonds and to contribute significantly to disintermediation, leading to a marked reduction in the role of banks in European corporate finance. Currently, the proportion of loans to bond financing in Europe is estimated to be almost 3 to 1, roughly the reverse of the U.S. pattern. The evidence for the first two quarters of 1999 shows a high rate of growth of the European bond market, especially the corporate segment. If sustained, the current rate of growth would indeed allow the corporate bond market in Europe to bridge the gap with the United States in a matter of years. It would clearly foster the international role of the euro. But the specific conditions prevailing at the beginning of 1999 suggest some caveats in interpreting the data.

Evidence on the bond market is provided by Capital Data Bondware, which calculates the overall issuance of underwritten bonds denominated

67. See European Central Bank, *Monthly Bulletin*, July 1999, pp. 15–17.

68. In the past, some commentators have predicted that fine-tuning interventions to smooth interest rates would be difficult to execute, among other reasons because of the decentralized implementation of monetary policy (Centre for European Policy Studies, 1998, p. 31).

in euros. The aggregate figures provided do not include, among other things, equity- and warrant-linked bonds but do include government bonds that are underwritten rather than auctioned. *Total* issuance of domestic and international bonds increased from an average of €150 billion per quarter in 1998 to €261 billion and €220 billion in the first and the second quarters of 1999, respectively. As mentioned above, the nonfinancial corporate bond sector has experienced the strongest growth rate. Issues by corporations rose from an average of €8.9 billion over the four quarters of 1998 to €30 billion and €16.4 billion in the first and second quarters of 1999, respectively. Despite the fall in absolute value between the two quarters, the share of corporate bonds in total issuance increased from 12 percent in the first quarter to 16 percent in the second. The Bank for International Settlements (BIS) also reports a record volume of activity by corporate borrowers and ascribes the bulk of the growth to European companies.⁶⁹

Can these data be interpreted as evidence of a significant step toward a pan-European corporate bond market and a changing pattern in European corporate finance? Several considerations argue for caution in reaching any conclusion in this regard. First, a close look at the data reveals that most of the growth has come from European companies that have issued bonds in the past, and from foreign (that is, non-euro area) issuers. In particular, the presence of U.S. firms in the European bond market has increased significantly. Thus the growth in the market does not, so far at least, reflect a larger base of issuers. Second, part of the upsurge in the first months of 1999 can be attributed to the fact that some corporations (as well as governments, as discussed in the next section) delayed and bunched issues in anticipation of the birth of the euro. Reportedly, these firms sought to establish a presence in the new market with large and liquid issues. This explanation is consistent with the recorded increase in the average size of issuance between 1998 and 1999. Third, some of the growth in issuance may have been driven by the current wave of mergers and acquisitions throughout Europe, which is magnifying the financing needs of the corporate sector. Fourth, over the same period, bond issuance has also increased in other currencies; it has not been a specific feature of the euro area.

To some extent, corporations may have been encouraged to resort to the euro bond market by the sharp drop in yield spreads across countries at the

69. Bank for International Settlements (1999).

birth of the euro. The drop occurred in a context of generalized low yields, which were expected to reduce the traditional resistance of European investors to low-rated bonds as a way to seek better returns. (Indeed, the available evidence records an increase in the issuance of low-rated bonds.) Low yields at the beginning of the year may also explain the boom in the issuance of *Pfandbriefe*, the fully collateralized bonds issued by specially authorized German banks to fund housing, shipbuilding, and public loans. With an outstanding stock of €930 billion at the end of 1998, *Pfandbriefe* are the largest nongovernment asset class in Europe, far larger than the stock of any European national government debt. New issues of *Pfandbriefe* in the first quarter of 1999 exceeded €99 billion; they then dropped to €33 billion in the second quarter, possibly reflecting the upward adjustment in long-term interest rates.

Finally, it is worth stressing that the weight of bond issuance by banks, although falling, remains very large compared with that by nonfinancial corporations. Indeed, bank issues dominate the market with approximately two-thirds of total issuance. According to the BIS, the first quarter of 1999 also recorded a large increase in bank lending. After a contraction of \$126 billion in 1998, for instance, international bank lending in euros climbed to \$337 billion in the first quarter of 1999.⁷⁰ Not only have European banks added to their portfolios of European debt securities (largely buying up government issues, as discussed in the next section), but they have also been major players in financing mergers and acquisitions.

Public Debt Management in a Common Currency Area

Following the birth of the euro, government debt previously denominated in national currency has been converted into the new common currency. With an outstanding stock of about €3 trillion, euro-denominated government bonds make up the world's largest market for government bonds, larger even than the corresponding U.S. market. However, European government bonds are issued by eleven independent sovereign states, with different financial needs, fiscal policies, and regulations. The birth of the euro has therefore raised interesting and unprecedented issues in

70. See Bank for International Settlements (1999, p. 10).

public debt management. By eliminating currency risk, the euro has eliminated an important differentiating feature in the supply of debt instruments, thus forcing European governments to rethink their financial policies. And by speeding up the process of market integration, a common currency has increased the potential demand for national bonds, but it has also intensified competition among sovereign issuers, providing strong incentives for them to reform markets and pursue greater efficiency and transparency. The euro has also raised the question of whether and to what extent public debt management is a matter of common concern, requiring coordination and cooperation among European governments.⁷¹

During the course of 1999, euro area governments are expected to issue bonds with a face value of almost €500 billion (table 1). The three largest players are France, Germany, and especially Italy, whose 1999 redemption schedule is particularly heavy. New issues seem to have been front-loaded in the first few months of the year: approximately one-third of the estimated 1999 gross issuance was concentrated in the first quarter. In that period, the volume of benchmark bonds issued by France, Germany, Italy, and Spain often exceeded that of the U.S. Treasury benchmark.

Despite significant differences in ratings, yield spreads on government bonds have been quite narrow and seem to reflect liquidity considerations. Relative to ten-year German *bunds*, the largest spreads have not exceeded 33 basis points. Markets seem to have focused on the fact that deficits are uniformly low in all euro area states, and to have downplayed any risk of secession. Reportedly, the birth of the euro has indeed changed the criteria used by rating agencies to assess sovereign risk: variables such as trade deficits, export growth, and exchange rates now receive very little consideration; instead the focus is almost exclusively on the fiscal stance. In part because the European SGP establishes upper limits on the ratio of countries' overall (that is, not cyclically adjusted) national budget deficits to GDP, even mild cyclical fluctuations of deficits toward these limits may induce some variability in ratings and yield spreads over the business cycle.⁷²

71. A comprehensive overview and analysis of public debt management in the euro area is provided by Piga (1999), whose discussion is based on the results of a survey of European debt managers and market makers. Piga discusses in detail many of the issues touched upon in this section.

72. See, for instance, the section on sovereign debt in Deutsche Bank (1999).

Table 1. Government Debt in Euro Area Countries, 1999

Billions of euros except where noted otherwise

Country	Outstanding stock at the beginning of the year			Estimated redemptions and issuance during the year		
	Total	Excluding treasury bills	Percent foreign owned	Redemptions ^a	Gross issuance ^a	Net issuance
Austria	74.5	68.6	17	6.2	10.8	4.6
Belgium	183.0	143.0	6	19.5	23.0	3.5
Finland	43.6	41.0	6	1.7	1.7	0.0
France	616.0	561.0	16	41.7	80.0	38.3
Germany ^b	961.9	951.7	51	68.7	107.0	38.3
Ireland	21.7	21.7	27	1.9	0.9	-1.0
Italy	1,042.3	822.6	19	177.5	203.2	25.7
Netherlands	185.6	181.6	25	19.6	25.7	6.1
Portugal	59.5	58.1	29	4.5	6.4	1.9
Spain	280.2	185.7	15	16.2	35.0	18.8
Total	3,468.3	3,035.0	100	357.5	493.7	136.2

Source: Deutsche Bank (1999) and national ministries of finance.

a. Estimated by Deutsche Bank. Data for Italy and Spain exclude treasury bills.

b. Data refer to December 1998.

Significant cross-border diversification of government bond holdings has not (yet) occurred. Although hard evidence on diversification is scarce, the general perception is that very few investors have appreciably modified their holdings of domestic debt. Many market participants, however, anticipate a change in portfolio patterns as soon as European money managers come to be evaluated on the basis of European performance benchmarks rather than domestic benchmarks.

Underlying these general features of the government bond market are differences in the objectives and strategies pursued by national treasuries. In the two largest countries in the union, Germany and France, debt management is largely seen as part of a general strategy to promote the national market as a European financial center. The immediate goal in each country is to establish its domestic government bonds as the benchmark for the euro area as a whole.⁷³ To help it toward this goal, France can count on the fruits of a decade-long effort to modernize its bond market: French bonds are quite standardized, sufficiently liquid over a large spectrum of maturities, and supported by a well-organized and transparent market for repos. Their main drawback is perhaps the low liquidity of French bond futures contracts, compared with that of *bund* futures contracts. To reduce the gap with French standards, Germany has also been reforming its markets. In particular, breaking with its traditional preference for issuing debt through syndication, Germany has recently adopted an auction system, accessible to an “auction group” of domestic and international investors.

In the eyes of market participants, neither the French nor the German government is likely to become the sole provider of benchmark bonds across the whole spectrum of maturities. In part because of the importance of the *bund* futures contracts, German *bunds* are expected to be the European benchmark for the ten-year sector, whereas French issues should dominate shorter maturities. However, which specific bonds will be included in the set of euro benchmarks may well vary over time, depending on circumstances. Consistent with the general objective of promoting their national markets to the status of European financial centers, France and Germany require primary dealers in their sovereign debt to be located

73. The benchmark interest rate is the minimum interest rate investors will demand for investing in a nontreasury security. It is generally tied to the yield to maturity offered on a recently issued treasury security of comparable maturity. This is referred to as an “on-the-run” or current coupon issue or, more simply, a benchmark issue.

in the country.⁷⁴ A location requirement is not necessarily in the interest of other countries, and indeed some have actually reformed their regulation to allow primary dealers to be located abroad.

Because of their relatively low credit rating (table 2), Italian bonds cannot compete for the status of the European benchmark. Yet the large stock of its public liabilities gives Italy comparative advantage in terms of liquidity, and it has exploited that advantage by resorting to “jumbo” issues of euro-denominated fixed-income conventional bonds.⁷⁵

Issuing a few standard bonds in large amounts is also the dominant strategy in other countries of the euro area, mainly because of concern about the liquidity of their new issues, but with the related goal of marketing domestic debt to nondomestic investors. As a general pattern, debt managers have increased the size of each bond issue, while reducing diversification of their supply. There are, however, differences across countries with regard to the choice of auctions as opposed to syndication.

It is worth mentioning that European secondary markets for government debt are to a large extent telephone-based. The exception is Italy, which in 1988 adopted an electronic system, the MTS (*Mercato Telematico dei Titoli di Stato*). Since March 1999, an expanded version of this system, based in London and called the Euro-MTS, has been open to trade in the largest and most liquid government bonds of France, Germany, and Italy. By the end of October 1999, trading will also be possible in bonds of Austria, Belgium, the Netherlands, and Spain. So far this market has been remarkably successful. The average daily volume of trade between the end of March and the end of June 1999 was €2.7 billion, roughly evenly divided across French, German, and Italian bonds. In light of the experi-

74. The regulation of primary dealers is not subject to the European Investment Service Directive, which establishes that domestic markets can be accessed by EU financial institutions regardless of their location. A location requirement for primary dealers is therefore lawful but in open contrast with the spirit of the directive. This is a clear indicator that European governments view regulation of primary dealers in public debt as a highly sensitive political issue.

