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Europe's Gamble

AFTER THREE DECADES, the quest for European monetary unification may well bear fruit on January 1, 1999. On that date the European Union (EU) plans to introduce a common currency, the euro, in member states that satisfy specified macroeconomic convergence criteria. If the Economic and Monetary Union (EMU) project is launched on time and with the maximum membership of eleven countries that currently seems possible, it will create a market of close to 300 million consumers served by a common currency—roughly 10 percent more populous than the United States. Eventually that market could comprise twenty-five countries or more if EMU is successful and the EU expands eastward.

With only a year to go, however, Europe's political establishment remains riven with doubt about several questions central to the timely start and ultimate viability of EMU. What economic and political factors will determine the initial slate of EMU members? How will monetary and fiscal policy operate within the planned euro zone? What will be the economic impact of currency unification? Will domestic political realities become increasingly inconsistent with the visions of Europe's leaders, or will electorates come to love the euro? The procedure likely to be followed in introducing the new European currency itself magnifies the general uncertainty. Tightly circumscribed by obscurely moti-

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vated provisions of EU law, it inadvertently heightens the risk that political dissensions will be propagated into financial market turbulence in 1998, as they were during the ratification process for the Treaty on European Union (the Maastricht treaty) in 1992–93.

This paper reviews the prospects for EMU roughly a year ahead of its scheduled starting date. There is now a vast literature analyzing all aspects of European monetary unification, and I attempt no comprehensive review of its conclusions.[1] Rather, I focus on Europe's macroeconomic problems in the 1997–98 runup to the Maastricht treaty's deadline, and ask if there are strong reasons to believe that EMU will generate better macroeconomic performance or other significant economic gains.

My conclusion is that the current uncertainty over EMU flows directly from the internal macroeconomic tensions of the main European countries, tensions that are unlikely to disappear as a result of the single currency alone. EMU is a gamble that can be won in the long run only if it overcomes the existing political stasis to force fundamental fiscal and labor market reform in its member states. If Europe's leaders cannot do an end run around domestic opposition in the name of European integration, EMU could prove unstable.

The outline of the paper is as follows. After placing European economic unification in historical perspective and describing the timetable and entry criteria for EMU, I review the current macroeconomic positions of the possible initial members. I briefly discuss the main gains that EMU's promoters have identified, and then focus on the likely macroeconomic costs to member states of sharply diminished sovereignty in policymaking. In evaluating those costs, I argue that the larger states that are likely to form the core of EMU do not function efficiently as currency areas on their own. Distortions in labor and housing markets have perpetuated severe regional disparities in unemployment rates and helped to generate the pressures on public purses that figure so prominently in current uncertainties over EMU's immediate future.

Defenders of EMU sometimes argue that it costs little to give up nominal exchange rate flexibility in economies subject to severe real price rigidities. A key analytical point of the paper is to dispute the

1. For surveys encompassing a range of viewpoints, see Bean (1992), Gros and Thygesen (1992), Eichengreen (1993), Kenen (1995), Taylor (1995), Dornbusch (1996), Feldstein (1997), and Wyplosz (1997).

generality of that claim. Even when there is a small amount of nominal rigidity in the system, real labor market rigidities of the types that prevail in much of Europe may raise rather than reduce the macroeconomic costs of a locked exchange rate. I also argue, however, that knowledge about how devaluations pass through to domestic prices remains limited for European countries.

Some countries gave up a great deal of their monetary independence long ago, through the Exchange Rate Mechanism (ERM) of the European Monetary System (EMS). In its current design, EMU will circumscribe countries' options further, including on fiscal policy. An important source of uncertainty in evaluating EMU is the counterfactual: if a single currency were not on the agenda, how would economic policies within the EU evolve? Even on purely economic grounds, some outcomes might be worse than that of the Maastricht blueprint.

The paper describes the peculiar constraints on the choice of conversion rates for EMU member currencies against the euro. These constraints will inevitably lead to rather close coordination, de facto or de jure, of the monetary policies of future EMU members in the latter part of 1998. Given the real possibility of political and economic tremors, the need for monetary coordination might make exchange markets susceptible to the type of turbulence that nearly derailed EMU in the early 1990s. Whether that disruptive potential is realized depends in part on the initial cast of EMU members and on the policies that the EU countries follow. I conclude by speculating on the outcome of the initial EMU selection process and on the implications for the success of the single currency.

The Road to EMU: Origins, Achievements, and Hopes

The remarkable persistence of Europe's journey toward EMU makes no sense except in the perspective of the origins of European economic cooperation a half-century ago. U.S. aid for war-torn Europe under the Marshall Plan, announced in June 1947, included as a key element insistence on the collective European allocation of aid monies. That far-reaching provision reflected the desire to build a united and interdependent Western Europe, prosperous and stable enough to preserve internal peace while withstanding Soviet subversion. As the historian

Alan Milward puts it: "The United States did not only intend to reconstruct western Europe economically, but also politically."[2] From the start, economic cooperation was a key pillar in the pursuit of political and strategic goals.

Postwar European Economic Cooperation

America's aid initiative led to the establishment, in April 1948, of the Organization for European Economic Cooperation (OEEC), which had the additional charge of promoting the liberalization of trade and current account payments within Europe.[3] In the late 1940s Europe was caught in a web of currency inconvertibility and bilateral trade arrangements. As late as 1957, only the United States, Canada, Mexico, and seven small Central American and Caribbean countries had formally accepted their obligation under Article VIII of the International Monetary Fund agreement to make their currencies freely convertible on current account for nonresidents. The European Payments Union (EPU), set up under OEEC auspices in September 1950, broke the convertibility impasse by furnishing a multilateral clearing house for intra-European trade. Most European countries were able to announce Article VIII convertibility by December 1958, and some reached de facto convertibility earlier.

Paralleling the monetary cooperation implied by the EPU was more ambitious economic integration within a subgroup of the seventeen OEEC countries. In April 1951, France, West Germany, Italy, Belgium, Luxembourg, and the Netherlands created the European Coal and Steel Community (ECSC), a common market in coal, iron, and steel. In a recurring theme, the project implicitly called on Germany to integrate itself more deeply with other European countries in return for partial restoration of its prewar sovereignty, extent, and influence in world affairs. Thus Germany's economic interests were held hostage, to reassure public opinion in countries that it had recently occupied, notably, France. The ECSC agreement ended eight decades of Franco-German conflict over the resource-rich regions on their common border,

2. Milward (1984, p. 56).

3. See Cooper (1968, pp. 37–39) on the OEEC's trade liberalization initiatives in Europe. The OEEC became the Organisation for Economic Co-operation and Development (OECD) in 1961, at which time non-European countries became eligible for membership.

paving the way for the return of German control of the Ruhr and the Saar.[4]

In December 1957, under the Treaty of Rome, the six members of the ECSC went much further and set up the European Economic Community (EEC), which over the years has expanded its membership to encompass the fifteen members of the current EU.[5] The Treaty of Rome called for macroeconomic policy coordination among EEC members, identifying exchange rates between member states as a particular area of common concern. In the 1960 European Monetary Agreement, EEC members agreed to limit mutual exchange rate movements to 1.5 percent bands, much narrower than the 4 percent bands allowed for non-dollar exchange rates under Bretton Woods rules.

German and Dutch revaluations in 1961, coupled with the impending inauguration of a protected common market for cereals in 1964, led EEC leaders to focus more intensely on the possibly disruptive effects of currency realignments within Europe.[6] Among other concerns, they feared that member countries would have to retain and tighten existing exchange controls to repel future currency speculation, frustrating the community's long-term goal of enhanced capital market integration. As a step toward enhanced exchange rate stability within Europe, the EEC Central Bank Governor's Committee was created in 1964. But the search for stability became urgent again only in the late 1960s, as the Bretton Woods system of fixed dollar exchange rates came under pressure with the devaluations of sterling (not yet an EEC currency) in 1967 and the French franc in 1969, and the second revaluation of the deutsche mark in 1969.

Meeting in the Hague at the end of 1969, European Community (EC) heads of state enunciated for the first time the goal of economic and monetary union. In 1971 the EC countries accepted proposals based on

4. Milward (1984, p. 407) observes: "The Franco-German alliance has been the heart of all subsequent developments in the European Community and has taken on as permanent an air as the hostility which preceded it." The British declined to participate in the ECSC—another recurring theme.

5. In 1967, the ECSC, the EEC, and the European Atomic Energy Community merged to form the European Community (EC). Since the ratification of the Maastricht treaty in 1993, the EC has been known as the European Union. As of October 1997, the complete membership roster is Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom.

6. See Giavazzi and Giovannini (1989, pp. 8–9).

the 1970 Werner Report, which laid out a three-stage progression toward the irrevocable locking of EC exchange rates by 1980.[7] But that plan, devised when most dollar exchange rates were still pegged, soon became impracticable in the economic turbulence of the early 1970s. The operation of the European currency "snake"—a network of mutually pegged exchange rates set up in 1972—did little to promote comprehensive exchange stability in Europe, the only consistent members being Germany and the Benelux countries.

From EMS to EMU

The European Monetary System began operation in March 1979, conceived by French president Valéry Giscard d'Estaing and German chancellor Helmut Schmidt. Both leaders wished to counter the effects of U.S. dollar instability on intra-European exchange rates. The EMS succeeded in limiting short-term nominal exchange rate fluctuations, but at the cost of continuing capital controls in most member countries and periodic discrete currency realignments. A critical feature, however, was that the timing and size of realignments became matters for group discussion and decision. This practice introduced an element of true coordination into exchange rate policy, although fiscal and monetary policies initially remained much less constrained.

The current drive toward EMU originated in the temporary economic upswing in Europe after 1985, when the European Commission (the executive body of the EU), under the presidency of Jacques Delors, conceived and successfully promoted the "1992" single-market completion initiative. A key component was the complete liberalization of capital flows (achieved throughout the EU when Greece removed its restrictions in 1994). This high degree of capital mobility implied that even the suspicion of an impending currency realignment could induce massive speculative cross-border capital flows. Accordingly, EMS members embarked on heavier intramarginal intervention and exchange rate-oriented monetary policies in the late 1980s. Realignments were to be shunned.

In this policy environment, the proposal by the Delors Report of a three-stage plan for the creation of a single currency, to be issued by a European Central Bank (ECB), found widespread support. For coun-

7. See Giovannini (1990, pp. 220–21).

tries with credibility problems, a single currency would lead to lower interest rates and possibly to greater wage discipline. Speculation on EU exchange rate changes would disappear. The European Commission subsequently advanced detailed arguments for EMU on efficiency grounds.[8] But from a political point of view, the most potent motivating force behind support of the Delors proposals was the desire to end the preponderant control of EMS monetary policy by the German Bundesbank. Germany's partners in the ERM effectively pegged their currencies to the deutsche mark, just as all had pegged to the dollar under Bretton Woods. Through the ECB, however, all EMU members, not only Germany, would have a voice in setting interest rates.

Why did Germany go along with the plan? Apart from the German leadership's belief that it could design an EMU with a currency as hard as the deutsche mark, there was a crucial political deal. Hans-Werner Sinn notes the "open secret" that German support of EMU was the price of French acquiescence in the reunification of East and West Germany.[9] Ironically, the economic consequences of reunification may have undermined Germany's hopes for a reliably hard euro.

"Stage One" of the Delors plan started on July 1, 1990. According to the report, this phase was to see completion of the internal market as set out in the "1992" initiative, removal of remaining exchange controls, avoidance of currency realignments, and accession to the ERM of then-nonmembers such as Britain, Portugal, and Spain. Stage One was disrupted by the 1992–93 ERM crisis, which was ignited by uncertainties over the ratification of the Maastricht treaty.[10] The treaty's ratification by all EU members was finally complete by November 1993, but only after most ERM currency bands had been widened to ± 15 percent (in August 1993) and subject to the United Kingdom and Denmark having the option to stay outside EMU.

In October 1990, EU leaders (over British prime minister Margaret Thatcher's dissent) agreed to start "Stage Two" of the Delors plan on January 1, 1994. The second stage was intended to bring intensified policy coordination, culminating in the establishment of a European System of Central Banks (ESCB) that would prepare for the introduc-

8. These arguments are assembled in "One Market, One Money" (Commission of the European Communities, 1990).

9. Sinn (1996, p. 1)

10. See Eichengreen and Wyplosz (1993).

tion of a single currency in "Stage Three" of the plan. But as of 1990 there was no detailed road map for reaching Stage Three, nor had the structure of the ESCB been agreed on. In December 1990 an intergovernmental conference began negotiations on amending the Treaty of Rome, which culminated a year later in the Maastricht treaty.

The Maastricht Treaty and Its Implementation

The document that emerged in December 1991 went far to address German concerns about a weak European currency in Stage Three of the Delors plan.[11] The Maastricht treaty provides for the creation of an independent (and largely unaccountable) European System of Central Banks, dedicated to the overriding goal of price stability and forbidden from directly financing government deficits. At the system's pinnacle is the European Central Bank, modeled largely on the Bundesbank but with a governing board that includes representatives of all EMU member states. As the treaty directs, a European Monetary Institute (EMI) was set up in January 1994 to monitor convergence during Stage Two and prepare the ground for the ECB. Finally, the treaty charts the passage from the enhanced but still vulnerable EMS of Stage One to the long-sought monetary unification of Stage Three. A detailed scenario for Stage Two, including rigorous convergence criteria that individual countries must meet before admission to EMU, lies at the heart of the Maastricht treaty. I describe these entry criteria after outlining the plan for the transition from Stage Two to Stage Three.

The Maastricht treaty is usually interpreted as specifying that Stage Three will begin no later than January 1, 1999. On that date (but effectively on Monday, January 4, the first business day after the New Year's holiday), national central banks will become branches of the ESCB under the direction of the ECB, the euro will be introduced, and the ESCB will begin to conduct EMU's single monetary policy.[12] The

11. Council of the European Communities (1992).

12. According to the treaty, EMU might have started before 1999. But at their December 1995 Madrid summit, EU leaders set the start of Stage Three at January 1, 1999, because convergence as specified in the treaty appeared remote and the technical preparations for EMU remained incomplete. The Maastricht treaty states that EMU will begin by that date, even if only a minority of countries meets the convergence criteria (Council of the European Communities, 1992, article 109j[4]). This provision was proposed by France to prevent indefinite postponement of EMU. But Kenen (1995,

Table 1. Current Timetable for the Transition to the Euro

Early 1998	European Monetary Institute and European Commission prepare convergence assessments as basis for Ecofin Council qualified majority vote to identify convergent member states. National and European parliaments debate the convergence reports.
May 1998	Council of Ministers (composed of heads of state or government) selects initial EMU entrants by qualified majority vote. The European Central Bank is established and the European Monetary Institute dissolved.
January 1–4, 1999	Stage Three of EMU begins. Conversion rates of national currencies into euro set. European System of Central Banks begins to conduct EMU monetary and foreign exchange policy in euro, but national currency notes and coin remain legal tender and private actors are still free to denominate in national currency units.
January 1, 2002	Latest date for the introduction of euro notes and coins.
July 1, 2002	Latest date for the withdrawal of national banknotes and coins; euro becomes sole legal tender.

goal of the single currency must, however, be attained in a very specific way.

The choreography for the final year of Stage Two and the first years of Stage Three is intricate. A description is useful, however, for understanding the political and technical hazards inherent in the transition to EMU. Table 1 provides a summary of the likely timetable. In December 1995 the Madrid summit of EU leaders agreed that the final examination of convergence before Stage Three will be completed as early as possible in 1998, on the basis of 1997 data. According to the Maastricht treaty, the EMI and the European Commission are to report to the council of economics and finance ministers (the Ecofin Council) on whether individual EU members have fulfilled the convergence criteria.[13] National parliaments—notably, that of Germany—and the Eu-

p. 28) points out that the treaty's language would seem to allow a later starting date, provided that it is set before the end of 1997.

13. Member states make EU law through the Council of Ministers, which must decide some questions unanimously but can settle others through weighted majority voting (weights are related to population). Sometimes the Council of Ministers is composed of heads of state or government. For many purposes, however, national ministers of economics or finance represent their countries at council meetings. In such cases, the Council of Ministers is referred to as the Ecofin Council. The powers of the European

ropean Parliament will debate these assessments. On a recommendation of the European Commission, the Ecofin Council will take a weighted vote to identify the member states that qualify for EMU and forward its own recommendation to the Council of Ministers. On the basis of the Ecofin Council's list and the opinion of the European Parliament, the Council of Ministers will determine the initial EMU entrants by a final weighted majority vote. The admission process should be complete by May 1998, under current plans. Countries excluded from the first round will be reconsidered for entry later—subject to the same admission process and criteria as in 1998.

Once it is known which countries will adopt the euro in 1999, the European Central Bank is to be set up and the European Monetary Institute dissolved. However, for the remainder of Stage Two the ECB's sole formal role is to prepare to take over in Stage Three. Until then, national monetary policies are to remain fully vested in national central banks.

On January 1, 1999, the Ecofin Council will adopt the exchange rates at which member currencies are to be transformed into euro and Stage Three will begin. Importantly, the Madrid European Council accepted the EMI's recommendation of a "changeover" period of up to three years, during which the new currency units would supersede the old ones in defined stages. In the transition, "private economic agents should be free to use the European currency; on the other hand, they should not be obliged to do so before the deadline set for the completion of the changeover." As a result, national currency denominations will continue to be used for some time after January 1, 1999, and the ESCB will be obliged to exchange national banknotes against the euro at par. However, it is intended that national currencies will be "different expressions of what is economically the same currency," in the same way as nickels and dimes are "expressions" of the dollar in the United States.[14] The ESCB will conduct its monetary and foreign exchange policy in euros. Thus currency will be the sole component of the high-powered money stock to remain (transitionally) denominated in national units. Euro notes and coins will be introduced only after Stage Three

Commission include initiating legislation for approval by the Council of Ministers. "European Council" refers to the periodic summit meetings of EU heads of state or government and the president of the European Commission.

14. European Monetary Institute (1995, pp. 1–2).

has begun, but by January 1, 2002 at the latest. National currency notes and coins may remain in circulation until July 1, 2002.