75. For instance, in May 1999 Italy sold ten-year Buoni Pluriennali del Tesoro for €23 billion in a single issue. This is to date the largest issue in euro-denominated bonds. A goal actively pursued by Italy in recent years has been to improve debt maturity and duration. Between July 1998 and June 1999, the average maturity of Italian public debt rose from 4.9 to 5.5 years—a level consistent with the average maturity of French and German debt. Over the same period, the share of bonds indexed to short-term rates fell by more than 5 percentage points of GDP, with a significant impact on the duration of Italian debt (Republic of Italy, 1999). Spain is also pursuing the goal of lengthening average debt maturity.

Table 2. Euro Area Bond Ratings and Sovereign Yield Spreads Against the German Bund

Units as indicated

Country	Ratings		Yield spread as of May 20, 1999 ^a				
	Moody's	S&P	2 years	5 years	10 years	30 years	
Austria	Aaa	AAA	5	26	18	10	
Belgium	Aa1	AA+	4	26	24	19	
Finland	Aaa	AA	-10	19	19	...	
France	Aaa	AAA	8	12	12	4	
Ireland	Aaa	AA+	14	21	18	...	
Italy	Aa3	AA	8	18	26	25	
Netherlands	Aaa	AAA	2	12	15	7	
Portugal	Aa2	AA	1	26	31	...	
Spain	Aa2	AA+	-2	20	26	15	

Source: Deutsche Bank (1999).

a. Basis points.

ence of the Euro-MTS, it is likely that new initiatives will soon speed up profound changes in the European bond markets.

Will the euro necessarily encourage more coordination and cooperation among public debt managers? Some have recently proposed a single debt agency for the euro area, which would issue European debt instruments on behalf of national governments.⁷⁶ Supporters of this idea, such as the former commissioner for monetary affairs of the European Union, stress three motivations: the belief that both lack of coordination among national issuers and market fragmentation are important factors hampering the euro's status as a reserve currency; the need to avoid congestion in European financial markets because of uncoordinated bunching of issues; and the presumption that a unique agency would reduce the cost of borrowing.

One problem with the creation of a supranational debt agency as a new European institution is that it would require a costly process of revision and amendment of European treaties. Moreover, the arguments presented in favor of such an agency are unconvincing. Consider first the presumption that a supranational agency would reduce the cost of borrowing. As national issues would be lumped together, the proposed arrangement would provide some scope for increasing the liquidity of European debt instruments. Yet it is unlikely that financial markets would overlook the existing differences in rating among sovereign debtors. At best, the debt issued by a European debt agency would be rated at some average of the underlying ratings of member states, resulting in a net gain for issuers with low ratings and a liquidity problem. All other countries, however, would experience a net loss. Moreover, to the extent that the issue of undifferentiated European bonds is perceived to reduce transparency with respect to the creditworthiness of the borrower, the overall cost of debt may well increase rather than decline.

A supranational agency could also reduce competition among national treasuries, which is now perceived as an important factor at the root of greater innovation and efficiency in European financial markets. As for the threat of congestion, current practices in the euro area already minimize this risk. Italy and France publish an annual calendar of issues, and Germany publishes a quarterly calendar, without necessarily specifying the exact dates of issues.

76. See "De Silguy Proposal May Confound Sceptics: An Agency Issuing Public Debt for the Euro-Zone Is a Long-term Prospect," *Financial Times*, August 4, 1999, p. 21.

On the positive side, the existence of a supranational agency would be likely to promote product standardization, but a market-driven trend in this direction is already detectable. If anything, some market participants have expressed concerns about excessive product standardization, as new issues have largely consisted of standard fixed-income bonds. In contrast, the supply of indexed bonds, for instance, has fallen markedly. Finally, a European debt agency could reduce the market power of primary dealers, relative to the current situation in national treasuries in which debt managers compete against each other.

Given that the proposal of a single debt agency has been met with widespread skepticism and a variety of criticisms, it is unlikely that such an institution will be created in the near future. Some form of coordination may nonetheless emerge, especially if debt management ends up creating liquidity management problems for the ECB as mentioned above.⁷⁷ A notable example of an institution engaged in coordinating debt issues is the German Committee for Public Sector Credit Issue, which ensures full cooperation among the Ministry of Finance, the governments of the *Länder* (German states), and the Bundesbank, as well as other public and local institutions.

The Equity Market and the Demand for Diversification

Given the scant evidence available thus far, the impact of the euro on equity markets is harder to assess than that on the bond markets. The considerable uncertainty about the new economic environment has encouraged a thorough review of equity portfolio strategies and risk exposure by both individuals and institutional investors. Whereas currency risk has disappeared in the euro area, country risk clearly has not. Not only fiscal and regulatory policies but also labor markets and financial systems differ across member states. As discussed below, there is no presumption

77. The ECB provides a regularly updated report on the effects of national treasuries' activities related to liquidity. Countries are classified in three groups according to the volatility and size of these effects. The first group includes Austria, Belgium, Finland, Germany, Luxembourg, and the Netherlands, where the overnight balances on the treasury's account with the central bank are low or close to zero. The effect on liquidity is moderate for the second group, including Ireland and Portugal, and considerable for Italy, Spain, and, to a lesser extent, France. See European Central Bank, *Monthly Bulletin*, July 1999.

that the effects of the common monetary policy will be symmetric. Country-specific factors are therefore not likely to disappear from the portfolio strategies pursued by investment managers.

The Bank of England reports results of a survey of continental European fund managers carried out in April 1999 by Merrill Lynch and Company and the Gallup Organization.⁷⁸ In this survey, one out of four managers reported having already carried out the portfolio adjustment they considered necessary, and another 62 percent were confident that they will have done so by the end of the year. The marketing and investment strategies pursued by investment institutions reveal interesting trends. Many of these institutions now emphasize cross-border, sector-by-sector allocations of portfolios. Such a strategy is supported by the creation of several pan-European stock market indexes, including sectoral indexes.

The eventual scope and size of the ongoing portfolio revision are unclear. The first issue is the extent to which the euro will lead to a portfolio reshuffling toward pan-European, rather than national, asset holding. It has been observed that eliminating currency risk could alter the perception and definition of "domestic" assets, to include all assets denominated in the common currency. Thus, for a given home bias in portfolio formation, we should expect more cross-border equity holdings. According to recent estimates of equity holdings in France, Germany, Italy, Portugal, and Spain, the percentage of domestic assets in the portfolios held by residents is above 90 percent. It is noteworthy that a significant home bias also persists in individual states of the United States, the federation with the longest tradition of currency union, although this bias does not approach the levels observed in Europe. The U.S. experience could provide a benchmark for assessing what could be a realistic endpoint for the process of cross-border investment diversification in the euro area.⁷⁹

78. Bank of England (1999).

79. Huberman (1997, 2000) documents a significant home bias at the local level in holdings of claims on the regional Bell operating companies (the regional telephone companies spun off from the breakup of AT&T). Ellen E. Schultz ("Workers Put Too Much in Their Employer's Stock," *Wall Street Journal*, September 13, 1996, p. C1) documents that 43 percent of funds invested in defined contribution pension plans is held in the employer's stock. Coval and Moscovitz (1997) find that U.S. investment managers exhibit a strong preference for firms with headquarters in the area in which they themselves are based. For a discussion see Hess and van Wincoop (2000) and Pesenti and van Wincoop (1999).

In spite of the changes in the investment industries mentioned above, major diversification is unlikely to occur rapidly. Other things equal, domestic and local portfolio managers may need time to redirect their operations toward markets where they do not have comparative analytical advantage. In Europe there still exist considerable national differences in fiscal, regulatory, and political systems, let alone in corporate behavior. Moreover, the presence of capital gains taxes makes portfolio stock reshuffles costly, thus favoring a gradual diversification strategy consisting of investing only new flows of funds abroad. By the same token, the portfolio composition of existing mutual funds may be constrained by their official mandates. Diversification may occur through the creation of new mutual funds with broader mandates, rather than the redirection of existing ones.⁸⁰

Important changes are occurring in the organization and technical capabilities of European markets, as exemplified by the alliance between the Frankfurt and London stock exchanges with the goal of creating a single, liquid market for stocks with large market capitalizations. But progress in this area depends crucially on the removal of impediments arising from differences in law, regulation, and tax regimes.⁸¹ Although many consider the number of distinct markets in the euro area excessive, it is unlikely that domestic markets will disappear. Rather, they are likely to specialize in medium- or low-capitalization domestic stocks, leaving the larger stocks to a deeper pan-European market.

Banks, Bank Mergers and Acquisitions, and National Champions

It is easy to predict that banking, the sector at the very center of the European financial system, will also be the sector most affected by the transformations brought about by EMU. But the direction in which conti-

80. See Bank of England (1999) for a discussion.

81. The removal of the many obstacles hindering financial market integration is the objective of the European Commission's action plan for a single financial market. This plan, recently given high priority, aims to have most of the necessary legislation in place by 2002. A partial listing of the plan's agenda clearly illustrates the complexity of the task faced by European legislators: updating the Investment Service Directive, to provide a regulatory framework for cross-border provision of investment services (authorization, supervision, safeguards to counter market manipulation); simplifying requirements for companies seeking to raise capital on an EU-wide basis (especially regarding the mutual recognition of prospectuses); improving the comparability of financial information (by fostering the adoption of

continental European banking is heading is by no means clear. A first issue is the extent to which existing differences between countries will persist. A second is which particular model of banking will become the prevailing one for Europe, and a third is how fast the transformation of European banking will take place.⁸²

The sizable difference between continental Europe and the United States (and, to a lesser extent, the United Kingdom) in the importance of bank lending in corporate finance corresponds to a dichotomy between models of financial intermediation.⁸³ Whereas the Anglo-American model places greater reliance on impersonal markets, the traditional European model relies more on relationship banking. In recent years, several factors have already induced changes in these models, independently of EMU. A leading example is provided by developments in computing and telecommunications technology, which have undermined the very core of the traditional European model by encouraging price competition across a wide range of products and by reducing the relevance of historical bank-customer relationships.⁸⁴

The key issue, then, is whether and to what extent such a dichotomy will persist in the EMU era. Within the context of Europe's ongoing technological and legal transformation, EMU is expected to enhance competitive pressures in the European banking system. To the extent that the disappearance of currency risk facilitates the development of pan-

international accounting standards); defining a framework for the mutual acceptance and enforceability of cross-border collateral (at present there is a high risk of invalidation of cross-border collateral arrangements); defining a single market framework for supplementary pension funds (rationalizing investment restrictions and simplifying cross-border activities); eliminating cross-border tax obstacles and distortions, especially on life insurance and pension products.

82. See Centre for Economic Policy Research (1999a).

83. In the first half of the 1990s the share of bank loans in total debt liabilities of non-financial enterprises was 80.2 percent in France, 85.1 percent in Germany, and 94.6 percent in Italy. For comparison, the analogous shares in the United States and the United Kingdom were 32.4 percent and 49.4 percent, respectively. Small firms are not the only ones that make extensive use of credit financing in Europe. In 1996 the average ratio of loans to liabilities of the German firms among the world's 239 largest manufacturing companies was 63.2 percent; the comparable figure was 44.3 percent in France and 73.9 percent in Italy, but only 34.1 percent in the United Kingdom and only 9.4 percent in the United States. See Centre for Economic Policy Research (1999a, paragraph 1.3).

84. See, for example, White (1998).

European financial markets, corporations will find it increasingly advantageous to issue securities rather than seek bank loans. The availability of a wider variety of investment opportunities will provide an incentive for European bank customers to shift funds from safe but ultimately low-return bank deposits to higher-yielding mutual funds, employer-sponsored thrift plans, and the like. A significant increase in households' demand for securities will also stem from the development of fully funded pension plans, which demographic trends and changing political postures are fostering throughout Europe.

The transformation of the European banking system in response to stiffer competition presents several similarities with U.S. financial developments in the past two decades.⁸⁵ At the root of change in both regions is the combination of technological developments, deregulation, and a growing securities industry. In both regions the number of banks has decreased, small banks have been hit more severely than large institutions, and the wave of consolidation has tended to increase market concentration.⁸⁶ In both cases also, the bulk of the adjustment has occurred through mergers and acquisitions; bankruptcies have played only a marginal role.

What distinguishes the consolidation process in Europe from that in the United States is the fact that, in the United States, indicators of concentration at the local level have slightly decreased, whereas in Europe the concentration of banking activity at both the national and the local levels has significantly increased. This is especially true in the smaller countries. So far, the consolidation of EU banking industries has mostly taken place within national boundaries: out of 488 mergers and acquisitions from 1995 through the first quarter of 1998, cross-border activity accounts for only 17.6 percent,⁸⁷ and the additional wave of mergers beginning in 1998 has strongly reinforced the pattern. In other words, European banking consolidation has not yet eroded the segmentation of national markets, nor has it enhanced the internationalization of the European banking system. With the exceptions of Ireland and Luxembourg, countries in the euro area still

85. See, for example, Centre for Economic Policy Research (1999a, chapter 2).

86. There are a few exceptions. In France, for instance, the asset market share of the top five firms fell from 42.5 percent to 40.3 percent between 1990 and 1997 (European Central Bank, *Monthly Bulletin*, April 1999, table 3, p. 46).

87. See European Central Bank (1999, table 8). For an analysis of the benefits of mergers and acquisitions see the case study by Focarelli, Panetta, and Salleo (1999).

report a domestic share of branches and subsidiaries from foreign countries below 11 percent.⁸⁸

Consolidation confined to the national level raises at least two kinds of problems. At the microeconomic level, it may reinforce the local monopoly power of banks, thus increasing the inefficiencies faced by borrowers and worsening the condition of those customers, in particular small firms, that are less likely to have access to international capital markets.⁸⁹ At the macroeconomic level, it can affect the monetary policy transmission mechanism. For example, there is evidence that large German banks tend to insulate their loans from monetary policy fluctuations⁹⁰—a point we revisit below in the context of our analysis of asymmetries in Europe. But despite these concerns, for the time being there is no sign that the bias against cross-border bank mergers in the euro area is bound to disappear. A variety of factors can contribute toward explaining such a bias, but national law, regulation, and tax regimes, which de facto keep national markets segmented, play a key role. For instance, there exists no uniform European corporate law to provide a framework for the birth of European (that is, transnational) firms. This is a key problem hampering cross-national mergers of both financial and nonfinancial corporations. Moreover, as the structure of bank supervision in the euro area is decentralized, the incentives faced by nationally based supervisors may work against cross-border mergers.

Bank supervision in the euro area remains organized at the national level. Those national central banks that already had domestic supervisory and regulatory functions in the pre-EMU era (six out of the eleven) have retained them. In other countries such as France and Germany, supervision and regulation reside with independent agencies in close cooperation with the central bank. It is often argued that, as long as bank activity remains essentially confined to the national level, supervisory tasks are not impaired by informational problems. Difficulties in monitoring a bank's activity and balance sheet can, however, emerge in the case of international banks. The desire to avoid these difficulties may give national supervisors an incentive to discourage cross-border mergers—to the point of blocking them in countries where bank mergers require supervisory approval.

88. European Central Bank (1999).

89. See, for instance, the analysis in Centre for Economic Policy Research (1999b).

90. See, for example, Favero, Giavazzi, and Flabbi (1999).

Interestingly, a few national supervisors have recently expressed their aversion to hostile takeovers in the process of within-border consolidation, perhaps for fear of setting a risky precedent for future successful bids by foreign competitors.⁹¹ Ultimately, decentralized regulation can itself hamper the integration of European capital markets and impart a bias toward “national champions,” with uncertain implications. To the extent that banking market integration can be slowed down but not halted, these national champions may become embarrassing liabilities for national authorities. In an integrated market, these banks will be focused too broadly at the national level to benefit from knowledge of local markets, but at the same time too small to compete effectively with large international institutions.

There is another reason why several critics of the current regime of decentralized supervision are concerned with its effectiveness once the European banking market becomes more integrated. In time of crisis, a national supervisor may not fully internalize the euro area-wide implications of its decision when facing the option of rescuing a bank located in its own country but also operating abroad.⁹² Crisis management considerations thus make it likely that the emergence of European transnational banks will lead to some centralization in supervision. Currently, national supervisors cooperate with each other on a bilateral basis, according to a memorandum of understanding among EU countries that regulates the exchange of information and provides for periodic meetings, without, however, being legally binding. There are also two multilateral forums: the Banking Supervision Committee of the ECB and the lower-level Groupe de Contact.

Early on, critics questioned the ability of the new EMU institutions to cope with financial crises in a timely and effective manner.⁹³ Since the launch of the euro, however, the ECB has replied to these criticisms by clarifying Eurosystem procedures for crisis management. Provision of emergency liquidity is a national responsibility, and its costs are to be borne at the national level. Cooperation and exchange of information are required for the ECB to manage the impact of emergency interventions on the monetary stance of the euro area as a whole. An issue that remains

91. See, for instance, the analysis by Alessandro Penati of the unsuccessful double takeover involving BNP, Société Générale, and Paribas, “Le Banche tra Feudi e Mercato,” *Corriere della Sera*, August 13, 1999, p. 1.

92. See the considerations put forward by Padoa-Schioppa (1999).

93. International Monetary Fund (1998).

open is what role market segmentation will play in a potential EMU crisis. On the one hand, the current segmentation in the euro area might effectively contain the risk of contagion of a financial crisis erupting in one member country. On the other hand, severe problems may be associated with the lack of information at a central level, as well as with constraints on the flow of liquidity from one market to another.⁹⁴

The Exchange Rate of the Euro

At the onset of EMU in January, one euro was worth \$1.18. By July, it had fallen to less than \$1.02—a depreciation of 13.5 percent in less than seven months—before rebounding in the second half of the month. The euro's weak performance in the first half of 1999 has been cited by euroskeptics of all stripes as reason to question whether Europe was ready for a common currency after all. In our view, the slide of the euro has attracted a share of public attention much beyond its importance, in either macroeconomic or policy terms. Our analysis of the market for euro-denominated bonds suggests that the weakness of the euro in the first half of the year does not appear to have undermined the international role of the new currency. A “continuing buoyancy of issuance in euros despite the unfavourable background of euro weakness”⁹⁵ was a striking feature of international capital markets in the first two quarters of 1999.

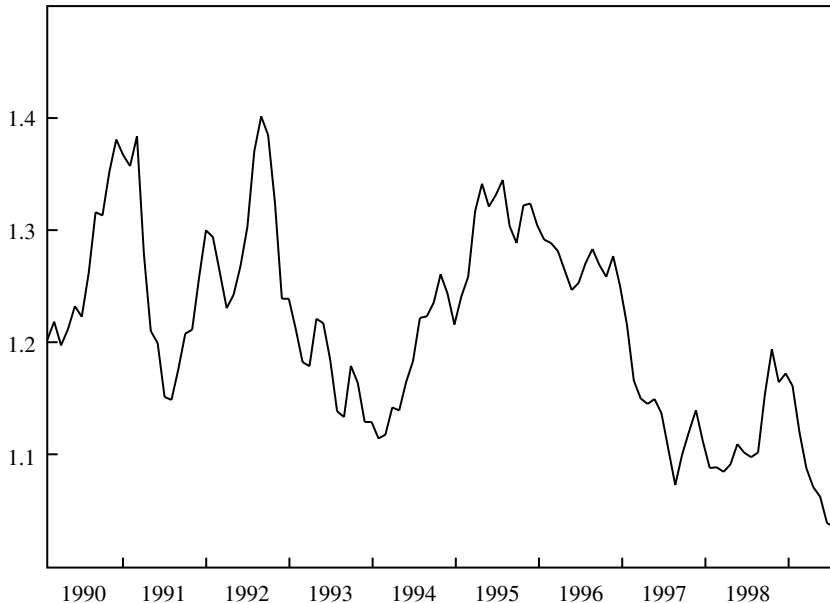
To put the recent behavior of the euro in historical perspective, figure 2 plots the exchange rate of the “synthetic euro” (a weighted basket of the currencies of the EMU member states) against the dollar over the 1990s. Three points emerge. First, to focus on recent events, the euro's slide in 1999 (more precisely, since the last quarter of 1998) appears as the

94. On these issues see International Monetary Fund (1999).

95. Bank for International Settlements (1999, p. 17). For a discussion of the international role of the euro see, among others, European Central Bank, *Monthly Bulletin*, August 1999, and Rogoff (1998). Portes and Rey (1998) argue that under a “big euro” scenario in which the euro replaces the dollar as the main international currency for cross-Atlantic financial transactions, Europe would reap a gain equivalent to 0.2 percent of GDP (as a flow). Meanwhile the United States would lose 0.04 percent of GDP and Japan 0.07 percent. The gains for Europe would come mainly from decreasing costs on its bond markets. The losses for the United States and Japan come from foreign exchange market transactions, since both countries are better off when the dollar is the vehicle currency.

Figure 2. Dollar-Euro Exchange Rate, 1990–99^a

Dollars per euro

Source: European Central Bank, *Monthly Bulletin*, various issues.

a. Exchange rates prior to 1999 are for the "synthetic euro," a basket of currencies of the EMU member states.

mirror image of the synthetic euro's strong appreciation in 1998—a "compensation" (to quote ECB President Duisenberg) for the rise in the value of the component currencies before EMU. Second, taking a longer-term perspective, the frequent swings of the synthetic euro against the dollar over the 1990s have been equal to or larger than the 1999 slide. Third, these fluctuations have occurred around a slowly declining trend. From this vantage point, the level of the euro in the summer of 1999 was consistent with its low-frequency history. If anything, it is the value of the synthetic euro in the months *preceding* the launch of EMU that stands out as being well above its trend.

Over the first half of 1999, the euro also weakened significantly against the yen, although in a tighter range than against the dollar. In response to the strength of the yen, the Bank of Japan reportedly intervened on

several occasions, and on June 18 the ECB, in its first and so far only currency market intervention, acted on behalf of the Bank of Japan to weaken the Japanese currency against the euro.⁹⁶

Commentators have cited a host of factors to “explain” the behavior of the euro over the first months of 1999, ranging from the delayed effects of the Asian crisis to uncertainties created by the Balkan war. However, the focus has mostly been on two factors: concerns over fiscal profligacy on the part of some EMU members, and cyclical divergence between the euro area and U.S. economies.⁹⁷ In retrospect—and to the extent that short-term macroeconomic analysis of exchange rate fluctuations makes any sense at all—the first of the two factors appears to have played only a marginal role, whereas the second appears to have been decisive.