Convergence Criteria

The convergence criteria for admission to the single currency have been among the most debated aspects of the Maastricht treaty. There are four primary criteria:

PRICES. In the year before the examination for admission, the consumer price inflation rate must be no more than 1.5 percent above the average of those of the three EU member states with the lowest inflation rates.

GOVERNMENT DEFICITS AND DEBT. Neither actual nor planned general government deficits may exceed 3 percent of GDP, unless the deficit ratio has been declining and has "reached a level that comes close to the reference value" of 3 percent, or unless the discrepancy is "exceptional and temporary and the ratio remains close to the reference value." Government debt should not exceed 60 percent of GDP, "unless the ratio is sufficiently diminishing and approaching the reference value at a satisfactory pace."[15]

EXCHANGE RATES. For at least two years before the examination, the country should have observed the "normal" fluctuation margins of the ERM, without devaluing on its own initiative against the currency of another ERM member.

LONG-TERM NOMINAL INTEREST RATES. In the year before examination, the long-term interest rate must be, on average, no more than 2 percent above the average of those of the three EU members with the lowest inflation rates.

These four criteria provide necessary but not sufficient preconditions for entry to EMU. In addition, they must be satisfied in a sustainable manner. In judging sustainability as well as convergence, the European Commission and EMI can consider other factors, such as current account imbalances or wage pressure. Finally, there is an institutional requirement: each member state is obliged to amend its national central bank statute to make it compatible with that of the ESCB.

The overriding motivation for these criteria is to ensure that the single

15. Council of the European Communities (1992, article 104c[2], p. 27). For the deficit, the treaty specifies the reference level as 3, not 3.0, percent.

currency will be a hard currency. Although there has been considerable academic debate over the necessity (and sufficiency) of the criteria for meeting that objective, the main practical intent was to exclude the (then) high-inflation EMS members—such as Italy, Portugal, and Spain—until they had lived for some time with monetary and fiscal rectitude and thereby proved the sincerity of their conversion to German "stability culture."[16] The convergence provisions thus made the loss of the deutsche mark more acceptable to German public opinion and to the Bundesbank, which has embraced EMU cautiously. In addition, a strand of official opinion (popular especially among central bankers) agreed that governments needed a sharp external prod to move on internal economic reform. In 1991 Italy's government deficit was running more than 10 percent of GDP, Portugal's inflation rate was running more than 12 percent per year, Spain's current account deficit was above 3 percent of GDP, and first-round EMU membership for these three countries appeared a remote prospect. By mid-1997, however, their chances looked very different.

Macroeconomic Trends and Prospects for EMU

Whether EMU goes ahead on time, and if so, with what members, will depend in part on the formal convergence criteria and in part on economic and political variables still difficult to forecast. The May 1998 decisions about entry will be intensely political. But their legality and public acceptance require a plausibly close linkage to the economic guidelines laid down in the Maastricht treaty. Any interpretations invoked in May 1998 will be binding precedents on future admissions to EMU, making it all the more urgent that most EU members view the selection procedure as fair and legally justifiable. Therefore an evaluation of the likely shape and near-term prospects of EMU must begin with the convergence criteria.

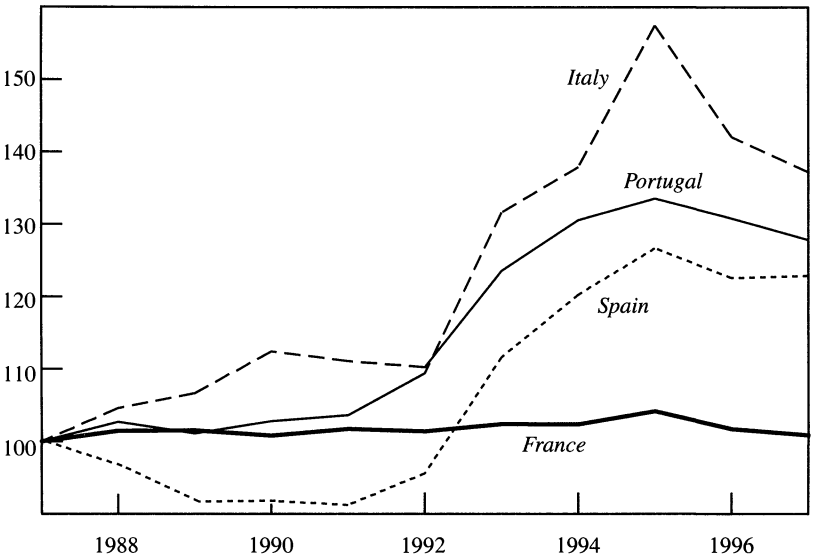
Exchange Rates, Inflation, Interest Rates, and Fiscal Variables

Although some minor questions of interpretation remain, it is unlikely that any country will be excluded from EMU directly because

16. For the academic debate, see sources cited in note 1.

Figure 1. Nominal Exchange Rates against the Deutsche Mark, 1987–97: France, Italy, Portugal, Spain

Index, 1987 = 100[a]



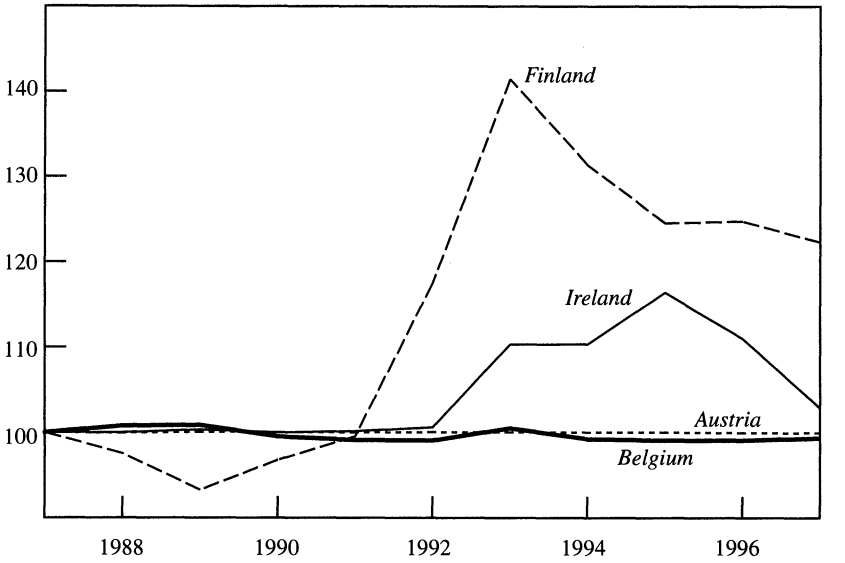
Source: Organisation for Economic Co-operation and Development, *Fiscal Positions and Business Cycles on Diskette,* 1997/1. For 1997, figures are OECD forecasts.

a. Exchange rates are in home currency units per deutsche mark, so that an increase in the index represents a depreciation.

of the behavior of its exchange or inflation rates—absent a sudden speculative currency crisis on the order of 1992–93. The same may be said of long-term interest rates, given current data, although these rates are heavily influenced by the current market view that the EMU that emerges from the May 1998 meeting of the Council of Ministers will be broad. Figures 1 and 2 together show exchange rate behavior against the deutsche mark during 1987–97 for eight contenders for early EMU membership (the Netherlands, whose guilder has remained tightly linked to the mark since the early 1980s, and Luxembourg, which is already in a currency union with Belgium, are not shown). France, Belgium, and Austria have followed the mark closely over the period shown, with only transitory fluctuations of more than a couple of percent from ERM central rates. (Austria's remarkably rigid peg to the mark long predates its 1995 entry into the EU.) The Portuguese escudo

Figure 2. Nominal Exchange Rates against the Deutsche Mark, 1987–97: Austria, Belgium, Finland, Ireland

Index, 1987 = 100[a]



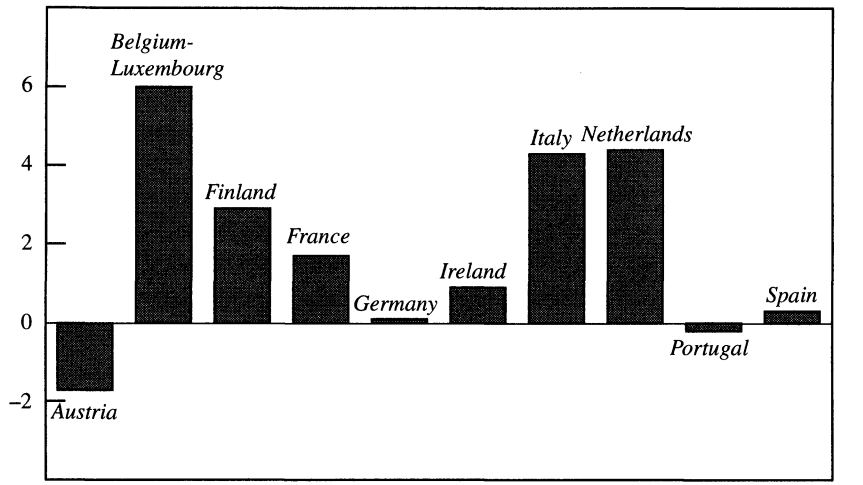
Source: See figure 1.
a. Exchange rates are in home currency units per deutsche mark, so that an increase in the index represents a depreciation.

and Spanish peseta have been fairly stable against the mark in 1996–97, their movements well within the current ± 15 percent bands of the ERM. Ireland's currency has also remained within its ERM band, but it has been much stronger than its central rate against the mark in 1996 and 1997. In bids to satisfy a strict interpretation of the exchange rate criterion, Finland joined and Italy rejoined the ERM late in 1996. (The lira appreciated sharply during 1996 as a result of Italy's moves to qualify for EMU.) If "normal" fluctuation limits are interpreted as the current ERM bands, and Finland and Italy are considered to have been in the ERM for long enough, all of these countries will likely satisfy the exchange rate criterion.

The current configuration of real exchange rates gives little evidence of major misalignments among the eleven countries that might enter EMU in 1999. But the usual problems arise in making this assessment: different measures of the real exchange rate give somewhat contradic-

Figure 3. Current Account Balances, Selected EU Countries, 1997

Percent of GDP



Source: OECD projection from Organisation for Economic Co-operation Development, *Economic Outlook* 61 1997, annex table 51.

tory indications, structural shifts may bring permanent changes in equilibrium rates, and it is therefore not clear how to pick an appropriate base year. In its November 1996 convergence assessment (based on data through September 1996), the EMI cautiously concluded that most of the countries' real exchange rates were not far from their levels in 1987—a year of approximate internal and external equilibrium—except those of Finland and Italy, which had depreciated.[17] Figure 3 illustrates the absence of big current account deficits among these countries.[18]

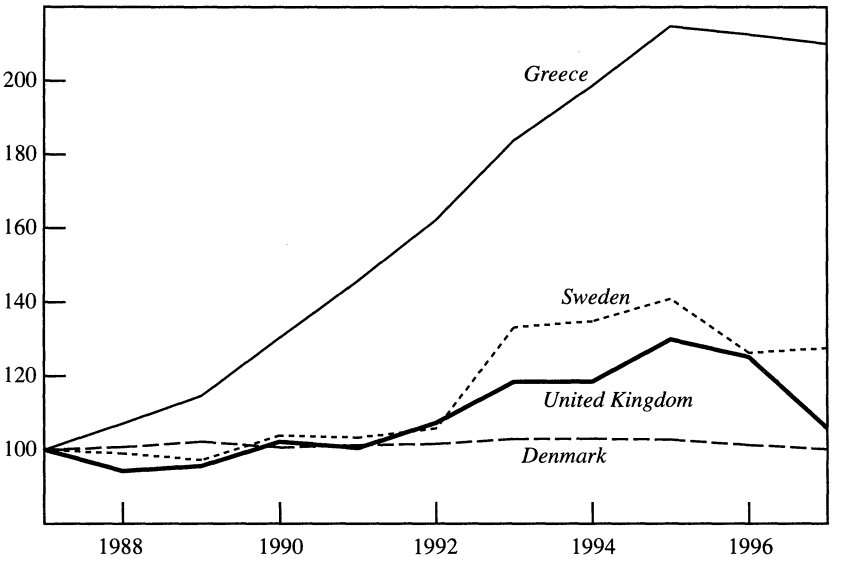
The four countries that almost certainly will not join EMU on the first round, shown in figure 4, present interesting contrasts. Denmark has followed the mark as closely as Belgium, whereas the Greek drachma has depreciated steadily, slowing down its fall against the mark only recently. Sterling and the Swedish krona have both appreciated since 1995. Of these countries, only Denmark is a member of the ERM.

17. European Monetary Institute (1996, p. 40). Italy's return to the ERM in November 1996 erased its gain in competitiveness, however.

18. For alternative assessments of real exchange rates, see Sinn (1996) and Begg and others (1997).

Figure 4. Nominal Exchange Rates against the Deutsche Mark, 1987–97: Denmark, Greece, Sweden, United Kingdom

Index, 1987 = 100[a]



Source: See figure 1.
a. Exchange rates are in home currency units per deutsche mark, so that an increase in the index represents a depreciation.

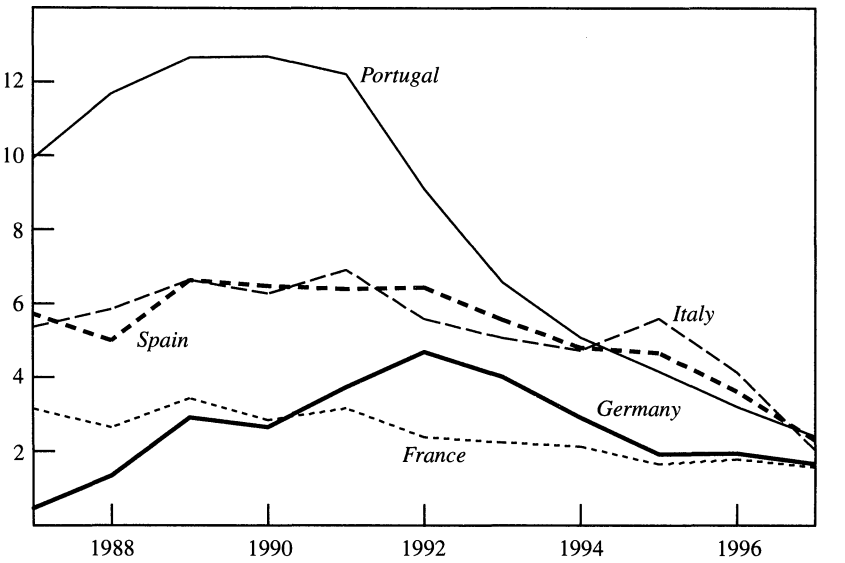
Britain would have been forced to pursue looser monetary policies had it rejoined the ERM in 1996, although part of the recent strength of sterling stems from market fears of a "soft" euro (a factor that has also buoyed the Swiss franc and the U.S. dollar).

Inflation convergence, illustrated in figures 5 to 7, has essentially been achieved by all first-round aspirants. Italy, Spain, and Portugal are the latest to bring their inflation rates within a point or so of the system's best performing countries. For 1997, it appears that Finland and Luxembourg (both with a predicted standard consumer price index [CPI] inflation rate of 1.5 percent) and Belgium and France (both with predicted inflation of 1.6 percent) will be in front.[19] Even among non-

19. Predicted inflation rates are for private consumption deflators, as forecasted by the OECD on the basis of national sources (*OECD Economic Outlook* 61, 1997, p. A18). However, before application of the treaty's price stability criterion, national figures are to be adjusted by the EU's statistical arm, Eurostat, for easier comparison. For 1995–

Figure 5. Consumer Price Inflation, 1987–97: France, Germany, Italy, Portugal, Spain

Percent per year



Source: See figure 1.

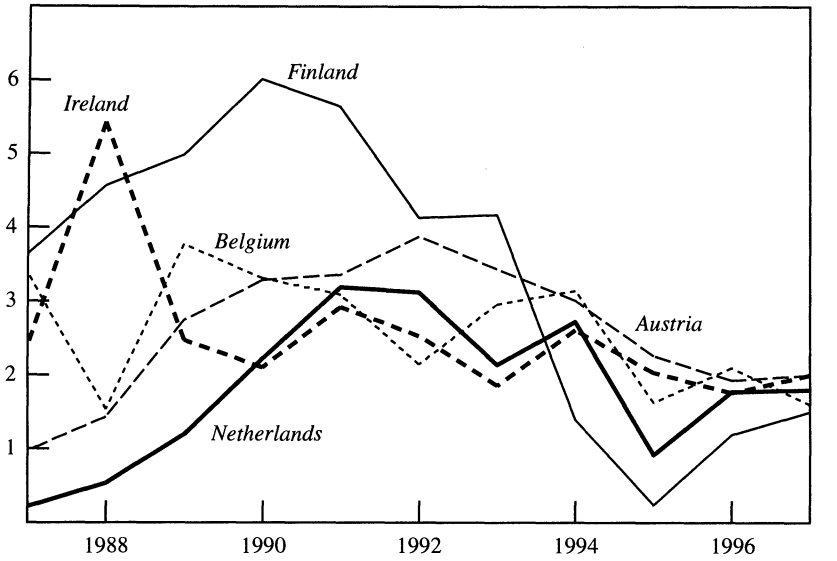
aspirants, only Greece could be definitively excluded on the inflation criterion, and it has reduced its inflation rate dramatically since the early 1990s. However, a country's inflation performance could be judged "unsustainable" if, despite low 1997 CPI inflation, its economy shows signs of future inflationary pressures; for example, accelerating growth in unit labor costs.

The rationale for the long-term interest rate test is murky. This test is likely to be satisfied automatically by countries that the market believes will enter EMU; but conversely, it could in itself disqualify a country simply on the basis of market beliefs, even if all the other

96, Eurostat has calculated adjusted "interim" indexes of consumer prices (IICPs). To cover 1997 it will publish more definitive "harmonized" CPIs. For example, Italy's CPI inflation rate for the twelve months ending in September 1996 was 4.2 percent; IICP inflation was 4.7 percent. For Germany, the corresponding numbers were 1.5 percent and 1.3 percent, respectively. See European Monetary Institute (1996, tables 7.3, 7.8).

Figure 6. Consumer Price Inflation, 1987–97: Austria, Belgium, Finland, Ireland, the Netherlands

Percent per year



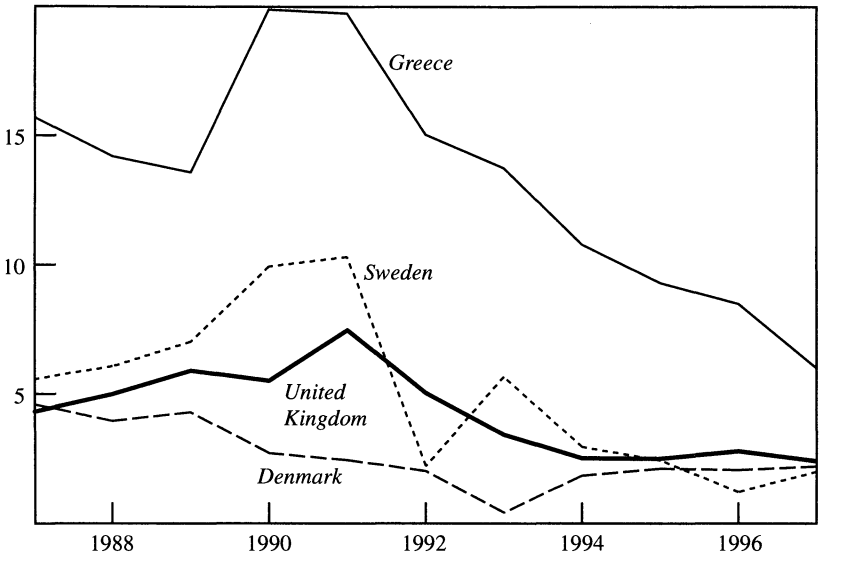
Source: See figure 1.

criteria are met.[20] Table 2 shows the positions of EU countries on long-term interest rates. Austria, Belgium, Finland, France, Luxembourg, Germany, and the Netherlands will easily meet the interest rate test. In all likelihood, so will Ireland, Portugal, and Spain, but a sharp adverse turn of market expectations could blow them off course. Italy looks more marginal, its fate most closely linked to the market's perhaps impressionable view—although its October 1997 rate is well below the period average shown in the last column of table 2.

20. Kenen (1995, p. 130) suggests that this feature reflects the true purpose of the criterion: to serve as a market-based "reality check" on official convergence assessments. Since there are no longer capital controls within the EU, there are three ways in which a country otherwise sure to join EMU permanently could fail the interest rate test, none of which is too plausible (I assume that interest rates are corrected for differences in national tax rates). The first two are an expectation of a debt default by its government or a very illiquid market in its debt. The third is the expectation of a very big devaluation before January 1, 1999.

Figure 7. Consumer Price Inflation, 1987–97: Denmark, Greece, Sweden, United Kingdom

Percent per year



Source: See figure 1.

Technically, the fiscal test requires that the Ecofin Council finds that a country does not have an "excessive deficit" on the basis of the government debt and deficit conditions described above. These determinations are part of the mechanism for EU policy coordination in Stage Two, and currently Denmark, Finland, Ireland, Luxembourg, and the Netherlands are the only EU states not subject to an excessive deficit ruling. They will automatically meet the EMU fiscal test unless the Ecofin Council changes their status early in 1998; conversely, no other country can be deemed fiscally convergent unless the council formally revokes its prior finding of an excessive deficit after evaluating 1997 fiscal data.

The debt component of the fiscal criterion received relatively little open discussion until July 1997. But then the French, seeking to counter German pique at the new Socialist government's seeming unwillingness to strive for a strict deficit target of 3.0 percent of GDP, began to

Table 2. Long-Term Nominal Interest Rates, Selected European Countries, 1995–97[a]

Percent

Country	*1995*	*1996*[b]	*1997*[c]
Austria	7.1	6.5	6.0
Belgium	7.5	6.7	6.1
Denmark	8.3	7.4	6.7
Finland	8.8	7.4	6.4
France	7.5	6.6	5.9
Germany	6.9	6.3	5.9
Greece	17.4	15.1	9.2
Ireland	8.3	7.5	6.8
Italy	12.2	10.3	8.0
Luxembourg	7.6	7.0	5.9
Netherlands	6.9	6.3	5.8
Portugal	11.5	9.4	7.3
Spain	11.3	9.5	7.4
Sweden	10.2	8.5	7.2
United Kingdom	8.3	8.0	7.6
Reference value[d]	9.7	8.7	8.1

Source: For 1995 and 1996, data are from European Monetary Institute (1996, tables 7.1-7.15); for 1997, data on national interest rates are obtained from the EMI.

a. Harmonized national representative long-term interest rates on central government debt. The particular securities used for calculation are chosen by member states and can correspond either to a benchmark bond or to a sample of bonds. Securities must have maturities of close to ten years and be highly liquid. Yields are measured gross of tax.

b. Twelve-month average ending September 1996.

c. Twelve-month average ending June 1997. For Greece, June 1997 value is given.

d. Calculated as 2 percentage points plus the unweighted average of interest rates in the three EU countries with the year's lowest inflation rates. For 1997, author's estimate is given, rather than an official EMI value.

murmur that whereas France would pass a strict debt test for 1997, Germany probably would not. In fact, France will barely pass: its 1997 debt-to-GDP ratio is forecast by the Organisation of Economic Co-operation and Development (OECD) at around 58 percent.[21] Almost none of the potential first-round EMU members has a gross debt below the reference value of 60 percent of GDP, however, and there is great divergence in the numbers, ranging from Belgium, with around 127 percent of GDP forecast for 1997, to Luxembourg, with 6.4 percent of GDP in 1996.

There are several explanations for the lack of attention given to debt levels, as compared with deficits. One focuses on Belgium, which would have to be excluded (probably for many years) on any strict application of the debt criterion. Belgium has shadowed the mark since

21. *OECD Economic Outlook* 61, 1997, p. A68. All other national debt data and forecasts in this paper are taken from this source.

the days of the currency snake, has not devalued significantly in over a decade, is a founding EU member, and is the seat of the EU bureaucracy. Moreover, while its public debt-to-output ratio exceeds even Italy's 123 percent, the absolute *level* of potential financial liability that its debt would create for EMU is much smaller than would be entailed by the Italian debt. Thus no one wishes to follow a proceedure that would exclude Belgium.[22] The second explanation is legalistic: the Maastricht treaty specifies 60 percent as a reference value, but—in contrast to the language describing the deficit—does not say that countries must be "close to" the target. Thus Belgium, whose debt stood at 137 percent of GDP in 1993, may be judged to have made sufficient progress in debt reduction to qualify. A third view is that for many countries, net public debt is far below gross public debt (the concept on which, puzzlingly, the Maastricht treaty focuses). The question of gross debt therefore appears less urgent. Finally, there is the "conspiracy of silence." High-debt countries have nothing to gain by bringing up the issue, while Germany and its allies may wish to keep it in reserve as the ultimate weapon to block Italy's admission. It remains to be seen whether scrutiny of debt levels will intensify as May 1998 approaches.

So far, however, the deficit component of the fiscal criterion has been the trial by fire for most countries, even those with the best inflation records. It is also the issue around which concerns about "sustainability" are likely to hover, given the widespread practice of cosmetic accounting. Figures 8 and 9 illustrate trends in fiscal deficits.[23] The magnitudes of these countries' efforts to reduce measured public deficits since the mid-1990s are evident.

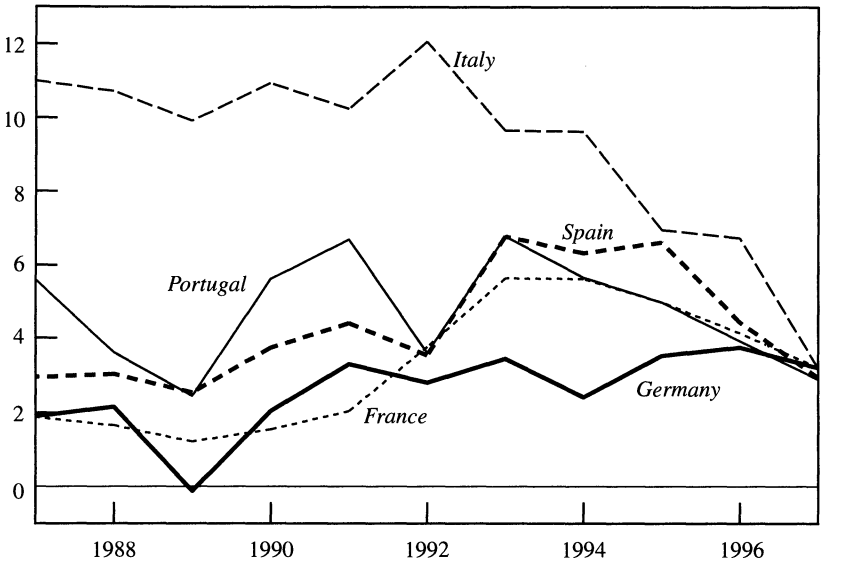
On present data, it appears that Finland, Ireland, the Netherlands, and Luxembourg (not pictured, but likely to have a government surplus this year) will avoid excessive deficit rulings by the Ecofin Council in 1998. Austria, Belgium, Portugal, and Spain are expected to come in close to 3 percent—so close, given projected 1998 budgets, that they

22. As Thygesen (1993, p. 17) puts it: "The budgetary criteria . . . are unlikely to be applied mechanically to bar countries which have long observed the rigid discipline of the normal margins in the EMS, from entry into the final stage." Belgium meets this description, but Italy, Portugal, and Spain do not.

23. The 1997 figures are forecasts by the OECD. All forecasts concerning the 1997 Maastricht deficit numbers remain highly uncertain at this point, not only because of the usual economic factors, but also because new rulings from Brussels could alter the set of items that governments must include in calculating deficits.

Figure 8. Public Sector Deficits, 1987–97: France, Germany, Italy, Portugal, Spain

Percent of GDP



Source: See figure 1.

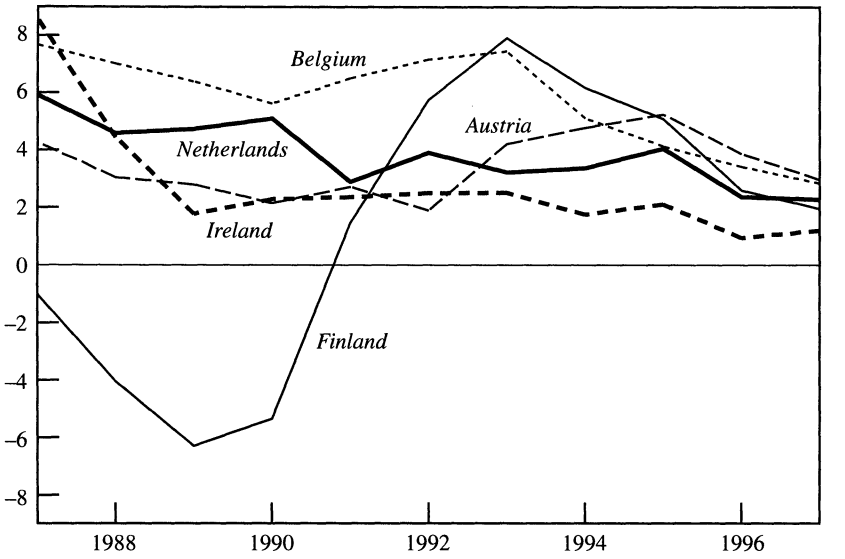
will very likely escape their present excessive deficit status and thereby meet the Maastricht fiscal criterion.[24]

The most problematic cases are those of Germany, France, and Italy. Germany's 1997 deficit may well exceed the 3 percent reference value. In France, the election of a Socialist government in the spring of 1997 and the French public's obvious discontent with budget cuts created the temporary impression that France would widely overshoot the 3 percent mark. Despite its campaign promises, however, the new government of Prime Minister Lionel Jospin abruptly changed course and made EMU a priority. France's deficit is likely to exceed the Maastricht

24. Of the countries currently subject to excessive deficit rulings, Belgium had the lowest 1996 deficit, at 3.4 percent of GDP. Belgium's debt situation is unusually bad, but it might nonetheless prove awkward for the Ecofin Council both to rescind Belgium's excessive deficit ruling and to do so for countries with 1997 or projected 1998 public deficits of 3.4 percent or above.

Figure 9. Public Sector Deficits, 1987–97: Austria, Belgium, Finland, Ireland, the Netherlands

Percent of GDP



Source: See figure 1.

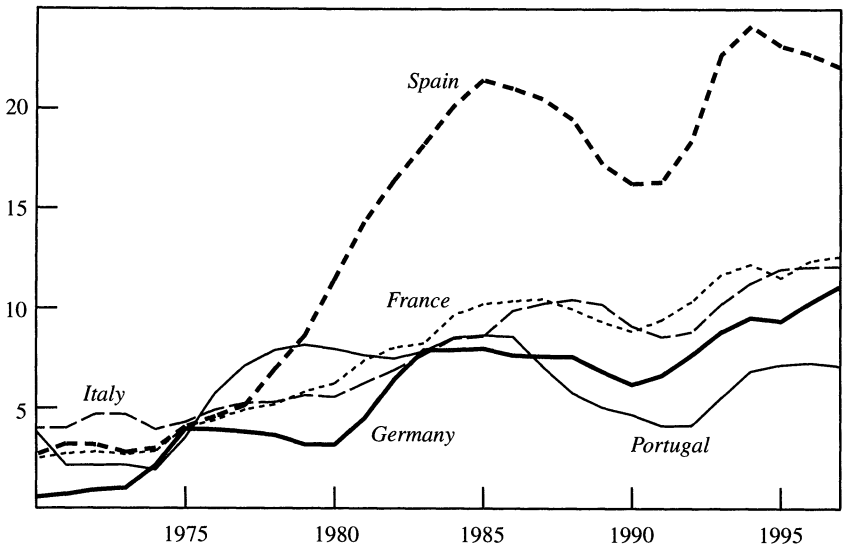
reference value for 1997, but probably not by much. Italy seems poised to come in well under 4 percent—perhaps close to the 3 percent target.[25]

Italy has accomplished its dramatic fiscal about-face through some genuine tightening, but also through imaginative gimmickry, such as the one-year-only "Eurotax." However, its position is unusually sen-

25. In June 1997 the OECD predicted that the French, German, and Italian public sector deficits for 1997 would all be 3.2 percent of GDP (*OECD Economic Outlook* 61, 1997, p. A33). After the publication of these forecasts, a decision by the European Commission gave Germany the right to exclude sizable hospital expenses from its official deficit figure. Also, the Jospin government, presenting its budget late in September 1997, forecast a 3.1 percent deficit for France for 1997. For Italy, the OECD has predicted a 1998 deficit of 3.8 percent, which could provide ammunition for charges that its 1997 fiscal performance is unsustainable. As noted below, however, interest rate effects will make Italy's 1998 deficit very sensitive to the outcome of its bid for first-round entry to EMU. Furthermore, new pension and welfare reform measures advanced by the government of Prime Minister Romano Prodi would substantially reduce the planned 1998 deficit.

Figure 10. Unemployment Rates, 1970–97: France, Germany, Italy, Portugal, Spain

Percent



Source: See figure 1.

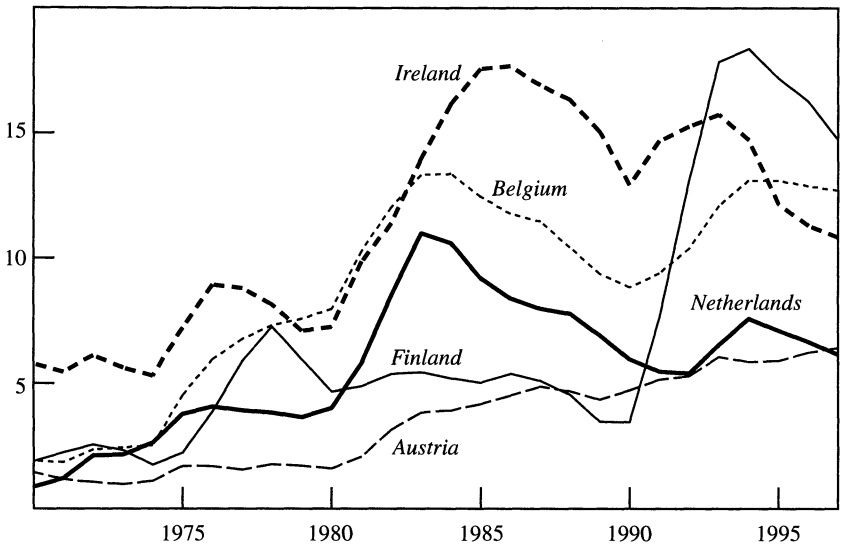
sitive to interest rates, and its longer term interest rates have declined as expectations that Italy will enter EMU in 1999 have risen.[26] The country has a large government primary surplus, projected to be 4.9 percent of GDP in 1997, according to the OECD. The OECD also projects Italian government net debt interest payments to be 8.1 percent of GDP in 1997. Given Italy's high debt-to-GDP ratio, a market conviction that EMU entry is imminent could alter its 1997 deficit ratio significantly. The effect would depend on the government's ability to refinance its debt quickly at maturities most sensitive to expectations.

For both France and Germany, rising unemployment coupled with rather generous unemployment support systems have been at the core of the difficulties in reaching a deficit target of 3 percent in 1997. Figures 10 and 11 show unemployment rates for ten potential first-round EMU members. European unemployment is much more persist-

26. See Begg and others (1997).

Figure 11. Unemployment Rates, 1970–97: Austria, Belgium, Finland, Ireland, the Netherlands

Percent



Source: See figure 1.

ent than that of the United States, at the national, regional, and even individual levels (as measured by the much greater incidence of long-term unemployment in most of Europe). Thus increases in unemployment rates lead to large and persistent budgetary drains.