There has been one specific episode in which the weakness of the euro was clearly associated with fiscal problems.⁹⁸ This occurred when a revision in growth forecasts led the Italian treasury minister to request a relaxation of the Italian deficit goal for 1999 to 2.4 percent of GDP from the previous 2.0 percent. This modification was granted on May 27 by the Ecofin Council ministers.⁹⁹ The euro reached what was up to that point an all-time low of \$1.04 the next day, prompting analysts to express their concern that individual member states were easing their deficit targets, and

96. In terms of volumes, data released by the Japanese Ministry of Finance show that, between January 1998 and January 1999, Japanese investors purchased roughly ¥7.3 trillion (more than \$61 billion) worth of European debt. Of these euro-denominated positions, a significant ¥568 billion worth was liquidated in February and March, contributing to the weakness of the euro. Interestingly, the trend has reversed since then. By June 1999 cumulative Japanese net purchases of euro-denominated debt since January 1998 were up to a staggering ¥9.3 trillion (\$81 billion).

97. See Buitter (1999a) for a presentation and discussion of the different arguments.

98. The link between fiscal problems and euro weakness was most explicitly suggested by the ECB president in the aftermath of the surprise resignation of German Finance Minister Oskar Lafontaine on March 11: “the possibility cannot be excluded that increased uncertainty about the political support for a stability-oriented monetary and fiscal policy has contributed to the weakening of the euro.” See Wim Duisenberg, “The Euro, the Dollar and National Economic Policies: What Room for Manoeuvre?” speech at the Euro, J+80 conference, Paris, March 25, 1999.

99. The Ecofin Council is composed of the ministers of finance and economy of the EU member states. It is responsible for deciding legislation regarding tax harmonization, financial liberalization, and economic policy. The council makes the final decision on many aspects of EMU, and it was on the basis of an Ecofin report that the EU heads of state and of government decided which countries qualified for monetary union.

officials to reiterate that this was not the case.¹⁰⁰ Given the extent of the unanticipated growth slowdown, the Italian request was not unreasonable: no revision would have been necessary had deficit targets been specified in cyclically adjusted terms. At any rate, the impact of this episode on the external performance of the euro was ephemeral. It is worth stressing that a larger combined fiscal deficit in the euro area could weaken the euro only if the ECB were expected to accommodate it through monetary relaxation, and that would be tantamount to questioning the ECB's commitment to its institutional mandate.¹⁰¹

Fiscal factors notwithstanding, the most convincing interpretation identifies the root cause of the euro's slide as differences in the phase of the business cycle between the European economy and economies elsewhere. To some extent, the slide of the euro represents a textbook case of exchange rate adjustment in response to a perceived shift in economic fundamentals. Figure 3 plots revisions over time in expectations for the 1999 growth differential between the euro area and the United States, as measured by *Consensus Forecasts*.¹⁰² The data provide preliminary but compelling evidence that the timing and magnitude of the shifts in relative growth expectations were consistent with the behavior of the euro.

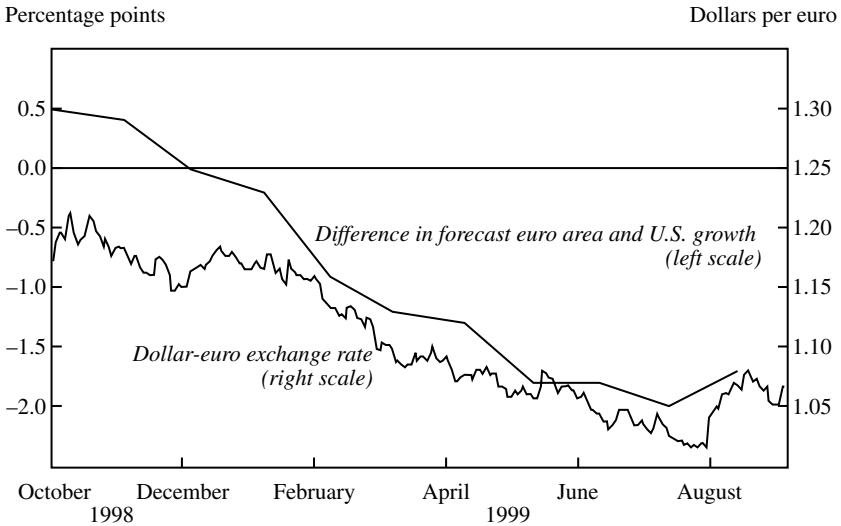
During the first nine months of 1998, the forecasters surveyed in *Consensus Forecasts* expected the growth differential to swing in Europe's favor, with Europe growing about 0.6 percentage point faster than the United States in 1999. During this period, the European currencies that are components of the synthetic euro appreciated rapidly. By late 1998, as the European recovery stalled and the U.S. economy continued its strong performance, these forecasters still expected the growth differential to reverse in 1999. As recently as the fourth quarter of 1998, they projected that Europe would be growing 0.3 percentage point faster than the United

100. In official comments the German chancellor stressed that the decision to ease Italy's budget targets was "a one-off" occurrence and did not mean that any of the member states were departing from a strict budgetary course. The ECB president noted that Italy was not breaking the rules but warned against fiscal laxity spreading within EMU. ECB board member Issing, however, said that Italy's decision sent "the wrong signal at the wrong time."

101. This point is controversial in light of recent work on the "fiscal theory of price level." See Sims (1998).

102. *Consensus Forecasts*, a monthly publication of Consensus Economics, London, has published forecasts for the euro area as a whole since August 1998. Before that, euro area forecasts can be approximated as weighted averages of the individual countries considered in the publication.

Figure 3. Revisions in Expectations of the Euro Area–U.S. Growth Differential, and the Dollar-Euro Exchange Rate, 1998–99



Source: *Consensus Forecasts* (Consensus Economics, London) and European Central Bank, *Monthly Bulletin*, various issues.

States. By the first quarter of 1999, however, forecasts for Europe were being revised downward and those for the United States upward. By the middle of the second quarter of this year, forecasters were expecting U.S. growth to outpace European growth by over 1.5 percentage points. In sum, the euro's slide was a clear reflection of the ratcheting down of expected growth differentials during the first half of 1999. Conversely, the upswing of the euro in July was related to an improvement in the expected relative growth performance of the euro area. Among the key elements coinciding with the sudden rebound of the euro was the July release of better-than-expected business surveys from France, Germany, and Italy pointing to a recovery in European industrial production.

Has the euro's slide been good news for Europe? Arguably yes, by providing a cyclical stimulus and counteracting transitory weaknesses of the European economies through a rebound in export orders. To quantify this sort of stimulus, the Organization for Economic Cooperation and Development presents estimates of the responses of GDP growth and inflation to a sustained 10 percent decline in the effective value of the euro. According to these estimates, such a depreciation would add more than $\frac{1}{2}$ percentage

point to real GDP growth after one year, cumulating to more than 1 percentage point after two years. The cost of this boost to growth is a 0.6-percentage-point increment to inflation, felt in the first year.¹⁰³ In the current economic environment, with euro area inflation running near 1 percent, such a rise would leave inflation still below the 2 percent upper limit for the range that the ECB regards as price stability.

The Eurosystem deliberately does not specify any target for the exchange rate of the euro. The argument is that price stability would be compromised if an exchange rate target were to be pursued. Others, however, argue that the relaxed attitude of the ECB to the euro's slide represents an element of discontinuity in European monetary policy from its Bundesbank-dominated past. An important consideration helps understand this apparent departure. Before EMU, fluctuations in cross-Atlantic exchange rates had an impact on intra-European exchange rates and were a major source of destabilizing pressures. This empirical regularity was referred to as the dollar–deutsche mark polarization: when the dollar strengthened against the mark, currencies such as the French franc and the Italian lira tended to appreciate against the mark as well. Downward swings of the dollar were particularly problematic: almost all realignments in the EMS were preceded by a fall in the effective dollar index and were followed by a recovery of the dollar.¹⁰⁴ Other episodes of strain in the EMS were associated with swings in the dollar exchange rate, and the crisis of September 1992 that led to the exit of the lira and the pound sterling from the EMS was preceded in the summer by a dollar crisis. Today, the risk that cross-Atlantic exchange rate fluctuations will have any impact on intra-European exchange rates has disappeared (with the notable exception of the exchange rate between the pound sterling and the euro). Other things being equal, the ECB can afford to adopt a more detached attitude toward exchange rate fluctuations than would have been possible in the past.

The ECB does not appear to have espoused the case for explicit support of a strong euro. However, consistent with the second pillar of the monetary strategy, the ECB does monitor exchange rate developments with regard to their impact on prospective price developments. As ECB Executive Board member Otmar Issing has said, “If a prolonged depreciation, for example, were to lead to significant inflationary risks in the

103. Organization for Economic Cooperation and Development (1999, p. 44).

104. See Giavazzi and Giovannini (1989).

euro area, all other things being equal, we would clearly know how to respond.”¹⁰⁵ The vagueness of the ECB pronouncements—clearly, no estimate of the elasticity of the HICP to a depreciation is provided—potentially leaves open all courses of action short of explicit exchange rate targeting. Over the first months of 1999, these ambiguities fostered concern over the possibility that the ECB would intervene in currency markets or raise interest rates to keep the euro from falling below parity with the dollar.¹⁰⁶

An element of concern in assessing future developments in the euro exchange rate stems from Article 109 of the Maastricht Treaty. According to that provision, the EU Council of Ministers may “conclude formal agreements on an exchange rate system for the ECU in relation to non-Community currencies,” although in doing so it must be acting unanimously on a recommendation from the ECB or from the European Commission. The council also has the right to “formulate general orientations for exchange-rate policy,” in this case acting by a qualified majority on a recommendation from the ECB or from the Commission.¹⁰⁷ Although the treaty expressly rules out exchange rate initiatives inconsistent with price stability, Article 109 raises the possibility of conflict between the ECB and parts of the European policy establishment regarding exchange rate orientations. Such a conflict emerged in the spring of 1999, when a number of European policymakers proposed—unsuccessfully—different plans to implement exchange rate target zones among the key currencies, in some cases explicitly referring to Article 109 of the treaty. It is worth stressing that on December 13, 1997, the European Council agreed to limit the provision of exchange rate orientations to “exceptional circumstances” and to “respect the independence of the Eurosystem.” But the meaning of “exceptional” remains undefined, and

105. Otmar Issing, “The Euro—A Stable Currency for Europe,” speech to the SUERF conference, Athens, June 10, 1999, p. 22.

106. See, for example, Krugman (1999). The closest these fears came to being validated was at the time of the currency intervention of June 18, when the ECB sold yen against euros on behalf of the Bank of Japan. Although technically acting as an agent of a Japanese central bank concerned with the excessive strengthening of the yen, the ECB appeared to be killing two birds with one stone.

107. See the discussion in Buitier, Corsetti, and Roubini (1993); Buitier (1999b); and Svensson (1999).

since this agreement is not part of the treaty, it can be revoked at the sole discretion of the Council of Ministers. Ultimately, the clause gives the euro area finance ministers, as Willem Buiter writes, “a foot in the door of Euro area monetary policy design.”¹⁰⁸ It may also represent a threat to the independence of the EMU institutions.¹⁰⁹

The Asymmetric EMU

For most critics of European monetary integration in the pre-euro days, the major argument against a common currency hinged on the view that Europe was significantly more heterogeneous than the United States, and therefore more vulnerable to country-specific shocks, which could be best dealt with by letting exchange rates change. The creation of EMU has ended the policy debate on whether Europe could afford to give up exchange rate flexibility, without necessarily implying, however, that the issues and concerns raised during the debate have been answered.