From this perspective, it is not surprising that some countries are currently finding it difficult to meet the Maastricht deficit target. Fiscal tightening in preparation for EMU has tended to raise unemployment and thus benefit payments, leaving a diminished net positive effect on government budgets. Countries where unemployment has come down since the early 1990s—Finland, the Netherlands, Ireland—are in relatively good fiscal shape. Countries where unemployment is high and rising—France, Italy, Germany (with especially high unemployment in the east)—are having a hard time adjusting. Aside from the budgetary repercussions, high unemployment places many countries in an uncomfortable position from which to enter monetary union. This was

Sweden's primary reason in 1997 for deciding not to enter EMU in 1999.[27]

The Political Context of the Transition to EMU

Uncertainty over the start of EMU will not disappear with the announcement of the first members, especially if that group is broad. EMU may have to clear some high political hurdles between May and December 1998 to reach the finish line on time. The greatest hazards originate in Germany, but they have been magnified by opposition to further domestic budget cuts in France.

The intransigent budget deficits in Germany and France have proven to be a major embarrassment to German chancellor Helmut Kohl's government, and perhaps the greatest threat to an on-time departure for EMU. Germany promoted the deficit criterion in part to exclude Italy from the first wave of members. Sharply rising German unemployment in 1996–97, coupled with unwillingness of Chancellor Kohl's coalition partners to approve new tax increases, has left Germany's anticipated 1997 deficit uncomfortably close to that of Italy. To make matters worse, France's deficit prospects resemble Germany's, and EMU cannot succeed as a European institution unless it includes these two core players. But if both France and Germany are in, the Germans may have little basis for a push to exclude Italy.

Germany's fiscal predicament led, in the spring of 1997, to the government's desperate and unsuccessful attempt to revalue the Bundesbank's gold reserves and claim the capital gain as a 1997 budgetary credit. The main effects of that episode were to outrage German public

27. On Sweden, see Calmfors and others (1997). In 1996 Sweden's unemployment rate was near 8 percent. Since Sweden has so far chosen not to join the ERM, it may not be in compliance with the exchange rate requirement—as will emerge from the May 1998 admission decision—and therefore may not be legally obliged to join EMU in 1999, despite the likelihood that it will satisfy nearly all the other convergence criteria in 1997. (Sweden's debt will be somewhat above the 60 percent reference value, but no more so than that of the Netherlands.) Unlike Britain and Denmark, however, Sweden has not negotiated an opt-out from EMU. At this time, therefore, the legality of its announcement that it will not be in the first wave of EMU members is doubtful, although there is little sentiment within the EU (except in Finland) for forcing Sweden in against its will. Another potential legal bar to Sweden's entry is the statute of the Sveriges Riksbank, which remains inconsistent with that of the ESCB. Legislation has been introduced to change the charter of the Swedish central bank, but the constitutionally mandated approval procedure is too lengthy to be completed by January 1, 1999.

opinion, alienate the Bundesbank further, undermine Germany's standing as a critic of the accounting virtuosity of other countries, and encourage some German politicians to call openly for delaying EMU. At the present time, Germany's last hope is that the European Commission and the EMI judge Italy's fiscal achievements in 1997 to be unsustainable or disqualify it from membership on some other ground, for example, its high public debt ratio.[28]

A broad EMU, including large countries that have not strictly respected the deficit reference value, would seriously raise the possibility of a German constitutional crisis. As a result, Germany might call for delay. Like their central bankers, many German voters fear that the euro will be a softer currency than the mark, especially if it has to be managed in collaboration with Italy as well as France.[29] Upon ratifying the Maastricht treaty, the German Bundestag claimed competence to judge whether Germany should proceed to Stage Three, stating that it would accept only a strict interpretation of the convergence criteria. The German Constitutional Court subsequently endorsed the Bundestag's position that it could block German participation in EMU if the convergence criteria were loosely applied.[30] Opposition in the Bundestag, especially if inspired by the open misgivings of the Bundesbank, might lead the Constitutional Court to rule that the German government would violate the constitution by joining EMU.[31] The Maastricht treaty makes no allowance for individual countries to block or withdraw from

28. A decision to disqualify Italy based on its government's debt might, in turn, lead to the disqualification of Belgium, and to the dissolution of Belgium-Luxembourg currency link established in the 1920s.

29. The May 1997 Eurobarometer survey (Standard Eurobarometer 46) carried out by the European Commission showed that 39 percent of Germans polled favored the single currency while 42 percent were against it. In Austria and Finland, both also likely first-round members, there was greater opposition to EMU than support. In France, supporters outnumbered opponents by 55 percent to 30 percent. Italy showed the greatest net support for EMU: 73 percent for and only 11 percent against. In the December 1996 survey, 59 percent of those polled in France supported EMU while only 22 percent were against it.

30. Kenen (1995, pp. 26, 166). Steinherr (1994, pp. 252–53) reprints an excerpt from the court's ruling in English translation.

31. The Bundesbank's skepticism over proceeding with EMU in 1999 is no secret. Bundesbank council members have been openly critical and the bank's *Monthly Report* has contained a series of warnings about German fiscal preparedness for EMU, the dangers of basing policy decisions on "structural" rather than actual government deficits, and so on.

EMU in the event of a domestic political impasse, but there might well be a delay.

Chancellor Kohl will be running for reelection in the fall of 1998, shortly before Stage Three is set to begin. It already seems likely that the opposition platform will call for delay, arguing that a hard euro requires waiting until the convergence criteria are strictly met. This is not an anti-EMU platform, which would still be beyond the political pale in Germany, but rather, it is a stalling tactic based on the argument that EMU must be "done right." Whether the deficits of the member government are 3.0 percent or 3.5 percent of GDP a year ahead of EMU can make no real difference to the anti-inflation resolve of the European Central Bank. The true subtext of the German opposition is that delay will show up the Italians' consolidation efforts as a sham, allowing EMU to start later without them.

Opposition to the single currency may grow elsewhere—as it has in France—if EMU becomes identified in voters' minds with a rollback of the welfare state and high unemployment.

Benefits and Costs of the Monetary Union

The hazards that bedevil the final months of EMU's gestation reflect not only contending political value judgments, but also genuine uncertainty about the purely economic gains and losses to be expected under the single currency. On the one hand, savings on transaction costs and economies of resource allocation are counted among the likely benefits. Some of these efficiency gains result from the single currency's effect on the political sustainability of the single market.

On the other hand, national monetary and fiscal policies are likely to be constrained further. The implications of this development are ambiguous and will differ across countries. In his work on optimum currency areas, Robert Mundell explains the macroeconomic stability cost of giving up the exchange rate as a mode of adjustment to macroeconomic shocks when nominal wages and prices are sticky.[32] A geographical unit characterized by high labor mobility, a high level of interregional trade, and a low incidence of region-specific demand and

32. Mundell (1961).

supply shocks might give up separate regional monies at minimal cost. To the extent that these conditions fail in Europe—certainly, intra-EU labor mobility remains very low—exchange rate adjustment would continue to be the easiest way to move international relative prices to equilibrium following a shock.

Imagine, for example, an unexpected permanent fall in Spanish aggregate demand that the other EMU countries escape. An idiosyncratic national real shock such as this would not cause much depreciation of the euro against outside currencies, nor would it trigger monetary easing by the ECB. If EMU were an optimum currency area, Spanish workers would migrate to other EMU countries rather than facing unemployment at home. In reality, however, out-migration would be minimal, and unemployment would therefore persist until Spanish prices and costs had fallen enough to create an export-led recovery. The deflation process is a lengthy one. With its own currency, Spain would have the option of altering relative international prices more quickly through depreciation, at lower cost in terms of unemployment.[33]

In principle, fiscal policy can supplement monetary policy by allowing a richer set of goals. However, monetary and fiscal policy can be abused, and have been by some EU countries, so there is a case for at least some restraints on national policy discretion.

Quantification of the various costs and benefits of a single currency ranges from difficult to impossible. Even the European Commission's remarkably comprehensive study, "One Market, One Money," shies away from a bottom-line cost-benefit analysis.[34] A brief summary of a few lessons learned since that 1990 report is nonetheless useful in evaluating the major challenges that EMU will face.

Efficiency Gains

Perhaps the most obvious gain to be had from EMU is the saving on currency transaction costs. "One Market, One Money" illustrates how an itinerant tourist could lose nearly half of a given original sum by making a "round trip" through ten European currencies. The loss re-

33. For depreciation to be effective, it must be at least partially unanticipated; that is, it must come in response to an economic shock not yet fully absorbed into the structure of domestic nominal prices and wages.

34. Commission of the European Communities (1990).

flects commissions and fees only. Together with additional costs, such as internal accounting costs and the interest cost of clearing lags, the transaction loss entailed by multiple currencies might be as high as 0.3 to 0.4 percent of GDP per year.[35] European financial institutions already bemoan the current and prospective loss of foreign exchange business due to the euro—although their layoffs, which induce foreign exchange traders to find more socially productive jobs, are a primary route through which the savings identified by the European Commission are to be reaped!

Critics of fluctuating exchange rates usually hold that direct currency conversion costs are a relatively minor component of the efficiency loss due to multiple currencies. More serious is the alleged disruption to international trade and investment from the unpredictability of future real and nominal exchange rates. Econometric studies of effects of short-term exchange rate volatility on trade and investment show slight negative effects, but the results are hardly indicative of large costs. Longer term misalignments in real exchange rates are arguably more disruptive.[36] A newer econometric approach considers nominal exchange rate volatility as a correlate of deviations from the "law of one price" in goods markets. Using alternative methodologies, some recent studies present evidence that nominal volatility contributes to international market segmentation.[37]

It is sometimes argued that the elimination of this segmentation within EMU would have ambiguous effects on the national welfares of member countries. The benefits from international trade creation, the reasoning goes, may be offset by a simultaneous diversion of trade from extra-EMU trading partners. The implicit analogy to the trade creating and diverting effects of customs unions is wrong, however. A customs union's effect on trade results from tariff changes that lower the private costs of intra-union trade by more than the social costs. In contrast, a rise in intra-EMU trade due to lower exchange volatility is akin to a rise due to lower transport costs. Because social and private trade costs fall equally in that case, trade expansion is beneficial for EMU countries. Only if EMU causes a big rise in dollar-euro and yen-euro exchange rate volatility is there a chance of its trade effects being harmful

35. Commission of the European Communities (1990, pp. 66–68.)
36. For a discussion, see Obstfeld (1995, pp. 141–44).
37. See, for example, Engel and Rogers (1995) and Obstfeld and Taylor (1997).

to the euro area. But it is not obvious that EMU will substantially change the euro zone's external exchange volatility.

Probably the most significant gains from the single currency regime stem from its effects on the political equilibrium that generates outcomes for trade, monetary policy, and fiscal policy. Several authors (notably, Barry Eichengreen) argue that adjustable intra-EU exchange rates would weaken the single market as swings in competitiveness lead to calls for protection.[38] Certainly, the link between currency misalignment and protection has been one of the worst features of floating dollar exchange rates, although the misalignments have been bigger than those between EU countries and the European Commission has much sharper teeth with which to enforce trade rules in its bailiwick than does the World Trade Organization. It is quite plausible, however, that exchange volatility would slow or even reverse deeper market integration within Europe.

The most striking contribution of the monetary unification process to economic efficiency is, perhaps, to have forced inflation into remission in a large number of European countries that seemed locked in its grip at the start of the 1980s. The allocational costs of high inflation, while not adequately captured in existing economic theory, are akin to those of exchange rate volatility but worse, in that they affect the entire economy directly, including sectors largely sheltered from international trade. Furthermore, divergent inflation rates invariably heighten exchange rate volatility, real as well as nominal.

Hoping to gain admission to the single European currency that they were confident would someday arrive, France, Italy, Spain, Portugal, Ireland, and others have brought inflation down to German levels and below (as shown above in figures 5 through 7). Possibly, some of these countries would have accomplished this feat without the prospect of EMU, as argued by Susan Collins, but the road would have been longer and harder.[39] The drive toward EMU has fundamentally changed domestic political equilibria, strengthening the hands of central banks and of those elements (primarily, but not exclusively, in the business community) favoring greater integration into Europe and domestic economic and institutional reform. If the new European central bank can keep inflation in check, the single currency will enhance and cement these gains.

38. Eichengreen (1993, p. 1329).
39. Collins (1988).

Despite its similar design, the ECB will not be the Bundesbank, and it is difficult to predict how the new central bank's approach to monetary policy will evolve. Currently, there is open disagreement between France and Germany on the independence of the ECB from political influence. France favors an institutional channel for political oversight, much to German dismay. There is also confusion about the compatibility of ECB independence with the Maastricht treaty's division of responsibility for exchange rate policy between the ECB and the Council of Ministers.[40] Under a September 1997 decision by the Ecofin Council, political interventions on exchange rates are envisioned to be exceptional rather than regular events. How such issues are resolvd in practice remains to be seen.

Loss of the Exchange Rate and Monetary Autonomy

Once Stage Three commences, monetary policy decisions for the union will be made by the Governing Council of the ECB. The Governing Council will consist of the governors of the member central banks and the ECB Executive Board (comprising the president, the vice president, and up to four other members appointed unanimously by EMU heads of state or government on the Ecofin Council's recommendation). Decisions on monetary policy will be made by simple majority vote, with the president's vote determining ties. As a practical matter, the national central banks will become regional branches of the ESCB, retaining autonomy only insofar as their actions do not conflict with ECB objectives.[41]

The EMU-wide scope of monetary and exchange rate policy poses a potential problem for individual member states, as noted above. If a country suffers an economic downturn while growth remains strong elsewhere, its currency cannot depreciate to lower its relative prices and spur demand, nor can it devalue. It shares a currency with its

40. For discussion see Kenen (1995, pp. 31–32).

41. Large interbank transfers of euro within EMU will be handled by the new TARGET (trans-European automated real-time gross settlement express transfer) payments system, which will link preexisting national systems. The preferred mode of open market operation will be tender offers open to all eligible counterparties in any EMU country. The ESCB's portfolio may (and will) include EMU government obligations; the ESCB is prohibited only from direct financing of government deficits. For details, see European Monetary Institute (1997).

partners, and local economic problems that do not simultaneously afflict most of them are unlikely to affect the foreign exchange value of the common currency. Because monetary policy will be geared toward price stability in the union as a whole, the ECB will not lower interest rates in response to purely nation-specific demand or supply shocks. If the local downturn is persistent, the country will suffer a protracted bout of unemployment above the EMU average. The high unemployment will persist while the national price level falls, and the limited scope for labor to migrate to other euro-zone countries will lengthen the adjustment process.

How costly it will be to adjust within EMU without the nominal exchange rate depends on the size and incidence of asymmetric real shocks, as well as on the efficacy of the alternative adjustment mechanisms. Empirical research on the nature of European economic shocks has failed to unearth any universally accepted truths. Besides, there is no guarantee that the future will look like the past, especially as the past data were generated under policy regimes quite different from the single currency. Considerable attention has focused on the possibility that the single market will promote regional economic specialization, making the geographical distribution of Europe's industries less diversified.[42] In that case, as Peter Kenen points out, Europe might become more susceptible to asymmetric real shocks and thus even less plausible as an optimum currency area.[43] The likelihood of such an outcome is questionable, particularly as service industries, many accessible through cyberspace, continue to crowd out traditional manufacturing employment.[44] And the single currency itself, by promoting deeper integration among its users, would raise the potential costs of exchange rate volatility. Nonetheless, some asymmetric shocks clearly are in the cards: sterling fluctuations will affect Ireland disproportionately, movements of Sweden's krona will buffet Finland, and Germany may be especially vulnerable to the continuing evolution of industry in eastern Europe and the likely enlargement of the EU early in the twenty-first century. The current dispersion of growth rates in the EU likewise

42. Krugman (1993).

43. Kenen (1969).

44. Frankel and Rose (1996) argue that, empirically, more extensive trade between countries raises the correlation between their national incomes. They interpret this finding as evidence contradicting Krugman's (1993) hypothesis.

testifies to the difficulties that common exchange and interest rates might cause.

If asymmetric real shocks remain likely, the strength of adjustment mechanisms other than the exchange rate gives little cause for comfort. Rigidities in European output and labor markets mean that prices and wages move very slowly to eliminate unemployment. For example, Olivier Jean Blanchard and Pierre Alain Muet illustrate the slow pace of aggregate price-level adjustment in France since the early 1980s, while Giovanni Peri and I show that regional price-level reactions in Germany and Italy do little to speed the adjustment to regional employment shocks.[45] It is sometimes argued that EMU will promote wage and price flexibility by removing the possibility of an accommodative currency realignment, but if that hypothesis were true, one would expect to see much greater wage-price flexibility within Germany than there appears to be. Industry-level wage bargaining—which currently prevails at the national but not at the European level—could explain this result. However, there is little in the experience of the EMS to suggest that even longstanding pegs have had much direct effect on wage and price flexibility.[46]

Labor mobility is probably an even weaker aid to adjustment. It is extremely limited between European countries, and also within many of them. Figure 12 illustrates the dispersion in unemployment rates among western German *Länder* (states). Not only the increasing extent of this dispersion is striking, so is its persistence over time. This pattern is in sharp contrast to that in the United States, where labor mobility ensures that regional unemployment rates show little persistence.[47]

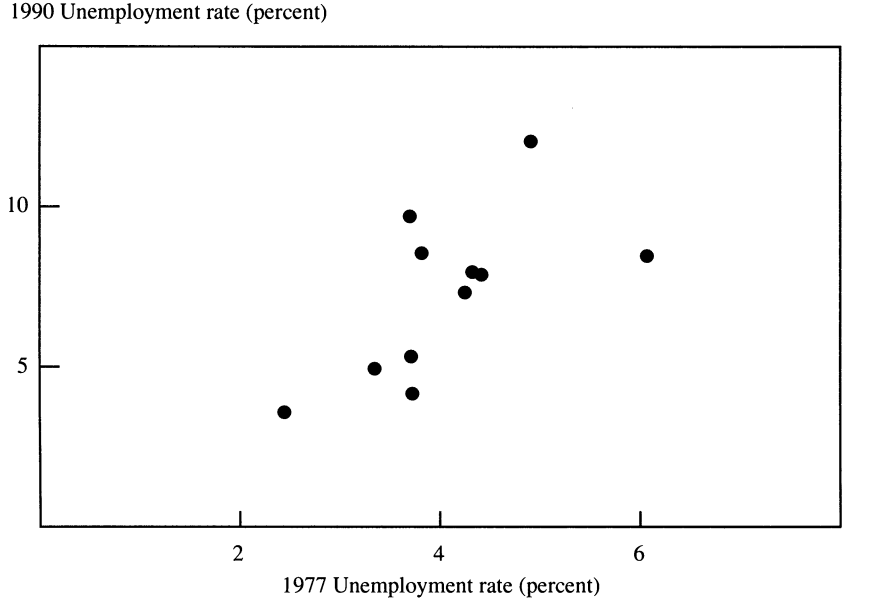
Indeed, the plight of the currency unions that will join to make up EMU leaves little hope that powerful adjustment mechanisms will operate swiftly to eliminate national unemployment problems in EMU member countries. Price and wage flexibility are low, and interregional

45. Blanchard and Muet (1993); Obstfeld and Peri (1997).

46. Hochreiter and Winckler (1995) argue that Austria's policy of fixing to the deutsche mark has enhanced real wage flexibility, giving that country one of the lowest unemployment rates in the EU. It is unclear, however, whether the credibility of exchange rate policy made wages flexible, or the high degree of corporatism in Austria made the exchange rate policy credible. Whatever the lessons of the Austrian experience, it is doubtful that they are fully applicable to larger potential EMU entrants, such as France, Germany, Italy, or Spain.

47. See Blanchard and Katz (1992, pp. 11–12).

Figure 12. German Regional Unemployment Rates, 1977 versus 1990[a]



Source: Obstfeld and Peri (1997).
a. Each dot represents one of eleven western German *Länder* (states).

migration is very limited. In fact, the principal mechanism of regional stabilization operating within these countries simultaneously discourages adjustment and makes nonadjustment tolerable. Regions suffering high unemployment receive fairly open-ended inflows of fiscal transfers from central authorities or from other localities, which support unemployed workers while keeping them in place for longer periods. Thus a fiscal system favoring "regional cohesion" interacts with a rigid labor market to discourage mobility. The ongoing economic crisis in eastern Germany illustrates this mechanism at work.

The other major structural impediment to mobility is the continuing distortion of housing markets, including government allocation of rental units, high transaction costs, and widespread regulation of mortgage markets. Government allocation, for example, typically entails queues for apartments, and job-seekers who arrive from other localities go to the back of the line. Gordon Hughes and Barry McCormick document the adverse effects of British council housing on worker mobility and

aggregate unemployment. Duncan Maclennan notes that in the Netherlands, 40 percent of rental units are allocated by local authorities rather than the market. And Andrew Oswald presents evidence of a negative relationship between overall national unemployment rates and stocks of private rental housing in OECD countries.[48]

Unless EMU, in itself, forces them to rethink and reshape the entire spectrum of social policies, countries will adopt the single currency without having even begun to solve their internal adjustment problems. The sacrifice entailed by an irrevocably fixed exchange rate will be greater as a result. In Europe it is sometimes argued that the discipline of a single currency will necessarily force participating countries to scale down the edifice of market regulations and social benefits associated with the welfare state. In a few EU countries there have been moves in that direction, but in many others, including France and Germany, domestic opposition runs high and hardly any reforms of substance have been made.

Some analysts of EMU's prospects see in certain labor market rigidities an argument *for* a single currency. Suppose real wages are rigid, so that nominal exchange rate changes feed through strongly and quickly to nominal wages. In that case, the exchange rate may be relatively ineffective as an adjustment device, and countries lose little by giving it up. The scope for successful currency realignment rests on the structural process of wage determination, an area where economists' knowledge is incomplete. I return to this topic in the next section.

Fiscal Policy in EMU

Both through statute and through its effects on economic integration, EMU will lessen the scope for individual countries to carry out countercyclical stabilization policy. A country that starts from a position of public deficit will find even its automatic fiscal stabilizers compromised—probably a more important loss, in view of the difficulties in promptly implementing discretionary countercyclical fiscal policy. The loss of fiscal policy as a stabilization tool potentially increases the costs of EMU in terms of macroeconomic stability, since the single currency would already have removed the option of changing the exchange rate in the event of a country-specific downturn. Furthermore, EMU could

48. Hughes and McCormick (1987); Maclennan (1996); Oswald (1996).

put countries in the position of having to cut budgets in circumstances of recession and rising unemployment. In this case, EMU would not be neutral with respect to fiscal policy, but destabilizing.

Yet any tendency for domestic economic or political distortions to generate excessive deficits and debt might be curbed by EMU's fiscal constraints, to the advantage of its members.[49] Several studies suggest that the threat of exclusion from the single currency can alter the high-deficit equilibria that have long plagued many countries (shown in figures 8 and 9).[50] I argue below that the durability of any increased fiscal discipline seen so far is questionable, more so than in the case of inflation. To impose ongoing fiscal discipline, however, EMU provides for continuing fiscal policy coordination after the start of Stage Three.

The Maastricht treaty outlines an "excessive deficits procedure" to be directed against any "gross errors" in fiscal policy by EU member states.[51] The Ecofin Council, acting on the advice of the European Commission, may rule that a deficit is excessive if it exceeds 3 percent of GDP or if government debt exceeds 60 percent. As noted above, the fiscal criterion for proceeding to Stage Three is that a country not be found to have an excessive deficit (a judgment subject to nuances of speed and direction of change mentioned above). In Stage Two an excessive deficit carries no meaningful penalties other than the threat of exclusion from Stage Three.

In Stage Three, however, a two-thirds weighted majority vote allows the Ecofin Council to impose penalties on an offender, including non-interest-bearing deposits and fines. In response to German demands for quick and sure punishment of fiscal misbehavior within EMU, the Dublin European Council in December 1996 went further in defining the procedure that would trigger such fines and the size of the fines. The

49. There are a number of reasons for believing that domestic political processes produce deficits higher than those that a unitary social planner would pick; see Alesina and Perotti (1995b) for a survey. But politics are not the only source of excessive deficits. Just as governments may be tempted to reduce unemployment by surprise inflation—with the rational expectations equilibrium result of high inflation but no reduction in average unemployment—excessive fiscal ease can be the equilibrium of a game between policymakers and wage- and price-setters. The fiscal coordination failure may be worsened if policymakers are deprived of monetary discretion; see Agell, Calmfors, and Jonsson (1996).

50. See Buiter, Corsetti, and Roubini (1993), McKinnon (1997), and Rotte and Zimmermann (1997).

51. Council of the European Communities (1992, article 104c).

result was the "Stability and Growth Pact," finalized by the Amsterdam European Council in June 1997. At the Dublin meeting, France had managed to add the phrase "and growth" to Germany's favored title and, more important, to soften its proposed terms. Subsequently, the new French Socialist government left for the Amsterdam summit vowing to renegotiate the stability pact, but returned empty-handed. All of these developments leave considerable uncertainty about how the stability pact will work in practice. One reason why many Germans fear a loose interpretation of the fiscal entry criterion for EMU is the possibility of setting a precedent that will weaken the exercise of sanctions under the stability pact.

Must members of a monetary union be saddled with fiscal restraints to ensure its smooth operation? In principle, the answer clearly is no.[52] Private capital markets might discipline government borrowers by means of steeply rising borrowing rates. Deeper economic integration could force fiscal harmonization along so many dimensions that widely divergent debt ratios would be impracticable. In addition, the loss of the ability to monetize debt promotes a tighter budget constraint. These mechanisms, which operate powerfully within longstanding monetary unions such as the United States, are already present in the EU, but so far have not imposed anything resembling tight limits on government debts. This situation may change after the single currency arrives, but not quickly. For the near future, the greater fiscal resources of national governments compared with U.S. states, for example, will continue to give the former a much longer rope. Proponents of explicit fiscal restraints contend that the rope is too long.

The internal costs of high deficits provide one motive for the excessive deficits procedure, but more important in shaping the treaty were concerns about external effects on other EMU members. Of these, the fear that high debts might compromise the ESCB's commitment to low inflation heads the list. Heavily indebted countries might lobby for surprise inflation to reduce their real debts. More realistically, the ESCB, in safeguarding the payments system, could effectively find itself obliged to bail out a country in financial distress by monetizing its liabilities. Partly for this reason, and partly also to address the moral

52. Cooper (1984) argues this case in proposing a single currency for the industrial democracies, managed by a joint central bank of issue.

hazard problem associated with expected bailouts, the ESCB is prohibited from directly buying government debt. The relevant provisions of the Maastricht treaty could readily be circumvented, however, so deficit and debt limits remain a potentially effective (if not optimally designed) defense against central bank bailouts. But the precise numerical limits specified in the Maastricht treaty have no persuasive rationale.

The Maastricht treaty also reflects a fear of bailouts accomplished by conventional fiscal transfers. Article 104b thus forbids the EU from bailing out member states by assuming their liabilities, and likewise forbids individual member states from bailing each other out. On the other side, Jürgen von Hagen and Eichengreen argue that centrally imposed fiscal constraints on subnational governments tend to characterize federations in which the center controls most tax collection.[53] When the states in the federation have significant powers to raise taxes on their own, as would be true in EMU, borrowing restraints are less necessary because a state in fiscal difficulty can raise local taxes instead of pressing the center for a bailout. Von Hagen and Eichengreen conclude that the quantitive restrictions of EMU are ill conceived.[54]

Other potential coordination failures in EMU could be mitigated by fiscal constraints, however. For example, in a floating rate system, countries might be deterred from fiscal expansion by the fear of appreciating their currencies and squeezing the tradables sector. Thus the lack of cooperative exchange rate policy could actually alleviate the domestic distortion of an excessive deficit.[55] With monetary union, the brake of a nominal appreciation is gone, and the excessive deficit problem therefore grows worse. In such cases, the gains from monetary union can be enhanced by appropriate fiscal limits.

Another argument for curbing national fiscal discretion in EMU is

53. Von Hagen and Eichengreen (1996); see also Glick and Hutchison (1993). The borrowing restrictions present in forty-nine U.S. states (all but Vermont) are self-imposed, not mandated by Washington.

54. For surveys of fiscal policy in EMU, see Bovenberg, Kremers, and Masson (1991), Buiter, Corsetti, and Roubini (1993), and Kenen (1995, chap. 4). The bailout problem does appear to be relevant empirically, based on the experience of existing European currency unions. In 1994, the German Constitutional Court allowed the federal government to start making special bailout payments to Saarland and Bremen, whose debt levels had reached "alarming proportions"; Deutsche Bundesbank (1997, p. 25).

55. See Rogoff (1985). Rogoff's example was based on government fears of currency *depreciation*, so the argument in the text would apply to a world in which fiscal expansion caused the currency to weaken, as several models predict.

that fiscal policy in itself can be a source of idiosyncratic national shocks. The Johnson administration's fiscal expansion in the 1960s helped to bring down the Bretton Woods system. The deficits caused by German reunification helped to shatter the EMS in 1992–93. And had Europe been pegging to the dollar in the 1980s, the Reagan administration's fiscal expansion would have affected European countries much as did the German expansion under Chancellor Kohl.

Fiscal constraints might also have the beneficial effect of forcing countries to scale back overgenerous social benefit programs. As argued above, these programs often impede labor market adjustment over the longer run, and they reduce wage flexibility by discouraging competition for jobs. A related phenomenon is state-subsidized hidden unemployment in the form of early retirement, as suggested by remarkably low labor force participation rates for older men in most high-unemployment countries of continental Europe.[56] A stricter fiscal environment could conceivably contribute to greater labor market flexibility if accompanied by other measures to increase geographical and occupational mobility, such as housing market reform. Greater mobility would, in turn, make the single currency easier to live with. How powerfully these mechanisms might work is anyone's guess. So far, most EU countries have made only minimal progress in this direction.

At least since the time of the influential MacDougall Report, European planners have been concerned that the feasible size of the Community budget leaves insufficient scope for the kind of fiscal federalism practiced in the United States and other currency unions as a cushion to idiosyncratic regional shocks.[57] The scale of fiscal federalism actually seems larger within European countries than in the United States.[58] But there is little chance that EMU members will agree on a system of stabilizing intercountry transfers in the near future.[59]

56. In 1993, participation rates for men aged fifty-five through sixty-four were 34.1 percent in Belgium, 44.0 percent in Finland, 43.5 percent in France, 51.5 percent in Germany, 32.9 percent in Italy, 38.4 percent in Luxembourg, and 41.5 percent in the Netherlands. By contrast, the equivalent rates were 65.5 percent in the United States, 64.3 percent in the United Kingdom, 61.0 percent in Canada, 85.4 percent in Japan, and 84.4 percent in Switzerland. These numbers obviously do not cover work in the underground economy. (*OECD Employment Outlook*, July 1995, p. 206.)

57. Commission of the European Communities (1977).

58. See Pisani-Ferry, Italianer, and Lescure (1993) for simulation evidence on France, Germany, and the United States.

59. Von Hagen and Eichengreen (1996) predict that as a result of EMU fiscal restic-

As noted above, the excessive deficits procedure and stability pact will reduce the scope for automatic fiscal stabilizers to serve as a substitute cushion at the national level, in particular, for highly indebted countries. This is a non-negligible cost of EMU. However, automatic fiscal stabilizers are not a perfect substitute for currency realignment. Fiscal stabilizers are useful in the face of transitory shocks but less so in countering persistent changes, because a permanently higher fiscal deficit impedes necessary price adjustment and may violate a government's long-run solvency. Yet it is precisely in the case of persistent shocks that currency realignment can be most useful. In any event, if EMU really does promote deeper market integration, as its backers contend, the domestic stabilizing powers of national fiscal policy will wane as economies become more open.[60] On all of these grounds, the true stabilization costs of the Maastricht fiscal constraints are quite uncertain.

Any offsetting long-run economic benefits of the fiscal constraints will require painful sacrifices by the public in the first years of Stage Three. Will political support for the single currency erode as a result? An optimist might hope that the pain of moving to the new fiscal regime has been frontloaded into the EMU selection process. If the countries that pass this year's test have achieved sustainable consolidation, they may be able to abide by the stability pact without severe strain.

However, recent research on earlier fiscal consolidations shows that this scenario is very possibly unrealistic. In a study of OECD countries after 1960, Alberto Alesina and Roberto Perotti find that fiscal consolidations based on cuts in government wage bills tend to be durable; those based on tax increases or cuts in government capital outlays typically are reversed. Robert Inman finds similar results for American states.[61]

Alesina and Perotti's empirical model would predict that much of

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tions, member states will press the European Union to develop substitute intercountry transfer arrangements; see also Obstfeld and Peri (1997). Some members, however, currently oppose creation of a "transfer union."

60. For discussions, see Cooper (1990), Eichengreen (1990), Goodhart and Smith (1993), and Krugman (1993).

61. Alesina and Perotti (1995a); Inman (1996). For additional evidence from industrial countries, see McDermott and Wescott (1996). Adjustment through tax increases has the additional disadvantage of increasing their distortionary burden.

the fiscal consolidation that has taken place in preparation for EMU is not durable. Table 3 summarizes patterns of fiscal adjustment between 1991 and 1997 for ten possible EMU members (1997 figures are OECD forecasts). Roughly speaking, the countries fall into three groups. The first comprises Austria, France, and Germany. These have generally been moderate deficit countries, but rising public debt and unemployment over the 1990s would have left them wide of the Maastricht reference deficit in 1997, had they not taken corrective measures. To offset increases in social benefits and interest payments, they have mainly raised taxes and cut capital outlays.[62] Of these three countries, only Germany has made an effort to cut the politically sensitive government wage bill. In France, that item actually increased by 1 percent of GDP, and the Jospin government is proposing to expand public employment. The Alesina-Perotti findings thus would lead one to question the sustainability of current fiscal adjustments in this group.

Finland, Ireland, and the Netherlands form a second group, countries where adjustment looks more durable. Finland, facing problems similar to those of France (but more severe), has reduced both categories of government consumption, although simultaneously taxes have been raised and capital outlays cut. Ireland accomplished a successful fiscal turnaround at the end of the 1980s. In the 1990s it has cut government consumption and taxes and has been rewarded by lower interest rates on its still sizable public debt. The Netherlands has lowered government consumption and taxes. With the help of labor market reforms, it has also been able to slash social spending and subsidies (by 3.5 percent of GDP). Not surprisingly, these three countries, along with Luxembourg, are the only potential first-round EMU entrants that are not currently subject to an excessive deficit finding by the Ecofin Council.

Belgium, Italy, Portugal, and Spain make up the third group, as countries of generally high structural deficits. For these, the durability of adjustments will be especially important for life under the EMU stability pact. Belgium's deficit reduction comes from a sizable tax increase coupled with smaller cuts in social benefits and government nonwage consumption. Government wage payments actually have risen, but public finances have benefited from falling interest rates.

62. Austria's underlying fiscal situation deteriorated by much less than those of France and Germany during 1991–97.

Table 3. Changes in Government Budgets, Selected EU Countries, 1991–97[a]

Percent of GDP

Country	Expenditures					Tax revenue[b]	Budget deficit[c]
	Wage consumption	*Nonwage consumption*	*Benefits, subsidies, and transfers*	*Net interest and property payments*	*Net capital outlays*		
Austria	−0.1	0.3	0.4	0.5	−0.1	0.8	0.2
Belgium	0.5	−0.3	−0.4	−1.6	0.1	2.0	−3.7
Finland	−1.9	−0.8	1.5	4.4	−1.2	1.5	0.5
France	1.0	−0.1	2.3	1.1	−0.8	2.3	1.2
Germany	−0.6	0.4	1.2	1.2	−1.6	0.6	−0.1
Ireland	−0.6	−0.4	0.0	−1.9	1.0	−0.7	−1.2
Italy	−1.0	0.0	0.2	−0.9	−1.5	3.8	−7.0
Netherlands	−0.4	−0.1	−3.5	1.1	−0.3	−2.6	−0.6
Portugal	1.2	0.1	2.8	−3.3	0.9	5.6	−3.8
Spain	−0.5	−0.1	0.9	1.0	−2.2	0.4	−1.5

Source: Author's calculations, based on data from Organisation for Economic Co-operation and Development, *Fiscal Positions and Business Cycles on Diskette*, 1997/1.

a. Each entry represents the difference between a 1997 budget item (expressed as a percentage of 1997 GDP) and the corresponding item for 1991 (expressed as a percentage of 1991 GDP). Figures for 1997 are projections.

b. Sum of direct taxes, indirect taxes, and social security contributions.

c. Sum of expenditure changes less change in tax revenue.