To start with, notable differences in growth performance have recently emerged from a two-year recovery phase in the euro area as a whole. According to recent calculations by the ECB, the increase in growth dispersion reflects to a large extent differences in *trend* growth rates.¹¹⁰ At the root of recent divergences in trend growth is the remarkable performance of Ireland, Finland, and the Netherlands and the decline of Italy. Ireland’s trend growth rate between 1994 and 1998 was a staggering 9.2 percent a year, and those of Finland and the Netherlands were above 3 percent, whereas Italy’s trend growth rate was as low as 1.3 percent. (The annual trend growth rate for the euro area as a whole, for comparison, was 2.3 percent.) Similar patterns emerge for employment and for growth in industrial production.

The ECB study also provides evidence of synchronization of shorter-term *cyclical* developments, as measured by the correlation of cyclical components of GDP growth in individual countries with those in the euro

108. See Buiter (1999a).

109. See Feldstein (1997).

110. For an analysis of these data see European Central Bank, *Monthly Bulletin*, July 1999, pp. 39–42.

area as a whole.¹¹¹ Apart from the usual reservations about trend-cycle decompositions, two observations are appropriate. First, this kind of analysis cannot detect the nature of the shocks underlying cyclical movements. The theory of optimal currency areas, for instance, suggests that giving up exchange rate flexibility is costly, in terms of output stabilization, only in the presence of asymmetric *real* shocks. The overall degree of synchronization is not necessarily informative about the frequency and magnitude of these shocks relative to financial shocks. Second, the evidence shows that synchronization diminishes dramatically in the presence of easily identifiable, *large* asymmetric shocks, such as that associated with German unification. As suggested by our previous work on the subject,¹¹² the 1992–93 EMS crisis serves as a sober reminder of the destabilizing potential of policy conflicts that may arise in those (luckily rare) circumstances.

Whatever the nature of the shocks that do occur, an increase over time in the degree of cyclical synchronization cannot but represent good news for the ECB, by reducing the scope for political dissonance on its policy stance. Will regional divergences in the euro zone in fact become less pronounced over time? One thesis is that this will be a *result* of the common currency. The argument is that the elimination of exchange rate risk and the development of an integrated market for securities will provide growing opportunities to diversify portfolios, stimulate trade, and enhance integration. An extreme version of this view holds that, ultimately, the euro area will *endogenously* become an optimum currency area even if it is not one currently.¹¹³ A different thesis, drawing lessons from the U.S. experience, holds that cyclical synchronization cannot be expected to stem from monetary reform *per se*.¹¹⁴ Structural economic features play a much bigger role.

Recently, EMU watchers have focused on a different dimension of economic asymmetry in Europe. Because of differences in the way banking and financial intermediaries operate in the euro area countries, the argument goes, there could be some heterogeneity in national mechanisms of transmission of ECB monetary policy. Thus a centralized policy impulse

111. Angeloni and Dedola (1999) provide evidence on the role played by coordination of monetary policy (either formal or informal) in inducing convergence in cyclical and inflation movements over the 1990s.

112. See Buitier, Corsetti, and Pesenti (1998a).

113. See Frankel and Rose (1998); Frankel (1999).

114. See Clark and van Wincoop (1999).

could have asymmetric repercussions on the economies of the member states. This issue has potentially far-reaching implications for the conduct of ECB policy, especially if the United Kingdom and the other current nonmember countries in the European Union join EMU.¹¹⁵

Consider, for instance, the “textbook” interest rate channel of monetary transmission, according to which monetary policy modifies the cost of capital and borrowing conditions, thus affecting demand for durables consumption and investment. Three factors could generate asymmetries in this mechanism across countries.

The first consists of differences in the diffusion of consumer borrowing—borrowing that increases the sensitivity of consumption to interest rates, and therefore magnifies the impact of monetary policy on aggregate demand. In light of this consideration, we should expect interest rate movements to have a stronger impact in the Nordic countries and the United Kingdom than in Belgium, France, and Italy. In the first group of countries, the use of consumer credit is widespread, and the ratio of financial liabilities to disposable income is around 100 percent (for comparison, the corresponding ratio in the United States is 90 percent). The opposite pattern characterizes the second group of countries, where the ratio of households’ financial liabilities to disposable income is much lower, between 30 and 50 percent. The second asymmetry reflects differences in the level of public debt, a key determinant of net interest income as a share of disposable income. By increasing the interest income of households, an interest rate hike in high-debt countries may actually raise rather than reduce spending. The third asymmetry arises from differences in the percentage of short-term (or floating-rate) debt in private sector financial liabilities. For instance, households’ borrowing in the United Kingdom and Italy is largely short-term or indexed to short-term rates, whereas short-term borrowing by firms is sizable, relative to that in other European countries, in Belgium, France, Italy, and the United Kingdom. Combining these three factors, monetary policy (through the interest rate channel) could be expected to be particularly effective in the United Kingdom, and relatively ineffective in France. Italy is a mixed case, as the effects just described may partly offset each other.

115. Dornbusch, Favero, and Giavazzi (1998) and Favero and Giavazzi (1999) provide an excellent overview of these issues. The key points they raise are synthesized in what follows.

A rather different picture emerges if we allow for a credit channel in the transmission of monetary policy, according to which a liquidity squeeze that reduces the supply of bank loans is more effective, the lower the substitutability of bond issuance for bank credit.¹¹⁶ The focus is on the development of markets for loans as an alternative to bank credit. On these grounds, there is an apparent divergence between continental Europe, where the share of bank loans in total debt liabilities is high, and the United Kingdom, where this share is only 50 percent (compared with 30 percent in the United States). Credit channel theories also suggest that monetary policy is more effective, the higher the proportion of small firms and small banks. The reason is that smaller firms are more likely to be liquidity constrained and depend on banks for their financing, whereas smaller banks are less likely to use bond holdings as a buffer to insulate their loan portfolios.¹¹⁷

Finally, there are striking national differences in the timing of the response of bank lending rates to changes in key interest rates. This response is rather fast in the United Kingdom, because of the presence of competitive securities markets, but slow in countries where banks value long-term relationships with customers, as such banks may be less prone to transfer interest rate shocks to borrowers. In Germany, for instance, it takes one calendar quarter for bank rates to adjust by 36 basis points in response to a 1-percentage-point permanent change in key interest rates, and the adjustment is incomplete even after one year. Adjustment is even slower in France, where interest rates adjust by only 60 basis points after one year.¹¹⁸ The credit channel is also to be considered particularly important in Italy (where nonbank finance is virtually unavailable, and the small-firm sector is large), but unimportant in the United Kingdom (for the opposite reasons). France is somewhat similar in this respect to Italy; Belgium and the Netherlands are similar to the United Kingdom; and Germany is somewhere in between.

At this stage, it is difficult to assess the practical relevance of these considerations. On the basis of the evidence on the features of national financial markets, one might expect monetary policy to have a somewhat homogeneous impact in France, Germany, and Spain. In Italy a weak inter-

116. See Bernanke and Blinder (1988, 1992); Bernanke and Gertler (1995).

117. See Kashyap and Stein (1997).

118. See Bank for International Settlements (1995).

est rate channel compensates for a strong credit channel, whereas the opposite is true for the United Kingdom. The econometric evidence is mixed. Some models suggest that monetary policy has the strongest impact on output in the United Kingdom and Italy, and the weakest in Spain, followed by Belgium and the Netherlands. The impact on inflation is large in Belgium and Italy, but negligible in Austria. Conversely, vector autoregressive (VAR) models detect differences in national responses to a monetary shock, but these differences tend not to be large. The impact from monetary shocks tends to be similar in France, Germany, and the United Kingdom, small in Spain, and large in Sweden and Italy.¹¹⁹

It has been argued that these asymmetries will tend to disappear with the development of deeper pan-European financial markets, and that a necessary condition for this to happen is the dismantling of regulatory and political barriers to cross-border mergers, particularly among banks. However, even if this condition is satisfied, national asymmetries may not disappear quickly, to the extent that they are related to structural differences among national financial markets, such as discrepancies in legal structures or bankruptcy law.¹²⁰

Consider finally the extent of price asymmetries in EMU. Figure 4 plots recent trends in an index of dispersion of inflation rates among the euro countries, as reported by Eurostat, the statistical office of the European Communities.¹²¹ It is apparent that the trend reduction of inflation dispersion in the 1990s bottoms out in the first half of 1997. Most of the subsequent rebound can be explained by the acceleration of services prices in fast-growing countries such as Finland, Ireland, the Netherlands, Portugal, and Spain, together with divergent behavior of the most volatile components of the consumer price index. With the important exception of Italy, inflation has been above the euro area average in those countries with higher growth rates. Differences in core inflation across countries shrink until the second half of 1998 and rebound afterward, although to a lesser extent than differences in overall consumer price index performance.

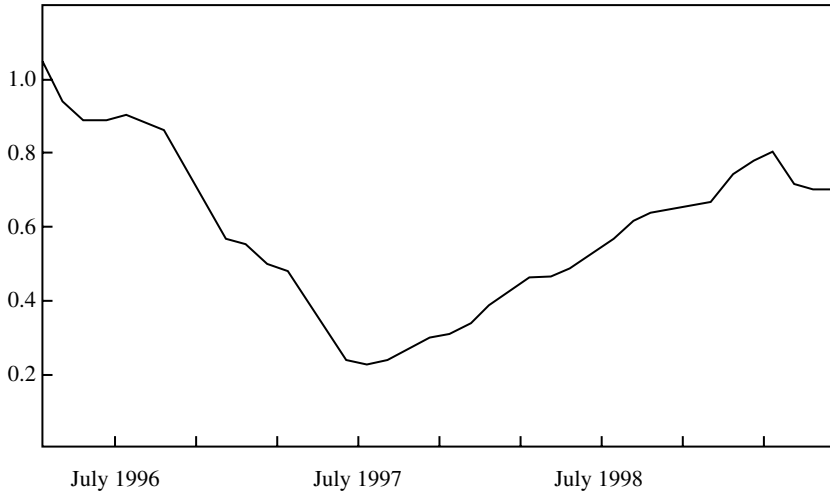
119. See Bank for International Settlements (1995); Gerlach and Smets (1995); Barran, Coudert, and Mojon (1997); Britton and Whitley (1997); Dornbusch, Favero, and Giavazzi (1998); Kieler and Saarenheimo (1998).

120. See Cecchetti (1999).

121. The dispersion indexes are computed as simple averages of the deviations in absolute value from the euro area mean and plotted as three-quarter moving averages. Data for Luxembourg are excluded. See also Bank of Italy, *Bollettino Economico* 32, February 1999, pp. 34–35.

Figure 4. Inflation Dispersion in the Euro Area, 1996–99^a

Percentage points



Source: Authors' calculations based on Eurostat Harmonized Indices of Consumer Prices.

a. The dispersion index is computed as the simple average of the deviation in absolute value from the euro area mean, and plotted as a three-quarter moving average. Data for Luxembourg are excluded.