Italy has so far benefited less from lower interest rates, but it has cut wage consumption by a percent of GDP. The bulk of its deficit reduction comes, however, from lower capital outlays and much higher tax revenues. In Portugal, government wages and social spending have risen. The large deficit reduction shown in table 3 is due to sharply increased tax revenues and a big cut in the interest bill as inflation has dropped from over 12 percent per year in 1991 to a forecast 2.4 percent for 1997.[63] In Spain, a cut in capital outlays has been the main force driving the fiscal deficit down. None of these four countries' efforts comfortably meets the Alesina-Perotti prescription for durability.

Italy's present situation might pose an exception to the Alesina-Perotti regularity, due to the special favorable conditions that it would face on entering EMU in 1999. Its real interest rates would fall relative to current levels, reducing the cost of public debt service dramatically and possibly producing a balanced government budget. But a temporarily balanced budget need not imply sustainable fiscal consolidation. Fiscal relaxation might well follow, and government finances would remain exposed to sudden runups in EMU interest rates.

The much publicized one-off maneuvers that countries have used to squeeze under the Maastricht treaty's 3 percent limit underline the impression that much of the recent fiscal progress is temporary, if not illusory. Countries that have failed to invest in sustainable budgetary consolidation may find it hard to live within EMU's fiscal confines after 1999. As they have quarreled over interpretation of the Maastricht entry criteria and ECB oversight, EMU members will quarrel over the implementation of the stability pact. The much needed process of long-run fiscal reform, only starting in many countries, will be slow. Any serious public budget cuts that result, however much they may be justified, will focus public resentment on the single currency regime.

In Search of the Counterfactual

An important question in the cost-benefit analysis of the move to a single European currency is the counterfactual: what type of economic policy regime would emerge in Europe were the single currency removed from the agenda? Despite its potential problems, EMU looks

63. But this implies that the fall in Portugal's real (inflation-adjusted) government deficit is much smaller than the 3.8 percent of GDP shown in table 3.

better than some conceivable regimes, though possibly worse than others.

Were EMU to be delayed indefinitely, the EU would try to retain a band exchange rate mechanism of some sort, for both good reasons (to lower protectionist pressures on the single market) and bad (to ease administration of agricultural protection). In recent years, the momentum toward the single currency has allowed the ERM to combine wide official currency bands with a high degree of exchange stability. But with policy convergence more haphazard and market expectations more diffuse, a broad-band ERM lacking the endpoint of a single currency would force a choice between more volatile exchange rates and narrower currency bands, such as those in force up to August 1993.

A floating rate regime based on a small number of sub-European currency blocs could work tolerably well, but would not produce the deeper market integration that a common currency could bring. From a purely economic viewpoint, the comparison of this arrangement with the single currency regime is that described by Mundell (subject to the special monetary and fiscal features of EMU).[64]

The prospect of a renewed ERM leads to a different calculus. In principle, such a system could eliminate the worst drawbacks that Richard Cooper, for example, attributes to volatile exchange rates.[65] The difficulty with this counterfactual is that fixed rates are extremely vulnerable to speculative attack in the current setting of high international financial integration. Weak macroeconomic policy coordination and looser fiscal discipline would take Europe back to the conditions of the "early EMS" (roughly, 1979–87), when capital controls were needed to support fixed exchange rates. Proliferating financial restrictions, to the extent these were effective, would undermine the single market. Expectations of exchange rate realignment would generate currency risk premiums absent under a single currency, while creating adverse pressures on domestic prices and wages.[66] Poor economic performance would create strong pressures for change; but if political imperatives were to make this regime the relevant alternative, then EMU may be preferable.

64. Mundell (1961).
65. Cooper (1984).
66. Obstfeld (1997).

The "Outs" and EMU

Those EU countries that do not join EMU at the start of Stage Three will face the choice of joining a revamped exchange rate mechanism. ERM2 will allow countries desiring admission on a later date to meet the exchange rate convergence criterion by pegging to the euro. The concomitant purpose is to discourage big shifts in intra-EU competitiveness, and the resulting outcry from the producers who are undercut. Membership in ERM2 is not compulsory.

The rules of the new system foresee joint intervention by individual members of ERM2 and the ECB to defend relatively wide bilateral bands, but it is explicitly acknowledged that intervention may be suspended if price stability is threatened. In such cases, central euro parities will be realigned. This explicit escape clause will make ERM2 even more fragile than its predecessor. In effect, outsiders will be on their own in a crisis, with the option to realign at either their own initiative or that of the ECB. Participants could be subject to speculative attacks that periodically dash their hopes of entering EMU.[67] Even if they desire to join EMU eventually, the peripheral status of ERM2 in the EU policy coordination hierarchy may weaken outsiders' commitment to its parities. Because the "outs" can benefit from depreciating their currencies, competing producers within EMU will lobby for their early admission. All of these considerations are likely to make adherence to ERM2 weaker than adherence to ERM1 has been.[68]

Problems in running EMU naturally will make outsider EU countries cautious about pegging to the euro. In that case, the Anglo-Swedish model of domestic inflation targeting might begin to appear more attractive. It remains to be seen whether the "outs" will suffer as a result of their exclusion from EMU, or will be net beneficiaries because of the policy flexibility that they retain. In the extreme case, "ins" might elect to become "outs," by exiting the single currency. The Maastricht treaty makes provision only for the expansion of the euro zone, not for its contraction. A seceder would therefore incur diplomatic costs as well as those of financial conversion. But for the same reason that the

67. De Grauwe (1997) discusses this possibility.

68. According to a Franco-German proposal, a "euro forum," comprising the economics and finance ministers of EMU countries only, will convene shortly before meetings of the Ecofin Council. This institutional innovation is sure to heighten the outsiders' sense of disenfranchisement. Sweden has protested the plan.

EU currently has little choice but to accept Sweden's preannounced refusal to join EMU in 1999, it will have few credible sanctions with which to deter a country that is determined to abandon the euro.

Real Rigidities and the Nominal Exchange Rate

If wages are totally rigid in real terms and output market prices are flexible, changes in the nominal exchange rate cannot affect the real economy by shifting relative prices. They merely lead to immediate proportional changes in all domestic money prices. Defenders of EMU contend that Europe's real wage rigidities render the nominal exchange rate a rather ineffective, and inflationary, mode of adjustment. The implication is that EMU members give up little by way of attractive policy options when they irrevocably lock their exchange rates.

There are, however, several considerations that cut in favor of preserving the realignment option in economies with real labor market rigidities. First, a rigid economy adjusts more slowly to asymmetric real shocks than does a flexible economy, so that rigidities magnify the economic costs of the shocks. Second, if there is even minimal nominal wage rigidity (which certainly is the case in Europe), it may still be possible to eliminate much of the adjustment cost following a shock through a well-chosen currency realignment. Finally, nominal *price* rigidities can make currency realignment an effective stabilization device, even when real *wages* are very rigid. Despite these mitigating factors, the power of real wage rigidity to limit the effectiveness of realignment should not be dismissed for the European economies. The outcome rests, in large part, on the precise modes by which price inflation passes through to wages in individual countries.

Rigidities and Real Wage Adjustment

The remarkable power of a nominal exchange rate realignment to accommodate a change in international competitiveness in a stroke is well illustrated within sticky-price open economy models based on a standard Phillips curve for wage adjustment.[69]

69. See, for example, Mussa (1982).

A simple model along these lines assumes a Phillips curve for the (log) nominal wage w,

$$(1) \quad w_t = w_{t-1} + E_{t-1}p_t^C - p_{t-1}^C + (1 - \theta)(p_t^C - E_{t-1}p_t^C) - \gamma u_{t-1},$$

where p^C is the consumer price index (CPI, also in logs), u is the unemployment rate (in percent), and E_t denotes an expectation based on information at date t. In the model, the base wage is set ahead of time, using date $t - 1$ information, but can be adjusted on date t by a fraction $1-\theta$ (between zero and one) of the CPI forecast error. The wage indexation parameter, θ, captures the degree of nominal rigidity, where $\theta = 1$ is the case in which nominal wages are not at all indexed to the current CPI.[70]

With constant markup and cost of capital, the log domestic output price index, p, can be expressed (omitting a constant) as a weighted average of wages and the log import price index, p',

$$(2) \quad p = \beta w + (1 - \beta)p'.$$

Thus the domestic CPI is a weighted average of the nominal wage and import prices,

$$(3) \quad p^C = \phi w + (1 - \phi)p'.$$

The model is closed with an equation to determine unemployment,

$$(4) \quad u = \delta(p - p') + \epsilon,$$

where ϵ is a stochastic disturbance. Since the model depicts a small economy with a fixed exchange rate, import prices are taken as given. They rise, however, when the home currency is devalued against foreign currencies.

Now consider a negative employment shock to the home economy, perhaps a fall in foreign demand, which I represent as an unexpected permanent rise in the shift factor, ϵ, in equation 4. If the home country's exchange rate is fixed within a monetary union, and the shock affects all union members symmetrically, the exchange rate of the common currency will fall to cushion employment. If, instead, the shock affects the home country asymmetrically, its economy will suffer a period of

70. Bruno and Sachs (1985) utilize essentially this formulation. Variables are deviations from trends.

high unemployment and deflation. In the present model, the long-run natural rate of unemployment is zero (apart from a constant), as equation 1 shows. According to equation 4, domestic prices will thus have to fall, driven by falling wages, until increased home competitiveness, $p' - p$, just offsets the rise $d\epsilon$ in the level of ϵ. The long-run nominal and real wage effects are

$$dw = -\frac{d\epsilon}{\delta\beta}, \quad dw - dp^C = -\frac{(1 - \phi)d\epsilon}{\delta\beta}.$$

The parameter γ, which measures the sensitivity of the expected real wage to unemployment, is one index of the flexibility of the labor market. When γ is relatively small, unemployment must remain high for a long time to bring about the declines in nominal and real wages described above. The first lesson from this standard model (one that generalizes well beyond it) is that the unemployment cost of a negative shock is higher when the labor market is less flexible.

Consider next unanticipated currency devaluation as a response to the shock. Devaluation raises p' permanently. A devaluation that results in the import price change

$$dp' = \frac{[1 - \phi(1 - \theta)]d\epsilon}{\theta\delta\beta}$$

obviates the need for nominal wages to fall and moves the economy immediately to its new stationary position at the natural rate of unemployment, with a higher price level and a permanently lower real wage. Importantly, there are no further dynamics after the immediate price rise caused by the devaluation: in equation 1 neither unemployment pressure nor the expectation of further CPI change is working to move nominal wages. A period of costly recession is therefore avoided. In a nutshell, this finding summarizes the case for exchange rate flexibility with nationally asymmetric output market shocks. But it must be qualified by three observations.

First, devaluation cannot work if indexation is complete ($\theta = 0$); in that case, all domestic prices rise fully in proportion to import prices, so nominal realignment is powerless to affect relative prices. When θ is above zero, even by a small amount, however, devaluation can be successful. But in the case of an "epsilon" of nominal rigidity, a devaluation must be massive to have the desired effect. Because wages

immediately rise nearly in proportion to import prices, a consequential gap between them requires a huge unexpected change in the exchange rate.

Second, the unemployment shock hurts the economy even when a well-chosen devaluation forestalls the incipient unemployment. Instead of unemployment, the economy experiences permanent deterioration in the terms of trade (which is the same as a rise in competitiveness, $p^I - p$). This alternative is preferable, because it does less to widen income inequality and avoids the social and fiscal costs of higher unemployment.

Third, the behavioral assumptions underpinning the optimistic view of exchange rate flexibility deserve scrutiny. A priori, these are not highly plausible. Take the date $t - 1$ expectation of the Phillips curve in equation 1 and write it as

$$E_{t-1} w_t - E_{t-1} p_t^C = w_{t-1} - p_{t-1}^C - \gamma u_{t-1}. \tag{5}$$

Equation 5 implies that when unemployment is at zero, workers are always content to accept their current real wage as their expected future real wage, regardless of how the current real wage was determined. For example, even if the current real wage is the ex post low result of an unexpected devaluation, workers will happily live with it, provided the labor market is not tight. This specification embodies a very strong assumption: that organized workers will not resist a decline in real wages. Most research on European labor markets has concluded, to the contrary, that real wage resistance is a factor to be reckoned with.[71]

An alternative to the standard Phillips curve model of wages and the natural rate, widely applied in studies of Europe, assumes that the expected real wage is persistent and is driven gradually to its long-run level by unemployment:

$$E_{t-1} w_t - E_{t-1} p_t^C = \rho(w_{t-1} - p_{t-1}^C) - (1 - \rho)\gamma u_{t-1}.$$

In this formulation, ρ may be viewed as a measure of "planned," or ex ante, real wage rigidity. But this formulation still implies an absence of ex post real wage resistance, since it amounts to equation 5 with ρ set equal to one where that parameter first occurs. The main substantive difference from the standard Phillips curve is that the natural rate of

71. Layard, Nickell, and Jackman (1991, pp. 210–11).

unemployment becomes a function of the real wage and, through the real wage, of the terms of trade.[72] Nonetheless, it is illuminating to build on this formulation to incorporate meaningful real wage resistance. The last equation, written to take account of CPI indexation, is the same as

$$(6)\quad \Delta w_t = E_{t-1}\,\Delta p_t^C + (1 - \theta)(p_t^C - E_{t-1}p_t^C) - (1 - \rho)(w_{t-1} - p_{t-1}^C + \gamma u_{t-1}),$$

where, for example, $\Delta w_t = w_t - w_{t-1}$. Blanchard and Muet use a similar error correction specification in their study of France.[73] Nominal wages are set as in equation 1, except that wage dynamics are driven by the absolute level of the real wage as well as by unemployment. A high value of ρ signifies that the short-run imbalance between wages and unemployment exerts a weak influence in moderating real wage demands.

"Error correction" is a misnomer in this context, however, for under the last wage equation, workers do not build past inflation forecast errors—which unexpectedly reduce ex post real wages—into current wage demands. Instead, they passively accept the real wage effects of their forecast errors, taking the current ex post wage as the base for their current wage bargain.[74] Under real wage resistance, however, workers aspire to the ex ante real wage that they bargained previously, so that

$$(7)\quad \Delta w_t = E_{t-1}\Delta p_t^C + (1 - \theta)(p_t^C - E_{t-1}p_t^C) - (1 - \rho)(w_{t-1} - p_{t-1}^C + \gamma u_{t-1}) + \rho[p_{t-1}^C - E_{t-2}p_{t-1}^C - (w_{t-1} - E_{t-2}\,w_{t-1})].$$

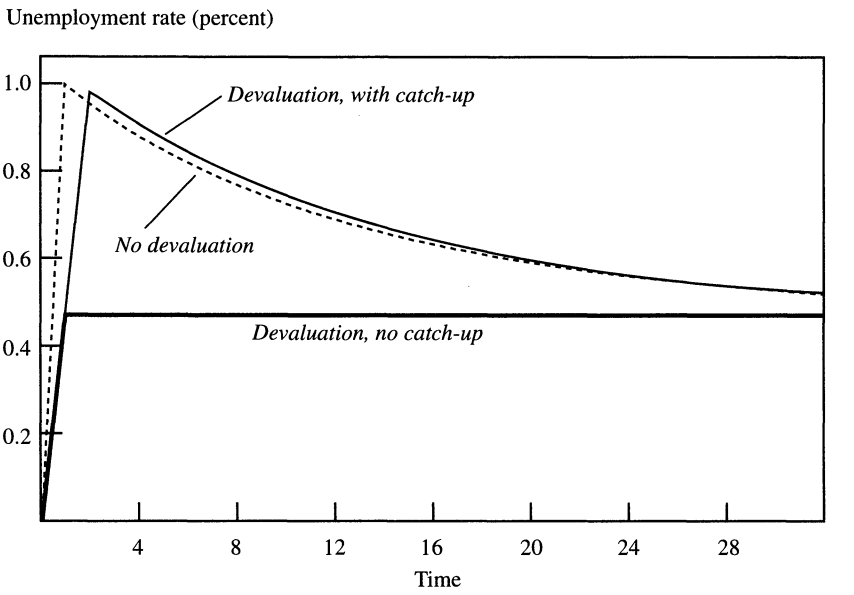
In this specification, workers bargaining on date t regain a fraction ρ of their real wage loss due to incomplete wage indexation on date $t - 1$. Their efforts greatly complicate the economy's response to an un-

72. For discussions, see Bean (1994), Phelps (1994), and Blanchard and Katz (1996). In the text's model, a higher real wage is associated with a lower natural rate, for example, because unemployed workers spend less time in job search when the opportunity cost of joblessness is higher.

73. Blanchard and Muet (1993).

74. Thus equation 6 has the odd implication that even when $\rho = 1$, unexpected devaluation brings a permanent reduction in the real wage.