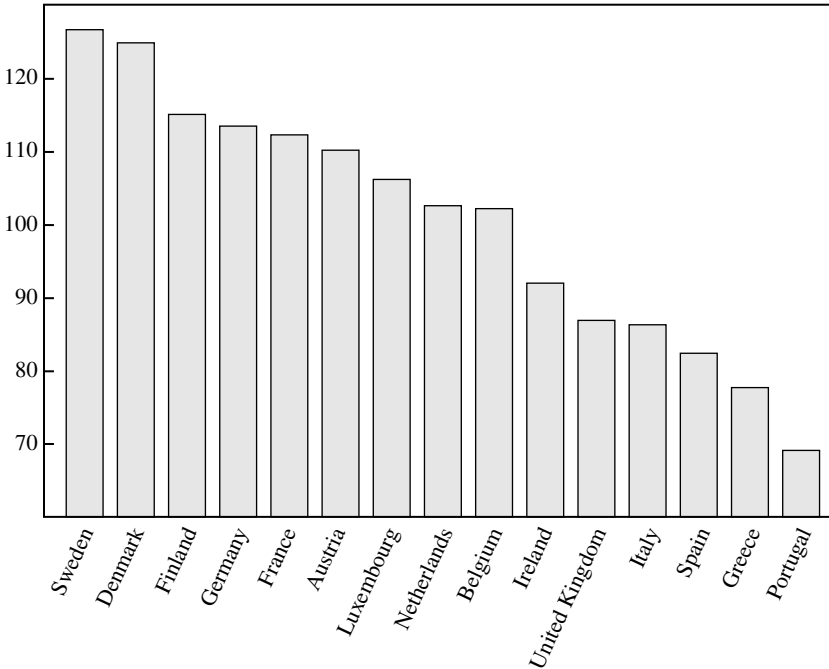
The Eurostat data also provide information about national differences in the price *level*, both in the aggregate and disaggregated by goods category, updated to 1996. The analysis of this evidence is relevant to monetary policy early in the life of EMU especially, when relative prices may move significantly in response to the new economic environment, affecting the rate of inflation directly and indirectly through possible repercussions on wages. Differences in the consumer price index reflect a variety of factors: transportation costs, indirect taxes, market segmentation, and search costs may hamper convergence in the prices of tradables, whereas income levels, as a proxy for productivity in the tradables sector, as well as the degree of labor market integration, influence the relative price of nontradables.

Differences within Europe in the level of prices are large (see figure 5). For example, in 1996 the German consumer price index was 32 percent higher than that in Italy. Although to some extent these differences reflect differences in GDP per capita, there is a striking degree of homogeneity among Austria, Belgium, France, Luxembourg, and the Netherlands.¹²²

122. See Bank of Italy (1999, p. 77).

Figure 5. Price Levels in the EU Countries, 1996

Index, 100 = EU mean



Source: Bank of Italy (1999) and Eurostat data.

This may be an indicator of the comparatively high level of economic integration that the continental part of northern Europe has already achieved, relative to the rest of the euro area. Preliminary work on disaggregated price indexes by the Bank of Italy shows, reassuringly, that the dispersion of prices of tradable goods is lower than that of the prices of services. It also shows that the dispersion of prices of both tradables and nontradables fell noticeably between 1990 and 1993 but remained stable between 1994 and 1996.¹²³ This is *prima facie* evidence of the effects of the exchange rate crisis in 1992–93 on relative price adjustment in Europe, a topic that merits further consideration. The open issue is to what extent the introduction of the euro will further reduce differences in tradables prices.

123. See Buttiglione and Veronese (1999).

Fiscal Vulnerabilities and the Stability and Growth Pact

Within the framework of the Treaty of Amsterdam, budgetary policy lies exclusively within the purview of the member states of EMU. However, the set of rules and coordinating procedures included in the SGP limit the conduct of national fiscal policies in the euro area.¹²⁴ Ultimately, the budgetary rules hinge upon the basic principle that EMU member states shall avoid excessive government deficits and shall commit themselves to a medium-term objective close to budget balance or surplus.

In general, a national government deficit is deemed excessive if it is above 3 percent of GDP, and government debt is excessive if it is above 60 percent of GDP. These rules admit a few exceptions,¹²⁵ and the complex procedure used to ascertain whether a country is running an excessive deficit involves, among other things, a qualified majority vote in the Ecofin Council. In practice, these elements may make the application of the excessive deficit procedure less automatic upon crossing the deficit threshold than it may appear.¹²⁶

No one would challenge the general principle that sound public finances are a prerequisite for the stability of a monetary union. What is controversial is whether the specific rules of the SGP represent the most appropriate way to promote and enforce fiscal discipline. Several commentators have argued that the deficit limits in the SGP, which are not cyclically adjusted, do not provide sufficient flexibility to cope with cyclical down-

124. The SGP consists of three documents. The first is a Resolution of the European Council (passed in Amsterdam on June 17, 1997), in which the commitments of the member states, the European Commission, and the European Council are explicitly specified. The other two are Ecofin Council Regulations of July 7, 1997, which clarify the implementation of the excessive deficit procedure and provide guidance on surveillance.

125. A deficit-GDP ratio over 3 percent is not deemed excessive if it has declined substantially and continuously and reached a level close to 3 percent. Similarly, the stock of debt is not considered excessive if its ratio to GDP is diminishing and approaching the reference value at a satisfactory pace. Also, a deficit above 3 percent of GDP is not excessive if it is expected to be temporary and has occurred under exceptional circumstances such as a severe economic downturn. For a detailed account see European Central Bank, *Monthly Bulletin*, May 1999.

126. If evidence of an excessive deficit is found, the country is expected to undertake appropriate corrective action. If it does not, financial sanctions in the form of nonremunerated deposits, from a minimum of 0.2 percent of GDP to a maximum of 0.5 percent, are imposed, under Article 104c of the treaty. These deposits are converted into a fine if the excessive deficit is not corrected after two years; otherwise they are returned to the country.

turns, and thus enhance the risk of contractionary bias in the euro area.¹²⁷ It is also argued that deficit limits cannot be used as a substitute for policy coordination and that, by focusing exclusively on the size of fiscal imbalances, the SGP overlooks the composition of budgets. Recent studies, however, provide empirical evidence that fiscal adjustments that rely primarily on cuts in transfers and public wages are more successful in leading to persistent deficit reduction than are adjustments based on tax increases and cuts in public investment. According to these studies, cuts in transfers and wages may also actually have an expansionary macroeconomic impact in the short run.¹²⁸ Moreover, it may well be that, in the practical implementation of the excessive deficit procedure, public investment will be given a different weight than public consumption and transfers, in light of their different impacts on future budget deficits and financial stability.

Are any EMU countries at risk of transgressing the SGP thresholds and running excessive deficits? Figure 6 plots official forecasts over the period 1999–2002 for the official government balance as a percentage of GDP in the EU countries, based on the fiscal consolidation programs of the members, both inside and outside the euro area.¹²⁹ Figure 7 does the same for public debt-GDP ratios. These ratios are reported in the May 1999 issue of the ECB's *Monthly Bulletin*. Three points are worth emphasizing. First, all countries expect to remain well within the SGP threshold for excessive deficits, but the largest economies of the euro area forecast medium-term deficits that fall short of a balanced budget or surplus. The forecast deficits for the three largest countries are 1 percent in Germany in 2002, 0.8 percent in France in 2002, and 1 percent in Italy in 2001. Second, debt-GDP ratios are expected to fall slowly for all EMU countries, but those of Belgium, Italy, and to a lesser extent the Netherlands will remain above the reference value of the SGP. Third, the EU members currently outside EMU (Denmark, Greece, Sweden, and the United Kingdom) expect to perform well in terms of the SGP criteria, with the notable exception of debt performance in Greece.

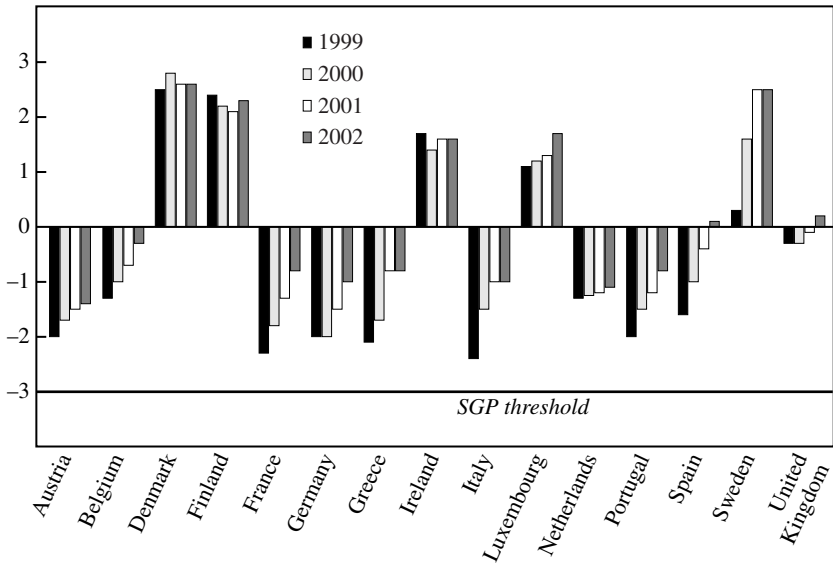
127. Recent contributions on the costs and benefits of the SGP and the macroeconomic effects of fiscal consolidation include Beetsma and Uhlig (1997); Buiters, Corsetti, and Roubini (1993); Casella (1999); Chari and Kehoe (1998); Corsetti and Pesenti (1999); De Grauwe (1998); and Eichengreen and Wyplosz (1998).

128. See, for instance, Alesina and Perotti (1996).

129. The programs are described online at ue.eu.int/emu/convergence/main.htm.

Figure 6. Official Fiscal Balance Forecasts for the EU Countries, 1999–2002

Percent of GDP



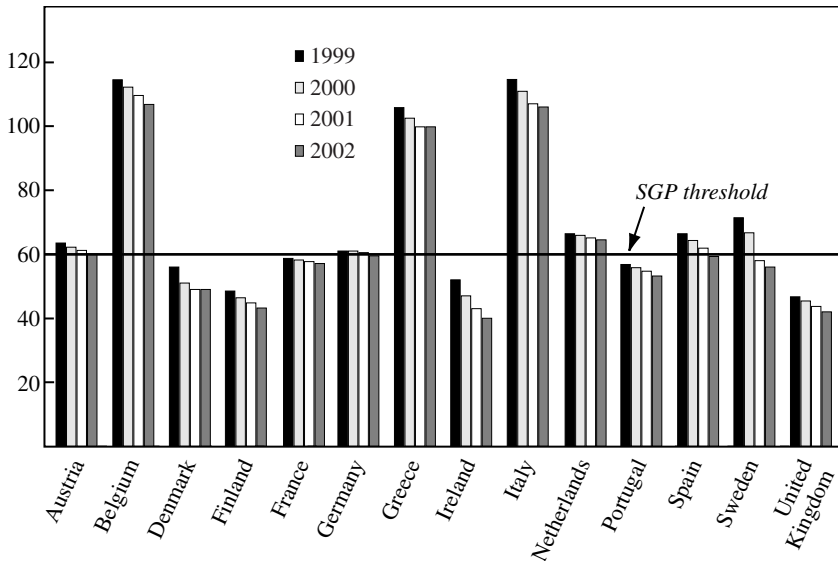
Source: European Central Bank, *Monthly Bulletin*, May 1999, except for the recently downgraded official forecast for Italy in 1999.

The projections appear to be realistic, contingent on a scenario of low euro area-wide interest rates (and thus reduced interest payments), continuing political support for fiscal adjustment, and growth near potential. If the last assumption turns out to be excessively optimistic, and as a result some countries exceed the reference values of the SGP, the key unknown is the extent to which the Ecofin Council will allow for cyclical contingencies in assessing whether current deficits are excessive.

Taken at face value, the data suggest that fiscal consolidation in Europe—and especially in the core countries of EMU—should be expected to proceed at a somewhat relaxed pace. As most countries expect to approach the balanced-budget target only at the end of the forecasting horizon, there is virtually no room for emergency budgetary responses to unanticipated contingencies. The ECB describes the prevailing approach to

Figure 7. Official Government Debt Forecasts for the EU Countries, 1999–2002

Percent of GDP

Source: European Central Bank, *Monthly Bulletin*, May 1999.

fiscal stability in the euro area as “minimalist”,¹³⁰ that is, countries are, in its view, attempting to comply with the letter of the SGP while ignoring its spirit.¹³¹ It has been correctly observed that the real problems lie ahead, with demographic trends expected to increase pension and health expenditure by about 7 percent of GDP between now and 2030. However, several European economies that have already undergone a process of consolidation to meet the convergence criteria required to qualify for EMU membership have also experienced a severe growth slowdown and a plunge of industrial confi-

131. In partial support of this interpretation, the record shows a substantial use of cosmetic measures to push deficits below 3 percent of GDP. These include the postponement of cash outflows in a variety of ways. Before 1998, for instance, public pensions in Italy were paid every two months. Thus the December payment included pension payments due in January of the following year. By switching to monthly payments, the Italian government engineered a one-time (but only cosmetic) drop in the budget deficit. Also, the use of derivatives allows debt managers to reduce the flow of interest payments—a point contested by

dence in the aftermath of the Asian crisis. Thus a “minimalist” approach may be for these countries the only feasible option.

Conclusion

At the end of our review of the new economic and financial landscape that is emerging in Europe, and of the policy debate accompanying the ongoing changes, three considerations stand out. First, after many decades of experimentation in monetary cooperation, EMU has been heralded as the endpoint of Europe’s long-lasting quest for financial stability and the catalyst for its further economic integration. If one has to judge by its early performance, EMU is indeed delivering on its promises. The switch to a common currency has apparently enhanced market integration, as witnessed by the smooth and swift takeoff of a pan-European money market as well as by the growth of the euro bond market. Despite the many concerns expressed in the past, the historical break induced by the creation of the euro and the changeover process have not brought about financial or systemic instability.

Second, despite these positive elements, the fact remains that EMU was born in a context of substantial market segmentation, regional economic diversity, and fiscal heterogeneity, let alone cultural, legal, and institutional diversity. Traces of national segmentation appear even in the most integrated market, that for overnight liquidity, and the extent of home bias becomes increasingly predominant as one moves from the bond and equity markets to the banking system. The elimination of currency risk and a common monetary stance may well contribute to diminishing the asymmetries in the euro area over time. But all available evidence suggests that, in the foreseeable future, market segmentation and national divergences are likely to provide the context for monetary policy. Apart from consid-

Piga (1999). Taking advantage of low interest rates in 1999, some governments have offered to exchange low-coupon for high-coupon bonds. These exchange offers resulted in a decrease in the interest payment, at the expense of an increase in the stock of government liabilities. Of course, these measures cannot affect the fiscal stance in the long run, but they are crucial in giving national governments breathing space in the short run. In a world of second best, they may even be beneficial, to the extent that they result in a more sensible application of the SGP.

erable uncertainty about the degree of synchronization of national business cycles and the effectiveness of a centralized policy in the presence of regional disparities, the ECB faces the issue of possible regional asymmetries in the transmission of its monetary policy. Absent effective collaboration among supervisory agencies, there is also a risk that the new system may reinforce national asymmetries, for instance by imparting a bias against cross-border mergers in the banking sector.

Third, the monetary strategy chosen by the Eurosystem has raised several complaints about its degree of transparency, the effectiveness of its communication strategy, and its accountability. Yet the short track record of the new institution suggests that, on the field, its choices have been the right ones. Thus far, the Eurosystem has pursued its mandate in a balanced way, respecting its anti-inflationary objective while adopting monetary policies that are appropriate for the cyclical conditions of the euro area. In particular, despite heavy criticism, the Eurosystem's posture of detachment from exchange rate management can be seen *ex post* as a key element in halting the economic slowdown and facilitating recovery in Europe.

Addendum

On November 4, 1999, while this paper was in press, the ECB raised its interest rates by 50 basis points, reversing the April cut. Market participants anticipated the November hike better than they had the April cut, as the ECB had clearly signaled its intentions in advance. Already in late summer the ECB had stated its belief that the euro area was no longer facing downward risks to price stability, and since the end of September several statements by members of the council had suggested that the ECB was about to raise interest rates. According to survey evidence, in October a vast majority of market analysts were indeed expecting a rate increase of 50 basis points in the following month.

What changed between April and November? Real economic indicators and inflation data show, as late as November 1999, no compelling evidence of overheating in the euro area as a whole. However, the monetary aggregate M3 (monitored by the ECB as the first pillar of its monetary strategy) continued to grow at a rate exceeding the reference value. The end of the summer saw an acceleration of M3, and between July and Septem-

ber its average annualized monthly growth rate was up to 5.9 percent, almost one and a half percentage points above the reference value. Credit to the private sector also kept expanding at an annual rate exceeding 10 percent. As far as the second pillar is concerned, in April the ECB read many indicators as pointing to deflationary risks in the euro area. During the summer, however, the ECB detected a trend reversal, based on evidence of increasing consumer and investor confidence, rising producer prices, and an acceleration of wage demands. Also, the ECB decision may have reflected a concern about the eventual impact of the recent strong increase in oil prices on the consumer price index.

Responding to many criticisms of the ECB for undermining the recovery in the euro area, the bank presented the November hike as a move toward a neutral, rather than a contractionary, monetary stance. However, the ECB has not identified the level of interest rate at which its monetary stance should be considered neutral with respect to cyclical stimulus. Having made two 50-basis-point moves in a row, the ECB has revealed a preference for large rate adjustments, consistent with the goal of preventing expectations of fine tuning and short-term “activism.”

In official comments after the ECB council meetings on October 7 and November 4, ECB President Wim Duisenberg acknowledged that the monetary policy decisions at these meetings had been made by consensus, that is, without a formal vote. But some members of the council acknowledged that, on November 4, there had been a split on the size (not, however, on the desirability) of the rate increase. Shortly before the November hike, it was reported that Duisenberg did not exclude the possibility that the ECB’s internal inflation forecasts could be published, perhaps as early as 2000. Moreover, he referred to internal inflation forecasts in the press conference following the monetary decision on November 4. Subsequent statements by ECB members, however, show that the consensus on publishing internal inflation forecasts is far from complete.¹³²

132. Tony Barber, “ECB: Bank Opposes Short-Term Rate Changes,” *Financial Times*, November 12, 1999, p. 2.

Comment and Discussion

Alan S. Blinder: This is a thorough and thoughtful paper that probably should not have been written—at least not yet. The reason is painfully obvious: September 1999 is simply far too soon to appraise Europe’s new monetary union, as Corsetti and Pesenti realize and point out several times.

I will structure my discussion around eight questions about European Monetary Union (EMU) that were frequently posed prior to the launch of the euro. All but the first are considered in Corsetti and Pesenti’s paper. In each case, I will ask what we have learned from experience to date, and in almost all cases the answer will be, not very much. Thus, what we can do at this stage is speculate, and the authors do so intelligently.

I begin with the only three questions that we can actually answer at this stage, and I will be very brief on two of them. The first is an intensely interesting question in political economy, but it chronologically precedes this paper’s starting point of January 4, 1999:

Would the EU nations be able to overcome the formidable political and economic barriers to establishing a single currency on schedule, and covering most member states? Although there were ample reasons for skepticism, we now know that the answer was a resounding yes. This achievement should not be belittled. As late as 1997, there were plenty of doubters.

Would the mechanics of launching the euro be handled smoothly? As Corsetti and Pesenti observe, the answer here was another resounding yes. The euro’s birth posed many serious challenges to both the private and the public sectors, and both acquitted themselves admirably. This achievement, too, should not be underestimated. But it is not the sort of issue

that economists normally sink their teeth into, for it is about making the financial plumbing work, not designing it.

The remaining six questions are more strictly economic in nature, and the paper deals with all of them.

Would the euro appreciate rapidly after its launch? A number of observers believed that it would.¹ But we now know that it did not. Instead, it depreciated sharply from \$1.18 in early January to barely over \$1.01 in mid-July. Why? There is, of course, no single answer, but I agree with Corsetti and Pesenti that the starkly different macroeconomic conditions in the United States and Europe played the central role.² The U.S. economy has been surging while the economy of Euroland has been listless. Corsetti and Pesenti's figure 3 shows the euro sinking just as the relative macroeconomic outlook for Europe deteriorated—although both lines closely resemble declining time trends.

There is a lesson here for textbook writers and teachers (including myself), but not for market participants, who already know it well. Textbook presentations that focus on trade in goods and services emphasize that when a country grows faster than its trading partners, it imports more, and this pushes its trade balance into the red and makes its currency depreciate. But the reality is starkly different in the modern, capital account-dominated world. The more buoyant economy is likely to attract more internationally mobile capital seeking high returns, which makes the currency appreciate.

Corsetti and Pesenti get this right, noting also that the euro's slide stopped only when some glimmers of macroeconomic hope for Europe finally started to emerge around mid-July. I do, however, take issue with their claim that the euro's fall "appears as the mirror image of the synthetic euro's strong appreciation in 1998." Look at their exchange rate chart for the euro against the dollar (figure 2). It shows the synthetic euro moving up and down in a trading range from about \$1.12 to about \$1.40 during 1990–96, but distinctly weaker after January 1997. In fact, first the synthetic and now the actual euro has spent almost all of the time since mid-1997 *below* the *lower* bound of its earlier trading range. The remarkable cyclical strength of the U.S. economy since 1996 may explain this cur-

1. See, among others, Bergsten (1997).

2. However, macroeconomic conditions are even weaker in Japan, and yet the euro has also depreciated against the yen.

rency adjustment, too. But the data do not support Corsetti and Pesenti's suggestion that what was unusual was how *high* the euro climbed in late 1998 rather than how *low* it fell in the summer of 1999.

Would the new European Central Bank try to out-bubba the Bundesbank? There were reasons to worry that it might, thereby starting EMU off with an excessively tight monetary policy. First, and perhaps foremost, as a new institution with no track record and many non-Teutonic members, the ECB would have to show its teeth. Second, it would have to nurture a brand new currency, which some observers thought was born prematurely and might be in for a tumultuous early childhood. Third, the Maastricht Treaty gives the ECB a lexicographic ordering of goals: price stability *über alles*. And fourth, the ECB is, in effect, the first central bank in history with no national government to report to, and I think we all believe that politicians are usually less inflation-hawkish than central bankers.