Figure 13. Simulating Unemployment Dynamics after a Fall in Demand[a]



Source: Author's calculations, based on model described in text.

a. Simulation measures response to a 1 percent fall in labor demand. Simulation involving devaluation with no catch-up takes equation 6 as its wage equation. Simulation allowing for catch-up uses equation 7. See text for details.

expected devaluation, as the literature on lagged wage indexation recognizes.[75]

Effects of Devaluation

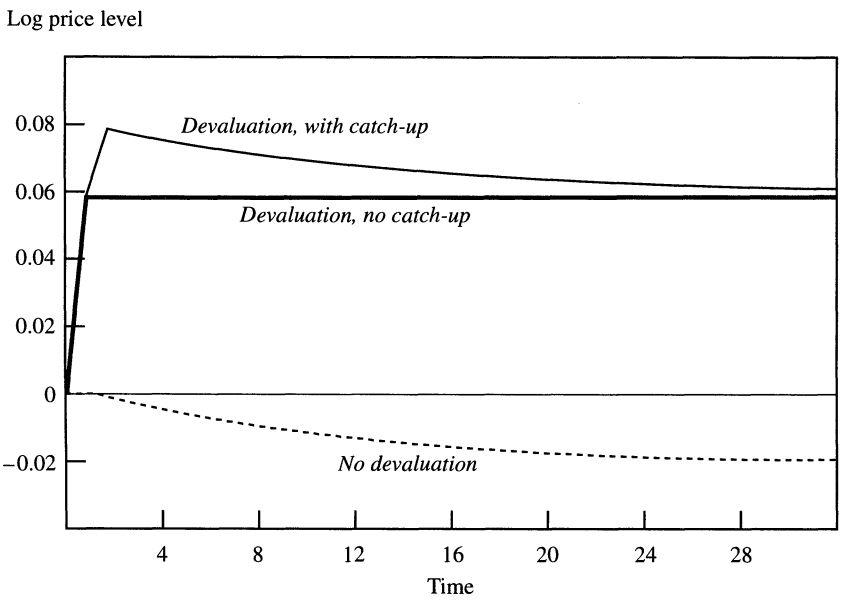
The potential pitfalls of devaluation are illustrated in figures 13 and 14, which show the economy's response to an unexpected 1 percent fall in labor demand under alternative exchange rate policies and wage setting structures.[76] With no policy response, unemployment rises

75. See, for example, Fischer (1988); although, in a sense, the point was raised long ago in the present context by McKinnon (1963). The "levels" version of equation 7 is

$$w_t = E_{t-1}p_t^C + (1 - \theta)(p_t^C - E_{t-1}p_t^C) + \rho(E_{t-2}w_{t-1} - E_{t-2}p_{t-1}^C) - (1 - \rho)\gamma u_{t-1}.$$

76. The parameters chosen for these exercises are $\rho = 0.964$; $\gamma = 2.44$; $\theta = 0.2$, implying 80 percent contemporaneous wage indexation to the CPI; $\beta = 0.8$; $\phi = 0.65$; and $\delta = 0.2$. The first two parameters are suggested by Blanchard and Muet's (1993) study for France, based on quarterly data, so the simulation periods should be interpreted

Figure 14. Simulating Price Level Dynamics after a Fall in Demand[a]



Source: Author's calculations, based on model described in text.

a. Simulation measures response to a 1 percent fall in labor demand. Simulation involving devaluation with no catch-up takes equation 6 as its wage equation. Simulation allowing for catch-up uses equation 7. See text for details.

sharply and then decays toward its (higher) long-run natural rate, as consumer prices fall. Nominal wages (not shown) fall more quickly than the CPI, so real wages decline progressively over time.

If, as wage equation 6 implies, there is no lagged catch-up of real wages to previously expected levels, an 8 percent currency devaluation puts the economy roughly at its new stationary equilibrium (figure 13). A cost of the policy is a one-off price level increase of about 6 percent, because wages are extensively indexed to the CPI. But the devaluation lowers real wages to their warranted level in a stroke, avoiding the long period of unemployment that would otherwise be needed to achieve the same reduction in real wages through deflation.

The last scenario may be overly optimistic, however. In the third

as quarters. Blanchard and Muet do not impose on their estimated wage equation the parameter restrictions embodied in equation 7. In addition, their model incorporates price-setting behavior. Their empirical findings concerning devaluation look quite different from the effects shown in figures 13 and 14, as discussed below.

simulation shown in figure 13, wages are set by equation 7. Unemployment falls in the initial period of devaluation, but then rises sharply, as wages and prices rise further in the subsequent period. Since real wages are not as low as in the absence of a devaluation (precisely because unemployment was low for a period), for the balance of the transition unemployment slightly exceeds the level of the nondevaluation simulation. Devaluation thus produces only a transitory employment gain, at the cost of greater variability in the price level.

Table 4 is a preliminary attempt to estimate equation 7 on annual EU data. (I add a labor productivity variable to the equation.) Expectations of CPI inflation are proxied by a regression of that variable on its own lags, lags of nominal wage growth, and lags of import price inflation. Because expectations are measured with error, twice-lagged values of inflation, unemployment, the real wage, productivity, and import-price inflation are used as instrumental variables. The current CPI forecast error is impounded in the equation disturbance.

Clearly, the success of the specification is limited. While most variables have the expected sign, in general they are estimated very imprecisely. The "lagged forecast error" variable which is a lagged CPI forecast error, and thus measures the lagged error in forecasting the real wage, always has a positive sign but enters significantly only for the Netherlands. Thus it is difficult to conclude much from these structural wage equations.

Econometric models based on semistructural equations or reduced forms suggest the presence of some lagged catch-up in real wages.[77] Its strength, however, produces devaluation effects on unemployment intermediate to those of the "no catch-up" and "with catch-up" cases shown in figure 13. The experiences of Britain, Finland, Italy, Spain, and Sweden after devaluing in the early 1990s are consistent with an absence of strong catch-up effects, although labor market deregulation under Prime Minister Margaret Thatcher makes Britain atypical of Europe, and Italy dismantled its official wage indexation system (*scala mobile*) shortly before the 1992 crisis.

More research into the relation between the reduced-form equations in existing macromodels and the underlying structural model plainly is

77. See, for example, Commission of the European Communities (1990), Blanchard and Muet (1993), and Baker, Fitz Gerald, and Honohan (1996).

Table 4. Estimating Wage Equations for Six Countries, Annual Data[a]

	Country and sample period					
Independent variable	*Belgium 1974–94*	*France 1974–96*	*Germany 1974–94*	*Italy 1974–96*	*Netherlands 1974–96*	*Spain 1974–95*
Expected inflation[b]	0.78	1.51	0.31	2.46	0.53	2.10
	(0.30)	(8.50)	(0.01)	(7.47)	(2.76)	(3.09)
Lagged real wage[c]	−0.07	0.09	−0.33	−0.22	−1.23	−0.41
	(0.03)	(2.15)	(0.04)	(0.79)	(0.89)	(0.55)
Lagged unemployment rate[d]	−0.83	−1.66	−1.51	6.39	−1.03	0.24
	(0.12)	(13.49)	(0.69)	(24.57)	(2.67)	(1.09)
Lagged forecast error[e]	0.06	3.79	1.54	5.54	2.35	3.50
	(0.60)	(2.98)	(2.97)	(17.31)	(0.78)	(3.76)
Lagged productivity[f]	0.05	0.18	0.49	−0.68	0.24	0.53
	(0.03)	(1.64)	(0.14)	(1.39)	(0.03)	(1.20)
Summary statistic						
SER[g]	0.01	0.07	0.03	0.14	0.03	0.09
$\overline{R}^2$	0.92	0.26	0.24	−0.08	0.63	0.32
Durbin-Watson	2.64	2.55	1.47	2.54	2.01	2.59

Source: Author's regressions. Wage data are from International Monetary Fund, *International Financial Statistics*, various issues (available on CD-ROM). All other data are from OECD, *Fiscal Positions and Business Cycles on Diskette*, 1996/2.

a. The dependent variable is the annual change in the log nominal wage rate. Equations estimated correspond to (7) in the text and include a constant. Standard errors are in parentheses.

b. From equation 7, $E_{t-1}\Delta p_t^C$.

c. From equation 7, $w_{t-1} - p_{t-1}^C$.

d. From equation 7, u_{t-1}.

e. Workers' last-period error in forecasting their real wage, $p_{t-1}^C - E_{t-2}p_{t-1}^C$.

f. Log productivity in period $t-1$.

g. Standard error of the regression.

in order. The reduced forms estimated often span several different policy regimes and their usefulness for policy evaluation certainly is subject to the Lucas critique. Nonetheless, the totality of available evidence suggests that unexpected devaluation can be quite effective, even in the European context. Any advantages that exchange rate flexibility confers are all the more helpful because labor market inflexibility makes it so costly to adjust to shocks in other ways.

Reinforcing this conclusion is the observation that prices as well as wages are somewhat inflexible in nominal terms, so that devaluation may affect output and employment even when real wages are quite rigid. Olivier Jeanne employs a closed economy model with monopolistic producers and real wage rigidity to show that monetary expansion can have a persistent effect on output, even when the extent of nominal price rigidity is small.[78] The corollary for open economies is that even when real wage rigidities are pervasive, a small amount of nominal price rigidity might allow exchange rate changes to play an important role.

The End of the Beginning: Launching the Euro

The ground rules governing the introduction of the euro reduce the prospects for quiet in the foreign exchange market after May 1998.[79] The Maastricht treaty and subsequent EU decisions tightly constrain the way in which conversion rates between participating currencies and the euro are to be set in Stage Three. These euro rates will determine the relative real exchange rates at which EMU is launched, and affect government fiscal positions and the distribution of wealth within EMU. Given how slowly European economies adjust to disequilibria, an initial mistake on real exchange rates would have long-lived consequences that could undermine support for the single currency.

Conversion rates of EMU member currencies into the euro—the prices of the euro in terms of member currencies—are to be set unani-

78. Jeanne (forthcoming).

79. Analyses of the problem of setting euro conversion rates include Gros and Lannoo (1996), Begg and others (1997), De Grauwe and Spaventa (1997), Flood and Garber (1997), and Kenen (1997). The present discussion is based on Obstfeld (forthcoming).

mously by the Ecofin Council at the start of Stage Three. However, article 109l(4) of the Maastricht treaty requires that the adoption of conversion rates between the euro and the currencies of the EMU members "shall by itself not modify the external value of the ECU [European Currency Unit]."[80] The Madrid European Council of December 1995 decided to change the name of the single currency from ECU to euro and decreed further: "In the case of contracts denominated by reference to the official ECU basket of the European Community, in accordance with the [Maastricht] Treaty, substitution by the Euro will be at the rate of one to one, unless otherwise provided in the contract."[81]

These stipulations together imply that a euro will be defined at the start of Stage Three to have the same value as an official ECU basket at the end of Stage Two; that is, on December 31, 1998. The official ECU basket will cease to exist as of the start of Stage Three, and the euro will seamlessly take its place.

Another implication is that the value of the euro cannot be predicted in advance of December 31, 1998, as the ECU basket contains the currencies of countries that will not join EMU in 1999 and are unlikely to maintain completely stable exchange rates against those that will. But since the "scale" of the euro is economically neutral, this unpredictability probably is important only insofar as it prevents early public familiarity with calculations in euro.

Bilateral Stage Three conversion factors—the implicit exchange rates between national currencies—are much more important. But under the Maastricht and Madrid decisions, bilateral Stage Three conversion factors for EMU member currencies are constrained to equal final Stage Two bilateral market exchange rates. If the deutsche mark value of an ECU at the end of Stage Two must equal the deutsche mark value of a euro at the start of Stage Three, and if the same relationship holds for French franc values, then triangular exchange market arbitrage on December 31, 1998 would imply that the implicit Stage Three conver-

80. Council of the European Communities (1992, article 109l[4]). The European Currency Unit is a basket of fixed amounts of all EU member currencies other than those of Austria, Finland, and Sweden, which entered the union in 1995. The Maastricht treaty also refers to the single currency as the ECU.

81. Council of the European Communities, "Madrid European Council, 15 and 16 December 1995, Presidency Conclusions," chap. 1, sect. A.I(6), available on the worldwide web page of the European Union.

sion rate between marks and francs equal their closing December 31, 1998 market exchange rate.

Given this constraint, some observers have recommended "letting markets decide" on Stage Three bilateral conversion factors. Under that scenario, the national central banks of prospective EMU members would intervene only minimally after May 1998, allowing exchange rates to find their equilibrium levels. The resulting December 31, 1998 bilateral market exchange rates would then become bilateral conversion factors for Stage Three. Even if markets can be trusted to price currencies rationally, however, the mere fact that bilateral exchange rates are to be frozen at current levels at the end of Stage Two will inhibit stabilizing speculation and make rates more volatile, especially in the last days of 1998. Furthermore, exchange rates are never truly exogenous. The desire for a competitive advantage at the start of Stage Three would give each government an incentive to drive its currency down in the foreign exchange market toward the end of Stage Two. Competitive depreciation would cause political as well as market tensions.

Thus there are strong reasons for participating governments to agree in advance on the bilateral rates that they will formally set at the start of 1999. Indeed, in September 1997 the Ecofin Council decided to announce bilateral Stage Three conversion rates soon after the May 1998 determination of initial EMU members.[82] The question will then be how, and whether, the first-round EMU members can guide market rates to the desired levels over the final months of 1998.

EU leaders might trust in stabilizing speculation to drive market rates to these announced levels in time for Stage Three. Unfortunately, that strategy cannot be fully credible, because the Maastricht treaty and the Madrid Council decision require that the market outcome be accepted, whatever it is. And the treaty's provisions concerning EMU cannot easily be amended. To reopen the discussion of EMU would be to invite conflicting attempts to redesign the single currency, in particular, by France and Germany. Any resulting agreement would require ratification by all fifteen EU members. Revising the treaty thus would be tantamount to postponing EMU.

82. Even though the December 31, 1998 exchange rates between participating national currencies and the ECU are likely to be unpredictable, bilateral exchange rates between these currencies on that date could, in principle, be perfectly predictable; for example, if set by central bank intervention.

The only option is for some form of intensified monetary cooperation to begin *before* Stage Three, with national central banks guiding the future EMU members' bilateral exchange rates toward mutually agreed levels. Since the ECB will not yet control national monetary policies, however, a system of narrow spot exchange rate targets in Stage Two could be vulnerable to speculative attack. The imminence of EMU could enhance the credibility of the participating authorities and make available some attractive technical intervention options. But any number of shocks—ranging from devaluations of "out" currencies to macroeconomic easing by the "ins" to a German political or constitutional crisis—could frustrate efforts to start Stage Three at the promised exchange rates. So conspicuous a policy failure would not inspire public faith in the future of the single currency.

Conclusion

The most plausible alternative scenarios appear to be either that EMU will be delayed or that it will encompass a broad group of eleven countries: the core bloc consisting of France, Germany, Benelux, and Austria, and also Portugal, Spain, and Italy to the south, Ireland to the west, and Finland to the north. Right now, a broad EMU launched on January 1, 1999 seems likely. The 1997 public deficits of Germany and France probably will not furnish strong grounds for excluding any of the countries listed. All fifteen countries in the EU will bargain and vote over the EMU roster early in 1998. Germany and its close allies (excluding France) simply do not have enough voting weight to dictate the outcome. France must be included in EMU, and its public borrowing overrun will legitimize loose interpretations of the Maastricht deficit criterion. Were France excluded, EMU would lose the political anchor of the Franco-German alliance that has driven European integration for nearly half a century.

A broad EMU, however, will be more vulnerable to asymmetric shocks and disputes over macroeconomic policies than a narrow union. These are real costs, although they might be mitigated over time if EMU induces a serious reshaping of European social policy. A broad EMU does not necessarily imply a soft euro, even if Italy is in. There is still room for deals over the appointees to the ECB executive board,

and the bank's independence offers some insulation from political pressures. But if there were a soft euro, it would undermine the gains that EU members have made in reducing inflation. To be set against the possible economic costs of EMU are the economic benefits, which are also real, but exceedingly difficult to model or quantify. If the EU countries that do not initially enter EMU prosper relative to those that have joined, EMU could fall apart. The successor regime is difficult to predict.

European economic integration has always been a politically motivated enterprise. And at the moment, the political costs of not proceeding with EMU bulk so large that Europe's leaders are desperate to start on time. But while the noneconomic motives behind EMU may be laudable, any political achievements will be imperiled if electorates perceive the economic consequences as negative. As the preface to "One Market, One Money" puts it: "The Community has thus established its agenda with clarity and precision. It is an agenda of historic importance. While the content of the agenda is both economic and political, the whole process will stand or fall on the basis of the functional qualities of the economic and monetary union."[83] The uneasy coexistence of the political and economic objectives of EMU is the major dilemma facing Europe after a remarkable half-century of progressive unification. If EMU succeeds on its economics, the political vision that gave birth to the project will be well served. Economic success is possible, but it is by no means assured.

83. Commission of the European Communities (1990, p. 5).

Comments and Discussion

Alberto Alesina: This is an excellent and very exhaustive paper, and I very much agree with its message. European monetary union is a gamble. In fact, I am more pessimistic than Maurice Obstfeld: in my opinion, it is a gamble that should not be taken. In this comment, I address a few points already touched on in the paper and make some additional observations.

IS EUROPE OF THE OPTIMAL SIZE FOR A COUNTRY? Probably not. "Europe" (meaning the potential members of EMU) will never be a nation state, but it may come close to being a federal nation state. Many argue (correctly) that some form of political union is necessary for monetary union to be sustainable. Others take the even stronger line that monetary union is merely a step toward the real goal of European political union. I would argue that this is contrary to history. In 1946 there were 74 countries in the world and today there are 192. More than half of these countries are smaller than Massachusetts. In 1995, 87 countries had fewer than 5 million inhabitants.

One can think of the equilibrium size of a country as the result of a trade-off. On the one hand, small countries have the benefits of a low degree of conflict and relative convergence of preferences. On the other hand, large countries have several advantages, including economies of scale in the provision of public goods, insurance against shocks, and market size. However, as world trade becomes more open, one of the main benefits of a large country becomes much less important. A country does not have to be big to be open. Thus the tendency toward a reduction in average country size is perfectly understandable in an

environment of trade liberalization. Why would a country want to lock itself in a political union when it could be small, enjoy freedom of political choice, and trade peacefully with the rest of the world? There is no need for political integration when there is economic integration. Indeed, as I argue elsewhere with Enrico Spolaore and Romain Wacziarg, economic integration should go hand in hand with political separatism.[1] Europe is going in exactly the opposite direction.

IS EUROPE AN OPTIMAL CURRENCY AREA? Almost certainly not. Obstfeld deals extensively with this point in the paper. My reading of the evidence is that the pure economic benefits of a European monetary union are probably fairly small and the costs—which are very hard to measure—could be quite large. This in the sense in which I think it is not a gamble worth taking. The benefits of monetary union are well known: smaller transaction costs, less exchange rate volatility, greater credibility. The paper argues that for a variety of reasons, these benefits, except perhaps the last, are not very large. Nevertheless, Obstfeld notes that the asymmetry of economic shocks in Europe is a source of concern. It is possible, however, that the countries with the most asymmetric shocks are also those with the most to gain in terms of credibility in monetary policy. This is a point worth investigating.[2]

The paper also correctly emphasizes the role of labor mobility in a monetary union. As is well known, labor is not very mobile in Europe. Blanchard and Lawrence Katz show that labor mobility within each country in Europe is lower than that within the United States.[3] Labor mobility across European countries is even lower. It should be recognized that labor mobility may have high utility costs in Europe, although these never enter into standard cost-benefit analyses. That labor mobility within a currency area that includes very strong cultural and linguistic differences is costly, relates to my point that the optimal size of countries is a function of cultural homogeneity.