But the early returns suggest that this fear was exaggerated. The ECB's first, and to this point only,³ monetary action was a surprisingly aggressive interest rate cut in April 1999. Even before that, what we might call the "synthetic ECB" organized a coordinated rate cut in December 1998. And policymakers in Frankfurt did not lift a finger as its weak baby, the euro, fell toward parity with the U.S. dollar. Indeed, they barely uttered a word until the euro fell below \$1.03. Like Corsetti and Pesenti, I take cheer from these developments. A "monetary conditions index" for Euroland, if one existed, would depict an aggressively easing central bank in its early days—which is just what the macroeconomic doctor ordered for Europe. As macroeconomic tuners, whether fine or coarse, the ECB Governing Council is off to a pretty good start. But I emphasize once again that it is awfully early to pass judgment.

Who will manage the exchange rates between the euro and other major currencies? As Corsetti and Pesenti note, Article 109 of the Maastricht Treaty is famously vague about how exchange rate policy will be handled in Stage Three of EMU. The political authorities, in the form of the Council of Ministers, "may formulate general orientations for exchange rate policy" and enter into exchange rate arrangements, including setting central parities. The treaty goes on to say that "these general orientations shall

3. As Corsetti and Pesenti note in their addendum, about two months after the September Brookings Panel meeting, the ECB raised interest rates by 50 basis points.

be without prejudice to the primary objective of the ESCB to maintain price stability.”⁴ We all know, however, that in a world where sterilized interventions have limited power, exchange rate policy and monetary policy are inextricably intertwined.

However illogical it may sound to economists, assigning exchange rate policy to the ministers and monetary policy to the ECB is not very different from what we do in the United States. The Treasury—in consultation with the Federal Reserve, of course—decides on exchange rate policy (sterilized intervention), and the Fed has complete control over monetary policy. This division of labor does open the door to potential inconsistencies; for example, the Treasury might want to boost the dollar at a time when the Fed is cutting interest rates. But with consultation and a reasonable amount of cooperation, such conflicts should be minimal—and mostly have been so in the United States. In the event of an irreconcilable difference, the Fed holds the trump card, namely, interest rates.

Much the same should be true in Euroland, but with this important twist: there is one central bank, but there are eleven finance ministers. Especially since foreign currency interventions are often arranged on short notice via international phone calls, this raises the old question posed by Henry Kissinger: “If I want to talk to Europe, whom do I call?” Mr. Summers and Mr. Miyazawa may be pondering that now.

So far the Europeans have not seen fit to intervene in the currency markets—despite being sorely tested by the sinking euro. So we will all just have to wait and see how things work out. It could be that they will be less concerned with the exchange rate than many people feared.

How serious will asymmetric shocks be in Euroland, and how will the ECB cope with them? To many Americans, this was the big question about the advisability of EMU in the first place. And it remains open. Corsetti and Pesenti have several interesting thoughts on this issue, which I summarize into two.

First, they observe that the closer financial integration that EMU will doubtless foster may transform Euroland into something approximating an optimum currency zone, even though it is not one today. That is certainly possible. But I am skeptical that *financial* homogenization will bring about greater *real* homogenization—or even that it should be expected to do so.

4. These quotes from the treaty are from Szasz (1999, p. 151).

Texas and New York, to take two U.S. states not at random, share a totally integrated national financial market. But they hardly share a common industrial structure, and their business cycles frequently diverge. Indeed, trade theory would suggest that the single market should actually foster greater *specialization* in Europe, as we see in the United States, and hence greater vulnerability to asymmetric shocks.

Second, the authors note that different monetary transmission mechanisms in different countries can be as nettlesome to the ECB as different shocks. What if, for example, tighter money hits much harder or much faster in Italy than in Spain? After reviewing the relevant theoretical and empirical literature on the monetary transmission mechanism in Europe, they conclude—intriguingly—that some of the cross-country differences may be offsetting. But their main conclusion is that “it is difficult to assess the practical relevance of these considerations.” They are right. We will just have to wait for some experience.

I would like to add a third important element to the asymmetry discussion. We must remember that eleven of the seventeen votes on the ECB Governing Council come from national representatives.⁵ A crucial question is whether, when push comes to shove and national political pressures mount, the eleven central bank governors will vote for the policy that is best for Euroland, or each for the policy that is best for his or her own country. So far, the news out of Frankfurt is good: ECBers seem to be behaving like Europeans. But life at a central bank is (comparatively) easy when rates are going down. The crucial test will come when, say, conditions in Italy call for stimulus while conditions in Germany call for tightening.⁶ The ECB has not been through a stress test yet. So, in sum, the answer to this question is, Who knows?

Will monetary union eliminate inflation and price differentials in Euroland? Corsetti and Pesenti’s figure 4 shows that not much has happened to inflation differentials since the euro was launched. But that is a negligible time period. It is worth noting, however, because Europeans

5. On the Federal Open Market Committee of the Federal Reserve, the corresponding numbers are five regional bank presidents out of twelve total votes.

6. Much attention was lavished on the cyclical divergences that existed at the euro’s birth: a fast-growing periphery (Finland, Ireland, Spain) versus a slow-growing core. But the real test will come when at least one of the three big countries (France, Germany, and Italy) falls out of step with the other two.

often forget, that a single currency should equalize inflation rates only in tradable goods. If, say, Spain is hot and Germany is cold, we would expect inflation in housing prices and the prices of other nontradables to diverge—with Spain's overall inflation rate higher than Germany's. After all, no one thinks the prices of houses and restaurant meals should rise at the same rate in Silicon Valley and the Ohio Valley. To take a concrete example from the United States: the consumer price index for New York City rose 77 percent from its 1982–84 base to July 1999, while that for Dallas–Fort Worth rose just 58 percent. That is an inflation differential of almost $\frac{3}{4}$ percentage point per year, compounded for sixteen years.

Moving from inflation rates to price levels, proponents of monetary union in Europe often argued that a single currency would promote much greater “price transparency,” which would in turn enhance competition and drive prices down. It is, of course, too soon to know if this is happening in Europe now, but I have long been skeptical. For one thing, is it really that hard to compare the deutsche mark price for a Mercedes at a dealer in Stuttgart with the franc price at a dealer in Strasbourg? Don't they have calculators in Europe? Furthermore, surprisingly large price differences for exactly the same product exist even within geographically small markets that use a single currency—such as New York City. Why, then, should we expect the use of a common currency to obliterate price differences across eleven countries?

My last question can be posed either normatively or positively:

How transparent should or will the ECB be? At several points, Corsetti and Pesenti allude to a raging debate in Europe over whether the ECB is being unnecessarily opaque.⁷ I have been a hawk on central bank transparency⁸—and was even while I was a central banker.⁹ Economically, I believe greater transparency makes monetary policy work better. Politically, I believe central bankers owe transparency to the electorate in return for their grant of independent power. Except where proprietary information is involved, my general maxim on transparency is, The more, the merrier. Still, I would be inclined to cut the ECB some slack and not grade their performance to date too harshly, for several reasons.

7. For a sharp criticism of the ECB, see Willem Buiter (1999b). For a defense, see Issing (1999b).

8. See Blinder (1998), especially chapter 3.

9. See Blinder (1995).

First, openness in central banking is not the continental European tradition—and especially not at the Bundesbank, on which the ECB was modeled. Among the ECB's first tasks was to assure the German, Dutch, and other publics that their new central bank would look and act much like their old ones. We ought to give the ECB some time to step out of the long shadow of the Bundesbank, and it seems to be doing that a bit. For example, the ECB is already more explicit about its inflation objective than the Fed is or the Bundesbank ever was.

Second, we should remember that the ECB is the new kid on the central banking block. It is naturally still feeling its way around, learning to do its job. Unless its leaders are superhuman, they will make mistakes.¹⁰ Now, no central banker likes to air his or her mistakes in public; it contradicts the cherished notion of central bank infallibility. And publicly airing too many embarrassing errors too soon would likely undermine the ECB's credibility. Bismarck once famously declared that you should never see sausages being made. I would not necessarily apply that adage to monetary policy decisions, but I do think critics should at least wait until construction of the sausage factory is complete.

In any case, to my mind, this should be but a temporary reprieve. The ECB should become more open and transparent as it matures. Only time will tell if it will.

The attentive reader will have no doubt observed a pattern here. Once we note that the euro started on time, with eleven participating countries and no serious glitches, and then depreciated sharply, none of the remaining questions are even remotely close to being answerable with the scant evidence at hand. Corsetti and Pesenti will have to rewrite this paper in a few years. Having seen their fine first draft, I look forward to reading the revision.

General discussion: Richard Cooper found it misleading to represent achievement of the 1999 startup date as an accomplishment, since that was the latest date permitted by the Maastricht Treaty for the launch of the euro. Any further delay would have created a constitutional crisis with unclear consequences. The original plan had been to launch the euro in

10. Indeed, I think making M3 growth one of the “pillars” of its anti-inflation policy is already a mistake.

1996. Cooper found it interesting that the European periphery is now the fastest-growing part of the European economy. Expectations ten to twenty years ago, particularly in the French academic community, had been that the periphery would inevitably lag behind the center. He also noted that continental Europe traditionally had a strong primary market and a very weak secondary market in government bonds, and he wondered whether a stronger secondary market was emerging with the euro now in place and whether euro debt instruments were being held abroad.

Laurence Ball found the paper's positive view of the onset of EMU premature. He granted that the launch of the common currency had gone smoothly, but he saw little evidence yet of beneficial developments from the euro's introduction, and he questioned the assertion that market integration in Europe had exceeded expectations. Christopher Sims suggested that problems could arise from the divorce between fiscal and monetary authority. He was troubled by what might happen if it became necessary to bail out a large private corporation or bank; the funds required for such a bailout might amount to a nontrivial share of a country's budget. Such bailouts have fiscal implications, and the EMU's connection to fiscal authorities remains unclear. Sims noted that a true lender of last resort must have the ability to print money, and the only institution that can now do so is the European Central Bank. At the same time, a lender of last resort must enforce conditions that minimize moral hazard, yet bank regulation remains a national function with no apparent connection to EMU. Sims also questioned the paper's analysis of how contractionary interest rate increases by the ECB could handle a crisis of a depreciating euro. He argued that an interest rate rise is contractionary only if the fiscal authorities are committed to making the tax increases and expenditure cuts needed to cover the fiscal costs of higher rates. Thus the ECB's ability to defend the euro will depend on people believing in such a fiscal commitment. But under current institutional arrangements in Europe, it is unclear whether people would hold that belief.

Bradford DeLong addressed Alan Blinder's question about how the national representatives would vote on the ECB board. He reasoned they would become ambassadors of the bank to the member states, explaining to their home countries why the ECB's monetary policy should be accepted without complaint, rather than ambassadors of the home countries to the ECB, demanding that the bank act to suit their national interests. He noted that the original idea behind regional Federal Reserve Banks

was to have regional interests represented in monetary policy, yet over the years a central banker culture has overwhelmingly taken over at the Fed. In a similar vein, William Dickens reasoned that the present lack of transparency at the ECB might need to be made permanent. Many of the ECB's internal debates will be on labor market and fiscal policy issues, with frequent comparisons across member states, and publicly airing such deliberations might be politically damaging.

On the question of whether the euro would lead to convergence in price levels and inflation rates across member states, Susan Collins referred to the literature on cross-country price differentials of traded goods that asks "how wide is the border?" This literature finds that international borders matter a lot, in that price differentials between two cities within the same country tend to be small relative to price differentials between cities of similar distance apart that are separated by a border. She noted that EMU would test whether currency differences contributed to this effect, and she suspected it might shrink but not eliminate it.

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