I would like to clarify one of the few issues that Obstfeld leaves unclear: what is the alternative to monetary union? The paper seems to predict that if monetary union does not materialize, Europe will go back to a system of fixed adjustable exchange rates, which most likely will require restrictions on capital mobility. This would be a worse scenario

1. Alesina, Spolaore, and Wacziarg (1997).
2. For some evidence on this point, see Alesina and Grilli (1992).
3. Blanchard and Katz (1992).

than either monetary union or flexible rates. Thus in my opinion, the only reasonable long-run alternative to monetary union is flexible exchange rates, with free mobility of goods and factors of production.

IS EMU USEFUL FOR ENFORCING CONVERGENCE CRITERIA? First, suppose that EMU is a bad idea because of the structural arguments discussed above, which boil down to the fact Europe is not an optimal currency area. This proposition implies that it is good to adopt the wrong monetary system (perhaps for generations to come) simply in order to help a few countries to reduce inflation and budget deficits at one particular point in time. This strikes me as a major overvaluation of short-term gains relative to long-run costs. Either EMU is a good idea as a monetary system or it is not; convergence criteria are means, not goals.

Second, the convergence criteria for fiscal policy, which have proven to be the most challenging and controversial, have had both positive and negative effects. They probably have created incentives for some countries to reduce deficits more quickly that they would otherwise have done. However, the fiscal criteria overemphasize deficit reduction measures and do not pay enough attention to levels of spending and taxation. As a result, too much of the adjustment has been on the revenue side. For many countries in continental Europe, the real problem is not overly large budget deficits, but an excessively burdensome welfare state that requires very high taxes. Moreover, one must ask whether these convergence criteria are necessary for monetary union.

Third, it is possible that most countries would have adjusted without EMU. There are two pieces of evidence in favor of this view. When inflation was brought down sharply in the EMS countries, in the early and mid-1980s, inflation was coming down throughout the OECD. The countries in the EMS did no better than those that were not. And many other countries around the world have adjusted their fiscal balances during the past decade. While I do not deny that the progress of monetary unification and the Maastricht agreement may have helped European countries to adjust, it is not at all clear how much they have done so.

IS EMU USEFUL FOR ENFORCING PEACE IN EUROPE? It is often said, both by the press and in academia, that the economic costs and benefits of EMU are trivial compared with the true political advantage of European union: that it would prevent disruptive military conflicts such as those

that led to the two world wars. I find this argument unconvincing, and possibly wrong. One could argue that the likelihood of escalating conflicts might actually increase if several countries are forced to coordinate policies and compromise on various issues for the sake of an unnecessary monetary union. A system of free trade accompanied by national independence in the choice of policy may be best suited to promote peaceful interactions. At the very least, this reasoning is as convincing as the opposite. I would also note that over the past twenty years, animosity amongst western European countries has rarely been as high as in recent months, when monetary union is becoming a reality.

Finally, I come to my only nontrivial disagreement with the paper. Obstfeld points out that Europe's biggest problem is the lack of labor flexibility, and that the introduction of EMU might help in this respect. The reasoning—which is not fully spelled out in the paper—is that labor unions will accept more labor flexibility to compensate for the fact that the exchange rate can no longer serve as a channel for adjustment. That is a reasonable, but slightly optimistic, view. Another possibility is that labor unions will react strongly against the monetary rigidity imposed by monetary union, without yielding on labor flexibility. This could aggravate social tensions and increase political conflict, both within and across countries, leading some countries to leave the monetary union. Such an event would have very serious consequences for the credibility not only of the countries that leave, but of the entire project.

I would note that in the recent progress toward European unification, voters have often been less enthusiastic than their politicians. This observation raises some doubts about the political sustainability of the process and indicates that, in this case, the citizens of Europe have been more prudent than their leaders.

Richard N. Cooper: This is an admirable paper. It is comprehensive, thoughtful, and judicious. I agree with much of it. However, as a whole, it leaves me slightly uncomfortable. Without precisely saying so, Obstfeld gives the impression that currency union in Europe is a bad idea; but that if EMU is going ahead, as it is likely to, the Maastricht treaty—in particular, its fiscal provisions— is, on balance, beneficial. I believe, in contrast, that the objective of monetary union in Europe is a good idea; but that as an instrument to achieve that objective, the Maastricht

treaty—at least, its monetary and fiscal provisions (some parts of the treaty do not concern EMU)—is fundamentally misguided.

With respect to the objective of monetary union, I would start with the observation that the economics profession typically relies on an extraordinarily primitive theory of money. The classic dichotomy between real and nominal variables has served us well both analytically and in the classroom. But if we assume that our theory of money seriously reflects the real world, we risk getting things fundamentally wrong. Many economists believe that. For instance, Obstfeld writes: "The most striking contribution of the monetary unification process to economic efficiency is, perhaps, to have forced inflation into remission in a large number of European countries that seemed locked in its grip at the start of the 1980s." There is neither theoretical nor empirical support for that statement. One is not talking about Argentina, or Brazil, or Turkey, but about having reduced European inflation rates from 7 or 4 percent to 2 percent. Where does the idea of big increases in economic efficiency come from?

And yet, Obstfeld may be correct. Many economists have an uneasiness about inflation—even expected inflation—that simply is not supported by standard monetary theories or empirical evidence. I suspect that this uneasiness arises from the feared loss of efficiency in the transmission of information in a complex economy when the price level is rising persistently.

However, the uneasiness about inflation ought also to apply to flexible exchange rates between countries that are closely integrated economically—they stand or fall together. There is an important piece missing in economic argumentation on the costs associated with fixing exchange rates, such as in Obstfeld's paper, the same missing piece that accounts for the discrepancy between economists' theories and their feelings about inflation. In European economies, tradable goods and services account for over half of consumer spending and even more of business spending. The informational costs of fluctuating exchange rates may be greater than those of inflation. In addition to causing difficult-to-interpret variations in the prices of individual goods, due to differing short-run markup practices, they also result in movements between the prices of tradables as a group and nontradables as a group.

Incidentally, the conventional line of reasoning suggests that one should seriously consider breaking up the monetary union of the United

States. It is not obvious that the fifty states make an optimal currency area. There are some examples, such as Texas in the early 1980s and New England in the late 1980s, of circumstances in which flexible exchange rates would have had desirable macroeconomic regional effects. But I do not observe economists seriously proposing such a plan.

Is Europe an optimal currency area? Almost certainly not. But on some dimensions, it may not be as far away as Obstfeld suggests. Take, for example, the pattern of shocks discussed in the paper. I would conjecture that among these European countries, most of the asymmetric shocks are monetary in origin, either directly or indirectly. If their monetary independence is eliminated, that source of shock disappears. Most of these countries are highly diversified in production and trade, so industry-specific shocks should be well distributed, both between and within countries, and should not be a major source of asymmetric shock at the macroeconomic level. Finland is a possible exception, given its heavy dependence on forestry products, and therefore, on economic grounds, it perhaps should not hasten to join the monetary union.

Much has been made of the low level of labor mobility in Europe. The actual movement of labor within European countries—Germany is the example given in the paper—has been quite low. I would like to make two observations. First, one should not confuse movement with mobility. Mobility in Germany has not been tested because the pattern of national wage-setting has left workers with little incentive to move. Unemployment benefits are high, and significant regional wage differentials are not allowed (even the former East Germany after unification was targeted to reach west German wages within a few years, despite its much lower productivity). So, while one observes little movement, mobility is an unknown factor.

Potential mobility is much higher than Obstfeld suggests, mainly because of the large number of foreign workers in Europe. Seven percent of the German population is foreign, not counting the Bosnian refugees of the past few years; the percentage of the labor force must be still higher. These are Turks, Yugoslavs, Greeks, Portuguese. They do not have deep cultural roots in the places where they are working, so they may be willing to move not only within but also between countries, if they are given adequate financial incentive to do so. It is usually the margin that counts. To have 10 percent of the labor force

mobile may be sufficient to handle the asymmetric shocks that are likely to take place within a European currency union.

In regard to the Maastricht treaty as the instrument with which to achieve European monetary union, my main objection has to do with democratic theory—specifically, the lack of accountability of the proposed Governing Council of the European Central Bank. Both the Federal Reserve and the Bundesbank are meaningfully independent central banks, but both are part of a broader political process, accountable to the legislature. The Maastricht treaty takes the Governing Council, whose decisions will affect millions of people, out of the political process altogether. I view that as a scandalous dereliction, greatly widening the democratic gap in the European Union.

With respect to the fiscal criteria of the Maastricht treaty, I forecast in January 1992—the month after the treaty was agreed and before it was actually signed—that if Europe took the fiscal criteria seriously, it would condemn itself to a decade of economic stagnation. Half of that decade has now gone by and, unhappily, my forecast has so far proved correct. To tie fiscal policy down removes one of a region's major defenses against asymmetrical shocks, namely, regionally adaptive fiscal policy. In moving to currency union, Europeans are necessarily tying their hands regionally on monetary policy. Through the Maastricht treaty, and even more so with the subsequently agreed Stability Pact, they are tying their hands regionally also on fiscal policy. This seems to me to be a mistake of the first order.

Obstfeld, by contrast, sees some merit in the tight fiscal criteria. I want to take up the four arguments that he puts forward concerning the threats to the European Union of excessive fiscal deficits. None of them, he recognizes, is compelling by itself, so one must come to a judgment about their collective merit.

First, Obstfeld suggests that heavily indebted countries might lobby for surprise inflation to reduce their real debts. This idea is, I think, an economist's plaything. My knowledge is not comprehensive, but I do not know of any government that has deliberately engineered high inflation in order to reduce the real value of outstanding debt. That has frequently been the consequence of high inflation, but the inflation itself has usually been associated with some external shock that was not handled well or an internal policy failure involving conflict over taxes or expenditures, not a deliberate decision to generate surprise inflation.

Second, Obstfeld argues that "other potential coordination failures in EMU could be mitigated by fiscal constraints . . . . In a floating rate system, countries might be deterred from fiscal expansion by the fear of appreciating their currencies and squeezing the tradables sector." Although any economist who has studied the Mundell-Fleming model understands this proposition—and there actually have been two important examples, the United States in the early 1980s and Germany in the early 1990s—most "markets" (that is, practical people and officials) believe that excessive budget deficits lead to currency *depreciation*. I accept the Mundell-Fleming result under certain conditions, but Obstfeld is making a point about public perceptions and political reactions. At least to date, the political perception is that fiscal expansion leads to currency depreciation, not currency appreciation, and therefore the argument cannot apply.

Third, Obstfeld suggests that curbing national fiscal discretion might reduce idiosyncratic national fiscal shocks, mentioning three examples: the Johnson fiscal expansion of 1966–67, German unification in 1990, and the Reagan fiscal expansion of 1981–83. Play the thought experiment: would a stability pact have prevented any of these fiscal events? I think not.

The Reagan administration came in with a theory that it could reduce taxes substantially without increasing the deficit. Nothing in the Maastricht rules would have dissuaded the supply-siders from trying to carry their theories into practice. I also doubt that these rules would have prevented President Johnson from making the defense expenditures that he thought necessary to prosecute the war in Vietnam, or Chancellor Kohl from taking what, at the time, was seen as the political opportunity of the century to attain the long-standing national objective of German unification. So, while I do not deny the general point, I think that the chosen examples, the standard cases of major fiscal malfeasance in big countries in recent decades, are misplaced in this context.

Fourth, Obstfeld suggests that fiscal constraints might have the beneficial effect of forcing countries to scale back overgenerous social benefit programs. The examples to date, unhappily perhaps, do not give any support to this proposition. The difficulties faced in the United States in scaling back benefit programs are well known. To reduce the budget deficit, the United States has so far raised taxes and mainly squeezed traditional government, not social transfers. France and Bel-

gium have primarily increased taxes. The only country in which one can see even a glimmer of evidence of this proposition is the Netherlands, and there only a nibble, not a serious bite, has been taken out of social expenditures. Social benefits tend to be protected; either taxes go up, or other government consumption and investment expenditures are reduced, or both.

So, I find all four arguments for treaty-mandated fiscal restraint unpersuasive. In the context of monetary union, where the central bank should not be required to finance budget deficits (thus forcing deficit financing onto the capital market), the Stability Pact is a major mistake.

Finally, a subtheme runs through Obstfeld's discussion of fiscal policy, in essence suggesting that governments are incompetent. But if one is confident that governments are incompetent at management, what makes one think that they are competent at making rules? There are some game-theoretic arguments for making the distinction, but I would venture the view that the discussion to date has focused on only one subset of possible models, emphasizing current decisions. There is another subset of "games" that focuses on the rule-making functions of government, and I conjecture that those would also find serious nonoptimal outcomes. The Maastricht treaty is a perfect example.

General discussion: Several participants discussed the role of fiscal policy in the prospective EMU. Barry Eichengreen rejected the argument that EMU is undesirable because of the severe restraints that it would place on each nation's fiscal policy. He predicted fiscal flexibility would not be a problem because the binding restraints that Germany was trying to impose would be rejected and automatic fiscal stabilizers would be allowed to operate. Stanley Fischer believed the risk premiums that markets would apply to each nation's debt would help to provide discipline on fiscal policies. N. Gregory Mankiw noted that the size of such risk premiums would depend on whether it appeared feasible for a country to leave the monetary union once it had entered. To the degree that leaving the union did appear a feasible option, market discipline on fiscal policies would be stronger. But in that case, the advantages of fully credible monetary union were lost.

Christopher Sims believed that fiscal issues are a basic reason to be skeptical of EMU. Confronted with a sufficiently adverse shock, and with no relief available from an exchange rate depreciation, a country

could find itself in a downward spiral with interest rates rising sharply as markets questioned whether its debt would be salable. In these circumstances, it might opt out of the union as a final recourse. Alternatively, the central bank might respond by compromising its price stability target, or the crisis might be resolved in some other way. Sims noted that a supranational fiscal authority, which played the role that federal fiscal policy does in the United States, could get around such problems, but noted that no such institution was contemplated for EMU. James Tobin concurred with the need for fiscal stabilizers and with the problems inherent in relying solely on member states' fiscal policies. He feared that members' fiscal policies could be dictated by bond rating agencies. He predicted that in response to the diverse problems that individual nations are bound to encounter, a pan-European fiscal authority eventually would be adopted to provide credit guarantees of members' debts and other fiscal assistance to members who are in trouble. Cooper noted that the Brussels budget, amounting to about 3 percent of European GDP, already provides a form of pan-European fiscal authority, though one dedicated to structural transfers related to the common agricultural policy and income distribution rather than to cyclical stabilization.

Cooper was highly critical of the extreme independence and lack of accountability specified in the Maastricht treaty for the new European Central Bank, and of the bank's narrow charge to assure price stability. He argued that the ECB should ultimately be politically accountable either to a strengthened European Parliament (a pan-European approach) or to the Council of Ministers (a national approach) in the way the Bundesbank and Federal Reserve are accountable to representative bodies today. On the issue of responsibility, Cooper noted that the ECB's mandate does not even include assuring the functioning of the payment system and the stability of the financial structure, let alone employment stabilization.

Several participants offered observations favoring EMU, despite the doubts that had been raised about its impact on national stabilization. Eichengreen argued that the slow pace of regional adjustment that has been observed within national borders could not be applied to predict slow adjustment across national borders under EMU, because monetary union represented a regime change that would render past behavior a poor predictor. And he suggested that the alternative to EMU was

unattractive, reasoning that the exchange rate stability observed among potential members in recent years itself depended on the expectation that the monetary union would be formed. Robert Hall believed that the efficiency gains from conducting business in a single currency would be substantial, dominating any likely costs to economic stabilization under EMU.

Robert Shiller saw the willingness to form a monetary union as a historic watershed in the attitudes of Europeans. While the common currency's subordination of national monetary policy may create problems at first, he thought that ultimately the union would bring increased economic cooperation as well as favorable changes in wage bargaining and other key economic activities. Fischer emphasized the importance of monetary union as the force chosen by Europe's leaders to drive the political union. Regarding EMU's uncertain impact on economic performance; he reasoned that behavior and institutions would eventually adapt, with more wage and price flexibility and changes in social welfare and unemployment systems substituting for the monetary rigidities that EMU imposed. He acknowledged that such adaptations could take a long time, but believed that the benefits of political unity in Europe justified any transitory economic costs.

Susan Collins questioned how much of the credit for slowing inflation should be given to the EMS, the precursor to EMU. She saw little evidence that EMS members did better on inflation than other countries in the period since the EMS started in 1979. In recent years, the EMS members had eliminated inflation, but so had the United States, Canada, Japan and most other industrial nations. Furthermore, she reported that studies of the output cost of eliminating inflation show no cost difference before and after countries joined the EMS. This suggested that entering a regime of monetary discipline could not be relied on to produce greater wage and price flexibility and other institutional changes that might improve economic stabilization.

Collins also raised some issues about whether EMU would last, once it was established. On her reading of the past, big problems are likely to come from real rather than monetary shocks and so would not be mitigated by membership in a monetary union. Furthermore, because voters are much less enthusiastic about monetary union than are policymakers, they may become impatient with EMU membership if it stands in the way of dealing with their economic problems. She noted

that voters historically have seen economic problems as national, not regional responsibilities, which may help to explain why regional problems are often addressed at the national level. But EMU provides no means for furnishing such responses. Olivier Blanchard agreed that individual national economies might experience bad economic performance under EMU, but believed they would find it very costly to leave the union, especially if, some time in the future, all other members of the European Union were part of EMU.

Alesina agreed wth Collins that the history of performance under the EMS revealed no benefits to member nations, and provided no reason for optimism about performance under EMU. He also questioned whether benefits in the form of political unity, which Fischer had stressed, would be forthcoming. He noted that animosity among European nations has risen as EMU has approached. He saw this animosity as the result of imposing on nations things they did not want—a situation that would continue under EMU.

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